1991

Usted y su artritis : an exercise videotape for Spanish-speaking people with arthritis

Ronald Alan Johnson
San Jose State University

Follow this and additional works at: https://scholarworks.sjsu.edu/etd_theses

Recommended Citation

Johnson, Ronald Alan, "Usted y su artritis : an exercise videotape for Spanish-speaking people with arthritis" (1991). *Master's Theses*. 247.

DOI: <https://doi.org/10.31979/etd.32p2-6d7r>

https://scholarworks.sjsu.edu/etd_theses/247

This Thesis is brought to you for free and open access by the Master's Theses and Graduate Research at SJSU ScholarWorks. It has been accepted for inclusion in Master's Theses by an authorized administrator of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

U·M·I

University Microfilms International
A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
313/761-4700 800/521-0600

Order Number 1347162

Usted Y Su Artritis: An exercise videotape for Spanish-speaking people with arthritis

Johnson, Ronald Alan, M.A.

San Jose State University, 1991

Copyright ©1992 by Johnson, Ronald Alan. All rights reserved.

U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

**Usted Y Su Artritis:
An Exercise Videotape for
Spanish-Speaking People With Arthritis**

**A Project Report
Presented to
The Faculty of the Department of Human Performance
San Jose State University**

**In Partial Fulfillment
of the Requirements for the Degree
Master of Arts**

**By
Ronald Alan Johnson
December, 1991**

Approved by the Department of Human Performance

Dr. V. Gregory Payne

Dr. Richard Deivert

Ms. Christine Melvin

Dr. Nancy Megginson

Approved for the University

ABSTRACT

USTED Y SU ARTRITIS: AN EXERCISE VIDEOTAPE FOR SPANISH-SPEAKING PERSONS WITH ARTHRITIS

by Ronald Johnson

Usted Y Su Arthritis is an double workout videotape for the Spanish-speaking person with arthritis. To evaluate the videotape, two evaluative tools were administered. The first, a 10-point Likert Rating Scale survey, was administered to 23 "experts" after viewing the videotape. A positive attitude was determined for the technical quality (7.71 out of 10). The second tool, an 18 item pre- and posttest, was designed to examine the educational value of the video. It was administered to 31 Spanish-speaking elderly viewers. The number of correct answers in the pretest (10.00) increased 6.13% to the posttest (11.23). A t-test comparing the pre- and posttest results indicated no significant difference with a value of 1.87 where $P < .10$. The results indicate that the videotape had good technical qualities but did not yield statistically significant educational benefit.

ACKNOWLEDGMENTS

I wish to thank all of the wonderful people who have helped in this project, starting from its inception. Through the years, Dr. Gloria Hutchins of San Jose State University and I worked on two other potential theses before finding this project. Dr. Kate Lorig and her staff at the Stanford Arthritis Center were extremely helpful in setting up the framework for this video project. Michelle Boutaugh at the Arthritis Foundation determined the need for such a video. Dr. Hutchins retired and Dr. Rod Harter from San Jose State University helped mold the thesis project into acceptable proposal form allowing the De Anza College Television Center crew, namely Mark Gomes and Hoa Phan, to help me produce and edit the video. Goli Davidson helped so much with the graphics in postproduction.

Not enough can be said for the models, in particular Tino, his wife Manuela Rodriques, and Marge Jordan, for their help and comedic presence before videotaping. Ignacio Corona was a wonderful narrator. My friend, Carlos Barillas, helped countless times in smoothing out my sometimes rough Spanish translations; I truly appreciate his help. Likewise I appreciate the numerous video evaluators for their help.

Upon Dr. Rod Harter leaving to Oregon State University, Dr. V. Gregory Payne from San Jose State University has helped in upgrading the video production due to his prior Spanish and video

experiences. Dr. Payne's attention to detail and promptness have been instrumental in creating a finer product.

The financial support from the local chapter of the Arthritis Foundation paid for the narrator's efforts while the San Jose State University Alumni Fund and the De Anza College Associated Students group paid for the upgrade modifications. A more professional look was created.

Most of all, I would like to thank my wife, Phoebe, who has understood and endured the countless inconveniences associated with this project.

TABLE OF CONTENTS

Title Page	i
Signature Page	ii
Abstract	iii
Acknowledgements	iv
Table of Contents	vi
Table of Appendices	viii
List of Tables	ix
Chapter I - Introduction	1
Statement of the Problem	1
Purpose of the Project	2
Delimitations of the Project	2
Limitations of the Project	3
Definitions of Terms	4
Hypotheses	6
Chapter Summary	7
Chapter 2 - Review of the Literature	8
A History of Therapeutic Exercise and Arthritis.....	8
Arthritis Defined	10
Rheumatoid Arthritis	10
Osteoarthritis	11
Ankylosing Spondylitis	12
Exercise and Arthritis	12
Exercise and Rheumatoid Arthritis	12

Exercise and Osteoarthritis	14
Exercise and Ankylosing Spondylitis	16
Educational Benefits of Television and Video	17
Educational Benefits of Television	18
Educational Benefits of Video	23
Chapter Summary	25
Chapter 3 - Methods	28
General Procedures	28
Description of the Participants	28
Protocols	28
Pamphlet	29
Videotape Equipment	29
Videotape Contents	30
Program Organization	30
Exercise Scenarios	33
Evaluation Procedures	33
Survey	34
Educational Questionnaire	35
Chapter 4 - Results	36
Chapter 5 - Summary, Conclusions, and Recommendations	40
Survey	40
Questionnaires	44
References	48
Appendices	54

TABLE OF APPENDICES

Appendix A - Agreement to Participate	54
Appendix B - Agreement to Participate (Spanish)	56
Appendix C - Medical Acceptance For	58
Appendix D - Participant Release Form	60
Appendix E - Model Release Form	62
Appendix F - English Videoscript	64
Appendix G - Spanish Videoscript	132
Appendix H - English Pamphlet	175
Appendix I - Spanish Pamphlet	182
Appendix J - Survey	191
Appendix K - Pretest Questionnaire	195
Appendix L - Spanish Pretest Questionnaire	199
Appendix M - Spanish Posttest Questionnaire	203
Appendix N - Book Copyright	207
Appendix O - Audio Copyright	210
Appendix P - Videoscript Graphics	212
Appendix Q - Expert Evaluators.....	230

LIST OF TABLES

Table 1 -- Joint Protection Guide	19
Table 2 -- Benefits of Video	20
Table 3 -- Videotape Survey	37
Table 4 -- Questionnaire Data	38
Table 5 -- Scores of the Questionnaires.....	39

USTED Y SU ARTRITIS

Chapter 1

INTRODUCTION

Arthritis is a broad term applicable to over one hundred identifiable kinds of inflammatory and/or painful conditions in and around the joint (Fries, 1986). Arthritis can involve one joint, a few joints, or the whole body. Its manifestations range from joint pain to pain in membranes, tendons, and skin (Sheon, Moskowitz, Goldberg, & Hueter, 1987). Thus, arthritis can significantly affect one's psychological, social, economic, and/or occupational status, as well as physical health. A method of reducing the long-term negative effects of arthritis is to exercise the affected joints during the times when pain or inflammation are not acute (Simpson & Dickinson, 1983).

Videotape is a media tool used to present instruction of exercises for physically coping with arthritis. A properly prepared videotape on exercise will serve to inform the exercising viewer about the ultimate benefits of exercise, advice for a personal exercise program, and the indications and contraindications of exercise.

Statement of the Problem

Therapeutic exercise instruction for arthritis had been primarily limited to a physical demonstration of the exercises or a visual presentation in a book with two exceptions (M. Boutaugh,

personal communication, October 14, 1991). Two videotapes which present physical exercises already exist for the English-speaking person with arthritis, specifically, Jane Powell's Fight Back With Fitness (Maisano, 1986) and People with Arthritis Can Exercise (Arthritis Foundation, 1988). Videotapes for Spanish-speaking people with arthritis were currently nonexistent in the United States until now (M. Boutaugh, personal communication, October 14, 1991).

Purpose of the Project

This project was designed to create an exercise videotape for Spanish-speaking people with arthritis. The group of participants and the viewers were instructed using an exercise program developed in ten years by the Stanford Arthritis Center (Lorig & Fries, 1986). The specific exercises in the program were designed to improve flexibility and muscular strength as well as decrease pain and inflammation.

Delimitations of the Project

The delimitations of this project are as follows:

1. The sample of adult participants (models) was limited to the arthritic population living in the south San Francisco Bay area of California.
2. The exercises selected were directed at persons with only three of the many forms types of arthritis: rheumatoid arthritis,

osteoarthritis, and ankylosing spondylitis. These three types of arthritis are still the most prevalent (Fries, 1986).

3. The topics discussed in the videotape and the accompanying pamphlet were limited by video time, studio space limitations, and the chapter of their source (Lorig & Fries, 1986).

4. The samples of videotape evaluators and "educational" viewers for the questionnaires, otherwise known as subjects, were confined to persons living in the south San Francisco Bay area of California.

5. The adult evaluators have had expertise in, at least, one of three areas of the survey (technical, exercise, or Spanish-speaking). The viewers were able to understand a Spanish video.

Limitations of the Project

The limitations of this project are as follows:

1. The production quality of the videotape was dependent upon the expertise of the novice producer and the student assistants, and the technical limitations of the equipment available at the television studios at De Anza and Foothill Colleges.

2. The models were instructed in the correct techniques for exercise and the models were asked to perform to the best of their ability. Fatigue or physical pain may have affected their performance while the correctness was verified by physical therapists and rheumatologists associated with the Stanford Arthritis Center.

3. The evaluators were instructed in the "how," "why," and "what" of, at least, one of the two evaluative tools. The quality of communication between the producer and the evaluators may have affected their opinion of the videotape. Differences in knowledge and educational background may have affected their opinion. They also may have given their opinion in an area where "No Opinion" would have been more appropriate.

4. The responses by the subjects were expected to be honest and unaffected by the prior relationship to the producer. The selected subjects were not directly involved, in any way, with the production of the video.

Definition of Terms

Ankylosing Spondylitis. A widespread disease that results in a fusing together of the spine and sacroiliac joints. There is a progression of initial inflammation occurring deep in the ligaments and muscles of the spine to scar tissue formation to bony fusion between the vertebrae. There have been cases of inflammation of the eye, heart and lower limb joints. Inheritance factors are believed to be a factor in the causation (Swezey, 1985)

Arthritis. "Inflammation within the joint. Features of warmth, redness, and swelling may not be evident, but pain, tenderness, and stiffness are common" (Sheon et al., 1987, p.344).

Closeup (CU). "An emphasis shot that calls attention to some aspect of the subject-a facial expression, a fist-clenching, an inscription on an object" (Swain,1976, p.357).

Cut. "Instantaneous change from one shot to another by interspersing the two pieces of videotape together" (Swain, 1976, p.358).

Cut-in. "A medium shot, closeup, or the like, filmed for cutting into a master scene" (Swain, 1976, p.358).

Dissolve (lap dissolve). "An optical effect in which a fade in is superimposed over a fade out so that one shot replaces the other. Its most common use is as a transition through time and/or space between sequences" (Swain, 1976, p.359).

Dub. "To record dialogue or other sound to match action in shots already filmed" (Swain, 1976, p.359).

Fade. "An optical effect used as a transitional device, in which the picture on the screen gradually goes to black (fade out) or takes form from black (fade in). Fades may act as punctuation, separating major segments of a film" (Swain, 1976, p.359).

Head-on shot. "Movement straight into the camera" (Swain,1976, p.360).

Long shot (LS). "A shot that relates a subject to thebackground" (Swain, 1976, p.361).

Medium shot (MS). " A shot of the subject in and of itself, with only incidental background" (Swain,1976, p.361).

Mix. "The combining of sound elements (voices, music, effects) from various tracks in desired proportions on a single rerecorded track" (Swain, 1976, p.361).

Osteoarthritis. Arthritis that results from loss of the cartilaginous protective layer within a joint. It results from inherited factors (particularly when the fingers and great toe are involved) or from congenital, mild, structural changes in the shape of an affected bone (Sheon et al., 1987).

Rheumatoid arthritis. A chronic illness with profound morning stiffness in joints, swelling of joints, painful joint motion; it may involve the deep tissues in the skin, lungs, heart, nerves, and joints (Sheon et al., 1987).

Voice-over. "A narrator's recorded for incorporation on a film's sound track" (Swain, 1976, .365).

Wipe. "A transitional optical effect in which one image appears to push another off the screen in any one of dozens of patterns" (Swain, 1976, p.365).

Hypotheses

Two hypotheses were examined:

1-The content and technical quality of the video will be professional quality as determined by the Likert Rating scale.

2-The video will have educational value as determined by the difference between the pre- and posttest scores using a significance level of .05.

Chapter Summary

A videotape was made to help Spanish-speaking, arthritic persons become more physically active (K. Lorig, personal communication, February 2, 1988). This videotape was made using subjects, models, video technicians, and other people with specific expertise in the subject matter or in video production. All were from the south San Francisco Bay area. After the videotape was produced, two evaluations were conducted: one on the technical aspects and the other on the educational value of the videotape. The results of the survey specified the desired modifications in the production for and the contents of the videotape. The questionnaires may have demonstrated the ability of the video to educate the Spanish-speaking viewers.

Chapter 2

REVIEW OF THE LITERATURE

This review consists of four sections. The first is a history of therapeutic exercise and arthritis. The second includes definitions of three types of arthritis. The third is an examination of the interrelationship between exercise and arthritis. The final section concerns the educational benefits of television and video media.

A History of Therapeutic Exercise and Arthritis

Arthritis has plagued humans for at least 3500 years (Sheon et al., 1987). Fortunately, exercises for the relief of any pain and/or other negative symptoms associated with arthritis have also been present for many centuries. For example, the earliest known writings of the religious sect of Cong Fu in ancient China contained references to therapeutic exercise (Rice & Hutchinson, 1952). Since 2600 B.C., the Cong Fu practiced a series of postures and motions for improving organ functioning, increasing longevity and ensuring immortality of the soul (Rice & Hutchinson, 1952).

Licht (1984) compiled a history of therapeutic exercise and mentioned that the modern Western civilized version of therapeutic exercise had its roots in early Greece. Within the Greek philosophy of Hippocrates (460-377 B.C.), walking was advocated because it kept legs stronger than inactive legs which were rested (Licht, 1984). In ancient Rome during the fifth century (A.D.), Caelius Aurelianus

suggested the kneading of wax with the fingers, a progressive resistive program with a dumbbell-like set of weights, passive exercises depending on the person's strength, and walking on a soft surface of evenly strewn straw for arthritic people (Licht, 1984).

Tissot, in the eighteen century, expressed a modern concept of treatment in his comments on arthritis:

There is fever, swelling and pain in some parts of the body; sometimes in all the joints at the same time. ..The least movement will increase his suffering. ..This condition requires the prescription of complete rest. ..Once the great severity of the disease has partly diminished, even though there is still pain and difficulty on motion, we must use motion, which is the best remedy. It is absolutely necessary to start motion to hasten return of strength in the weakened parts (Licht, 1984, pp. 19-20).

Physical gymnastic systems in the United States were imported from Sweden and Germany around 1825 (Sherrill, 1976). Per Henrik Ling, from Sweden, and Freidrich Jahn, a German, introduced their respective modes of exercise to various physicians who, in turn, spread these systems of gymnastics throughout the United States in the period before the Civil War (Sherrill, 1976). Bonnet, in 1853, wrote a textbook repeating Tissot's ideas on arthritis treatment. He urged passive motion in a non-weight bearing position and promoted a new branch of medicine called "medicine functional therapy" (Licht, 1984). An important milestone related to arthritis occurred in 1949

when adrenocortical steroids were introduced (Licht, 1984). The adrenocortical steroids reduced inflammation of the joints and joint motion was possible for the first time for many sufferers (Sherrill, 1976). Other similar forms of chemotherapy have since augmented the benefits obtained by exercise therapy.

Arthritis Defined

Arthritis, as defined, means inflammation of the joint. A more complete definition would refer to the problems of the joint and be named arthrosis since many kinds of arthritis do not have inflamed joints (Lorig & Fries, 1986). The three types of arthritis referred to in this project will be rheumatoid arthritis, osteoarthritis, and ankylosing spondylitis. These three types along with juvenile rheumatoid arthritis are the most common forms of arthritis (McDaniel, 1973).

Rheumatoid Arthritis

Rheumatoid arthritis is considered the "classic" arthritis since there is inflammation in the joint (Fries, 1986). It affects about one-half of one per cent of our population (Lorig & Fries, 1986), which is about one million United States citizens. Three-quarters of the rheumatoid arthritics are women (Lorig & Fries, 1986). Stiffness, body ache, and fatigue are the most frequent symptoms of this disease. Rheumatoid arthritis can appear at any age although it usually appears in the fourth and fifth decade of life (Lorig & Fries, 1986). When inflammation occurs in rheumatoid arthritis, the

cardinal signs are redness, warmth, pain, and swelling (Lorig & Fries, 1986). These signs usually occur symmetrically, but the joints that are affected are not consistent between people with arthritis (Lorig & Fries, 1986). While rheumatoid arthritis can affect all of the joints, the carpal and metacarpo-phalangeal joints are most frequently involved with the tibiofemoral and the metatarsophalangeal joints involved to a lesser extent (Lorig & Fries, 1986). Morning stiffness and rheumatoid nodules are other common problems associated with rheumatoid arthritis. This is the "most destructive type of arthritis known" (Lorig & Fries, 1986, p.8). However, only one-sixth of all rheumatoid arthritic persons will have any crippling or deformities and, with time, even those "worst forms of rheumatoid arthritis tend to get better" (Lorig & Fries, 1986, p. 8).

Osteoarthritis

Osteoarthritis appears initially in the joints between the ages of 45 and 90. It will occur in nearly everyone over 60 years of age (Fries, 1986). There are three forms of osteoarthritis (Lorig & Fries, 1986): (a) the first type of osteoarthritis is the mildest and it causes knobby enlargement of the joints of the fingers, some stiffness, and little else; (b) the second type affects the spine in the neck and low back regions; the appearance of bony growths on the spine and the fraying of the intervertebral discs may occur early in life; however, few or no symptoms relating to the arthritis may present themselves; and (c) the third version of osteoarthritis occurs in the weight-bearing joints, usually the knees and hips, and it can be

severe. Any combination of the above three types is possible in one patient with osteoarthritis. When the cartilage at the end of the bone receives insufficient oxygen and nutrition from synovial activity, it becomes frayed and wears away (Lorig & Fries, 1986). Osteoarthritis typically has little or no inflammation and tends to affect the body asymmetrically (Lorig & Fries, 1986).

Ankylosing Spondylitis

Ankylosing spondylitis is a genetic disease that affects around two million people in the United States; it initially affects 15-40 year olds (Fries, 1986). People with ankylosing spondylitis tend to have a specific gene, B27, in their genetic structure (Fries, 1986). The most common sites of inflammation are at the point of ligamentous or tendinous attachment and not in the joint. Morning stiffness is a common symptom (Fries, 1986). Ankylosing spondylitis first manifests as inflammation of the sacroiliac in the lower back and may, in time, progress up the spine, in a caudal to cephalic direction. In severe cases the skull may ankylose (become fused) with the neck vertebrae (Fries, 1986). Ankylosing spondylitis is generally a mild condition and a vigorous lifestyle is possible without major limitations (Fries, 1986).

Exercise and arthritis

Exercise and Rheumatoid Arthritis

Considerable research on rheumatoid arthritis and exercise has been conducted. For example, Harkcom, Lampman, Banwell, and

Castor (1985) used 15 minutes of bicycle ergometer exercise three times per week to improve the aerobic capacity of twenty women with rheumatoid arthritis. A 10-week training program consisting of exercycle, stretching, and strengthening was designed for 24 patients with rheumatoid arthritis (Steveken, Ytterberg, Young, Lasher, Arill, Krug, Mullin, Messner, & Mahowald, 1988). Twelve patients also trained an additional reinforcement session and all were compared to eight patients in a control group. The results showed a decrease in pain, decrease in tender joint count, increase in leg strength, and an increase in cardiovascular endurance.

Nordemar, Ekblom, Zachrisson, and Lundquist (1981), in their long-term study (4-8 years), used 23 patients with rheumatoid arthritis who completed one hour of organized training of various physical activities every other week. Riding a bicycle ergometer at home was also encouraged. The results showed a treatment group three times more physically active than the control group. Less medical attention, less medicine, less joint stiffness, and less pronounced joint destruction were other comparative findings. Nordemar (1981) used the same group to find a positive correlation between capacity for the activities for daily living (ADL) and the reported amount of physical training. In the feelings of physical discomfort and weakness were less in the treatment group than in the control group. Harkcom et al. (1985) used 15 minutes of bicycle ergometer exercise three times per week to improve the aerobic capacity of twenty women with rheumatoid arthritis.

The proper balance between exercise and rest is important to rheumatoid arthritic individuals for long-term success (Nordemar, 1981). Rest reduces inflammation and fatigue. Rossky (1981) urged at least one rest period during the day and 8 to 10 hours of sleep at night. Too much rest produces stiff joints, osteoporosis, and muscle atrophy. Moderation in rest and exercise is the key to a long-term success (Nordemar, 1981). Exercise was found not to be inflammatory, nor did it invoke joint symptoms, when a single bout of strenuous, nonweight-bearing exercise was performed (Beals, Lampman, Banwell, Braunstein, Albers, & Castor, 1985). Range of motion (stretching) and strengthening exercises to the level of tolerance are recommended for those persons with rheumatoid arthritis (Simpson & Dickinson, 1983). Endurance activities, also to the level of an individual's tolerance, is another key to long-term success in maintaining the desired, healthy lifestyle. Banwell (1984) urges isotonic exercises for the joints or body segments not affected by the arthritic conditions.

Exercise and Osteoarthritis

Research investigating the effects of exercise on osteoarthritis has been focused on two general categories: (a) pathogenesis of osteoarthritis, and (b) the treatment of osteoarthritis. The exercise of endurance running is one example of a possible pathogenetic factor. Endurance runners were assumed to be at risk due to the forces generated on each running step and the number of repetitions involved. However, Sohn and Micheli (1985) found no significant

difference between the incidence of degenerative arthritis in a group of runners and a group of swimmers.

In another study, Beals et al. (1985) found that a single bout of strenuous, nonweight-bearing exercise did not create inflammation or increase the number of joint symptoms. This study shows that strenuous exercise could be performed under certain conditions.

Young and Minor (1986) employed a protocol consisting of three phases: (a) warmup, (b) aerobic workout, and (c) cooldown. The warmup used static stretching and strengthening isometrics. The aerobic phase utilized up to 30 minutes and used a variety of dynamic exercises at one's target heart rate, such as interval training and upper body weightlifting. The cool-down consisted of active range of motion and static stretching. Further joint exacerbation must be avoided (Young & Minor, 1986). Part of the recommended treatment for osteoarthritis involves the stretching of the soft tissues around the joints to the level of tolerance up to the full range of motion several times a day. If weight-bearing joints are affected, obesity control lessens the chance for joint pain. Activities that are not too stressful to the joints, for example, walking, swimming, and bicycling, and that have a smooth, not jerky motion, are recommended (Lorig & Fries, 1986). In a specific protocol supporting a similar philosophy of activity limitation, Noyes and McGinniss (1985) suggested that, after an anterior cruciate ligament injury of the knee, one should modify the intensity of their activities. The modification could limit the present and future risk for getting

injured or for acquiring osteoarthritis. This is done by limiting the intensity of the activities and the participation in jumping, twisting, or turning exercises or activities.

While inflammation is not a primary symptom of osteoarthritis, it has occurred in secondary injuries such as synovitis. Nonetheless, strenuous, nonweight-bearing exercise can be advocated when the lateral rotational aspects around the knee and hip are limited. Simpson and Dickinson (1983) recommended the use of various forms of heat or cold before exercising to reduce pain and ease movement.

Exercise and Ankylosing Spondylitis

There is a dearth of research on exercise and ankylosing spondylitis. Tomlinson, Barefoot, and Dixon (1986) showed statistically significant improvement in the parameters measured in mobility, posture, and lung function in 180 patients with ankylosing spondylitis after three weeks of hydrotherapy, sports, and spinal exercises. Bulstrode, Barefoot, Harrison, and Clarke (1987) illustrated success in passive range of motion on hips of patients with ankylosing spondylitis. An increase in the range of movement of all of the hip actions except flexion was noted; good compliance in their exercise program was also reported. Fries (1986) observed that daily stretching of the soft tissues surrounding the affected joints in all directions is helpful for persons with ankylosing spondylitis. In addition, deep breathing exercises help lessen the rate of fusion of the rib joints. If fusion has occurred, the position of best function

will happen (Fries, 1986). Ankylosing spondylitis is usually not severe in its physical limitations. Many physical activities, such as tennis, golf, and swimming, are possible. The Ankylosing Spondylitis Association (1985) emphasizes doing the spinal extension exercises among the many spinal stretching and posture-related exercises.

In conclusion, range of motion (stretching) and strengthening exercises to the level of tolerance is recommended for osteoarthritis, rheumatoid arthritis, and ankylosing spondylitis (Simpson & Dickinson, 1983). In the acute stages of pain and/or inflammation, passive range of motion is suggested along with rest, which may be more important (Simpson & Dickinson, 1983; Balke, 1984). Furthermore, isometric exercises are recommended during the times when the arthritis is in the nonacute stages (Banwell, 1984). In addition, Banwell (1984) urged the use of isotonic exercises for the joints or body segments not affected by the arthritic conditions. The general rule followed is that, if pain (muscle soreness pain is an exception) persists for more than two hours after the exercise period ends, reduce the intensity or the rate of the exercises (Lorig & Fries, 1986). A general set of rules for arthritic joint protection is presented in Table 1.

Educational Benefits of Television and Video

Television and video media have benefitted education, especially in recent years. Garforth (1985) cites three technological trends which improved the importance of the television and video

media: a) "decreasing costs, increasing reliability, and relative ease of use" (p. 175), which makes technology more accessible, b) rapid, global means of transmission allowing face-to-face and local radio and television interactions, and c) the integration of communicative devices for rapid data processing and storage. The increased accessibility, more universal use, and easier processing and storage had, in turn, created more educational end products.

Educational Benefits of Television

Video is the focus of this project. While the "practice of using video in education and training has drawn heavily from broadcast television" (Elliot, 1984, preface p. 1), the research justifying video instruction in education also draws heavily from television.

Unlike books or other written material, television has some visual benefits. Gilder (1982) reports that visual memories can trigger verbal memories easily and quickly. Elliot (1984) lists numerous other examples which can be extracted from Table 2, such as individualized learning, convenient usage, and re-editing capabilities. Gerlach & Ely (1980) believe photomicrography (magnified photography) in a motion picture "extend the limits of human vision" in order to bring the world to the classroom and have a better lecture transition (p.344). Wood (1964) added that "kids are accustomed to TV as an entertainment medium" (p.56); the free time during the taped lecture could be devoted to answering questions by your teacher's assistant(s) or critiquing your own lecture, and any

Table 1

Joint Protection Guide

-
1. Encourage each joint to be used at maximum range of motion and strength.
 2. Avoid positions of deformity.
 3. Use each joint in its most stable anatomical and functional plane.
 4. Use the strongest joints available for the activity.
 5. Any activity that involves holding joints or using muscles in one position for any undue length of time is undesirable.
 6. Never attempt an activity that cannot be stopped immediately if it proves to be beyond the power of the person to complete it.
 7. Recognize pain as danger of over-activity. Pain lasting two hours after activity or exercise is contraindicated.
-

Note. Adapted from Lorig & Fries, 1986; Simpson & Dickinson, 1983.

Table 2

Benefits of Video

-
1. Information can use moving pictures, various forms of sound, and graphics to form an effective presentation.
 2. Videotape can be re-used, have immediate playback, and be checked easily for various quality levels.
 3. Various individual shots and angles can be selected for better understanding.
 4. Various audio and visual materials can be placed in the production.
 5. Individual learning is possible anytime.
 6. Past events that are time-consuming or difficult can be videotaped and shown when convenient.
 7. Absent students can view missed material when the material is videotaped.
 8. Domestically-formatted copies can viewed at home.
 9. In-house, standardized training material can be videotaped, copied, and widely distributed.
-

Table 2 continued.

Benefits of Video

-
10. Videotaped, routine training can free trainers for other more important duties.
 11. Many production tasks are challenging and enjoyable.
 12. Careful production planning promotes properly ordered, educational material.
 13. Any part of any videotape can be replayed as needed.
 14. Videotape programs can be re-edited easily.
 15. Two soundtracks allow two voice-overs, such as an English-Spanish combination, for learning a foreign language.
 16. Video programs have had success influencing others, especially voters, in political campaigns.
 17. Video production promotes intra-team cooperation.
 18. Trainers and educators have a tangible product to be monitored in future planning.
 19. Portable video equipment allows for various videotapings and presentations in many arenas.
-

Note. Adapted from Elliot, 1984, pp. 12-13.

additional questions unanswered during the lecture period could be answered during office hours.

Televised instruction comes in many forms, ranging from pre-packaged video courses to an interactive telecourse to a part of a lecture class. Televised instruction (ITV) had been compared in many ways to direct teaching, which is the traditional, face-to-face classroom. Schramm (1962) surveyed 393 studies and summarized their results: 83 favored the ITV form of instruction, 255 showed no significant differences between both modes of instruction, and 55 favored the direct classroom form of instruction.

Hackman & Walker (1990) cited a study which compared a variety of televised courses to those in traditional face-to-face classrooms. The similarity of grades in both modes of instruction indicated that no intrinsic differences existed between the two modes of instruction. While Hackman & Walker agree somewhat with these conclusions, they would rather have an interactive system promoting student questions and comments which, in turn, increases student satisfaction with a particular course.

In additional research, Greenhill (1964) stated that television and video media "provide a marvelous vehicle with excellent control over the stimulus materials" (p.21). When this form of instruction is created, Baker (1988) prefers "excellent, clear, informed and memorable" (p.67) words along with a good visual capacity in order to educate the average American. Television now supplies two-thirds of the 62,000 words consumed daily. Baker desires television

programs that are both entertaining and educational; he then stated, from a Robert Frost poem, that the words in an educational program should "begin in delight, and end in wisdom" (p.67).

Educational Benefits of Video

There are many benefits of video, some of which are listed in Table 2. Moss (1983, pp.13-14) believes that the video medium is usable in training pupils, such as career and social skills, even those resistant to conventional teaching methods. He further believes that stimulating video can inspire a person of a minority because of the visual and vocal nature of a video in a way inexpressible in a written form.

Garforth (1985) elaborated on television's (or video's) capability for education over a large geographical distance (distance education) using the example of agricultural field extension workers in remote areas. Parlar (1987) reported on a distance education for career skills training. A training video helped the bank employees standardize and improve their sales skills, first at one bank and then throughout the various bank branches.

Teaching science methods and English composition are other training videos in an educational setting (Johnson, 1988; Regina, 1988). Reider (1987) includes in this list of benefits the idea that an individual teacher, with a blank videotape could copy a television program at home and literally change his or her curriculum every night. Reider states that this type of classroom instruction is more

readily available than school district-level films and is also used more than 16 millimeter films. In addition, instructional television, used locally or otherwise, is unlike that of broadcast television (Moss, 1983); the material is placed so that the student can control its pace or order. This could, as believed, change the student into a less passive viewer, allow him or her to "negotiate to an idea and beyond" (p.141), and gain more control of one's educational destiny. Reider (1987) cites some factors that helped the acceptability of the VCR in the classroom: low cost versus value, flexibility, physical accessibility, good reliability, low level of maintenance, and the ability to be unnoticed while in use (transparency). This coupled with the benefits of video production, as shown in Table 2, can make teaching easier.

Television and video media in its many forms appears to be as good or better than direct (face-to-face) teaching. As one of the conclusions of their study, Chu & Schramm (1968) believed that "television [or video] can be used efficiently to teach any subject matter for which one-way communication will contribute to learning" (p.330). They summarize much of the research regarding the role of instructional television in their concluding question, "what kind of guidelines can we extract from this body of research?"

For one thing, it has become clear that there is no longer any reason to raise the question whether instructional television can serve as an efficient tool of learning. This is not to say that it always does. But the evidence is now overwhelming that it

can, and under favorable circumstances, does. This evidence now comes from many countries, from studies of all age levels from preschool to adults, and from a great variety of subject matter and learning objectives. The questions worth asking are no longer whether students learn from it, but rather, (1) does the situation call for it? and (2) how, in a given situation, can it be used effectively? (p.331)

Chapter Summary

Therapeutic exercises for arthritic individuals have been in existence for many centuries, with specific contributions being made by Hippocrates, Aurelianus, Tissot, Ling, Jahn, and Bonnet. In the last forty years with the help of chemotherapy, major strides in physical therapy for persons with arthritis have occurred.

Arthritis denotes pain and inflammation in the joint or joints. Rheumatoid arthritis fits the classic signs of arthritis. Osteoarthritis causes pain in the joint from joint degeneration like rheumatoid arthritis but it usually lacks the inflammation in the joint. Ankylosing spondylitis causes pain and stiffness as major signs with inflammation sometimes occurring at the ligamentous or tendinous attachment(s). "Arthrosis" is the term applied to this group of conditions.

Exercise has had positive effects on arthritic persons who have participated in research. Whether a single workout or a long term exercise program, rheumatoid arthritic participants in research

studies have experienced less joint pain and stiffness, less medical attention, increased physical activity, increased muscular strength and endurance (Steveken et al, 1988). Osteoarthritic participants in a single workout experienced no inflammation in the joint or increase in the number of joint symptoms (Beals et al, 1985). Research participants with ankylosing spondylitis encountered a significant improvement in their flexibility, posture, and lung function after performing a three week exercise program (Tomlinson, Barefoot, and Dixon, 1986).

In conclusion, exercise, in its passive or active modes, is a desired method of treatment for arthritic persons. Following the rules for joint protection is recommended anytime (Lorig & Fries, 1986). The desired results of a well-planned exercise regime for arthritis are good mobility, strength, and endurance as well as no pain or inflammation. If done regularly, dramatic physical improvements can occur (Lorig & Fries, 1986).

There are many benefits from the use of television and video for instruction. Table 2 elaborated on many of these benefits, such re-editing or the pacing capability for individual learning (Elliot, 1984). Its use has been inside a bank for training bank employees and in a school lab for teaching science methods as well as training people from long distances (Elliot, 1984). In addition, its use has been increasing due to decreased user costs, increased reliability, an increased ease of use, and better storage, to name a few (Reider, 1987). Its ability to instruct others, via ITV, appears to be the rough

equivalent of face-to-face instruction, sometimes better and sometimes worse (Hackman & Walker, 1990). All in all, video (or TV) instruction can be an effective tool of learning, regardless of geographical area, age group, or subject matter.

Chapter 3

METHODS

The purpose of the project was to create an exercise videotape for Spanish-speaking people with arthritis. This chapter will present a discussion of: (a) general procedures, such as description of the models, (b) videotape techniques, such as soundtrack and editing, (c) videotape contents, such as the theoretical information upon which this video is based, and (d) evaluation procedures.

General Procedures

Description of the Models

Volunteer models were solicited from a list supplied by the Stanford Arthritis Center according to their Hispanic origin, their disability, and their gender. Four or more adults with an Hispanic origin, were selected for roles as "on-camera exercisers," preferably half with rheumatoid arthritis and half with osteoarthritis.

The narrator was fluent in Spanish with a good speaking voice and had prior narrative experience in an audio production.

Protocols

There were five forms for each model to sign: (a) agreement to participate, (b) agreement to participate (Spanish), (c) medical acceptance form, (d) liability release form, and (e) the model release form. Forms "a" and "b" consisted of the English and Spanish

agreements to participate in the videotape without any duress. Form "c" concerned the medical safety procedures for the videotape production. Form "d" was the financial liability release form releasing any liability from claims arising from participation in the videotape. Form "e" was the model release for the use of the models' appearance in the videotape. The forms are listed in the Appendices A through E respectively.

Pamphlet

There is a pamphlet accompanying the videotape consisting of material not covered in the videotape, such as pain management and pre-exercise preparation. In addition, unique features of the video are explained. See Appendices H and I for English and Spanish versions respectively.

Videotape Equipment

The videotape equipment consisted of a Sony DXC-3000A camcorder with 3/4 inch videotape augmented by the JVC CR-4900U audiovisual recorder for the remote shots. The studio shots utilized two Sharp A1 cameras, one for lateral or diagonal views of the action as well as one for the frontal views. Both cameras recorded simultaneously during the exercise section, using the Sony VO-5800. One of the two cameras recorded during the introduction containing the general advice and guidelines. The Chyron ACG was employed to create titles and graphics. At the editing stage a Sony VO-5800 (early editing) or Sony VO-9800 (later editing) videocassette

recorder and Panasonic CT-110MA color monitor were assisted by the Sony RM-440 editing control unit for the visual copy in order to match the narration in the first sound channel. The visual copy was edited to the final copy stage before the musical soundtrack is applied to the second sound channel. The Sony CDP-690 compact disc player and a Russco Cue Master turntable enabled the sounds to be mixed by the Soundcraft 200Delta mixer and applied to the second channel of the soundtrack of the final videotape.

While compact disc music, provided by De Anza College, provided the bulk of the music in the soundtrack, a Spanish album was used in the soundtrack and the permission letter for the use of the music is in Appendix O. The finished videotape was transferred to a 1/2 inch VHS videotape for the evaluation stage and for general use.

Videotape Contents

Program organization

There are several methods for teaching physical exercise: lecture, discussion, lecture-demonstration, practice, inquiry (student-teacher involvement), and oral presentation (by students) (Dowell, 1975). The lecture-demonstration method was used in this project.

The visual and verbal examples included in an instructional videotape consisted of a progression of exercises with a warmup stretch, a strength workout, and cooldown advice. The exercises planned for the videotape are safe, medically-sound, challenging,

easy to understand and use, and fun for the user. A culturally and linguistically appropriate soundtrack was added. The videotape introduced an arthritis exercise program into a sector of the population that has previously been neglected. The videotape also helped the user become physically healthier through regular exercise.

The videoscript was presented in Spanish in three parts (see Appendix G): (a) arthritis and therapeutic exercise, their interrelationship and individual characteristics as well as other specialized, introductory advice, (b) exercises in various positions and with various persons with arthritis in two different workouts, and (c) a review of the benefits of exercise, references, and credits. The English version of the videoscript is in Appendix F.

The nearly verbatim, Spanish videoscript, used in the filming and production of the arthritis videotape, was excerpted from Lorig & Fries (1986) with their permission. The permission letter is in Appendix N. Any alterations in the material used were done either for clarification, for a better transition to a visual medium, or for the sake of brevity.

Two unique features were used in the video. The studio background, directly behind the models, was solid-colored which allowed the exercising body parts to be visually distinctive from the background (Simmons, 1986). The volunteer models verbally motivate the viewer into action by explaining why exercise benefits them.

The pamphlet explained four helpful features within the video (see Appendix H). The helpful features were a) different background colors for finding different parts of the video, b) exercise numbers in the signs for further reference in the Arthritis Helpbook, c) functional benefits shown for each exercise, and d) different models performing the exercises in a similar yet modified way. The Spanish version is in Appendix I.

One of the physical layouts used in the video, with the group leader being the producer, is shown in Figure 1:

Figure 1 Models Layout

Exercise Scenarios

Basic exercise scenario

TITLE	EXERCISE	EVERYONE	NEXT	NEXT					
PAGE	INSTRUCTION-	EXERCISING	TITLE	EXERCISE					
	DEMONSTRATION		PAGE	INSTRUCTION					
				DEMONSTRATION					
TIME LINE	->	->	->	->	->	->	->	->	->

EXAMPLE of a variation to the basic scenario:

TITLE	EXERCISE	EVERYONE	NEXT	EVERYONE
PAGE	INSTRUCTION- EXERCISING	EXERCISE	EXERCISING	
	DEMONSTRATION	DEMONSTRATION		

2 variations of one exercise

1	2
Group leader and	Different model showing
model showing	second exercise variation
this exercise	with the correct technique

The narration is, at least, twice as loud as the music being played in the background. The leader/model layout changed according to the scenario desired.

Evaluation Procedures

This videotape was evaluated via two instruments: a technical survey and an educational evaluation. Both evaluative tools were

used by south San Francisco Bay residents, either in a group or in an individual setting. None of the subjects were directly involved in the creation of the videotape. This was done in order to lessen reviewer bias.

Survey

Subjects. The survey, shown in Appendix J along with the comments, was completed by 23 expert individuals, listed in Appendix Q, after they viewed the videotape. These subjects were be selected by the producer for their expertise in, at least, one of the three areas of the survey (technical, exercise, and Spanish-speaking). The experts were graduate students (or higher educationally) in their respective areas; instructors were preferred. None of the subjects were directly involved in the video production.

Likert Survey. The Likert (1932) rating scale allows an observer to rate his/her opinion in a certain area, eg. lighting. While Likert has used a five point scale, ranging from "strongly agree" to "strongly disagree," this video project used a ten point scale for its survey for a greater opinion differentiation in the results. The ten point scale represents the opinion of the subject and the point range of the rating scale extends from 1 (POOR) to 10 (EXCELLENT). The subject circled the number that was closest to their opinion in that area or circle "NO." The "NO" (no opinion) was used when the subject felt that insufficient information was available to respond. The results from each area's rating were compiled and averaged. An average of "5" or less was a negative rating while a rating greater

than "5" was a positive one. "No opinion" answers were not tabulated. The results of the survey were used to determine the quality of this video production.

Educational Questionnaire

Subjects. Thirty-one educational subjects completed the pretest and viewed the videotape; 22 subjects completed the posttest. The subjects were recruited from three senior centers that cater to Spanish-speaking persons with arthritis.

Questionnaires. The pre- and posttests consisted of 2 True (T)-False (F) tests, as shown in their Spanish version in Appendices L and M. The subjects' scores were expected to improve after the treatment (the viewing of the videotape). The correct answers received "1" point while an incorrect answer received no score. Both tests included the same questions though the sequence of questions was altered to prevent the the subjects from remembering the order in the pretest. A correlated t-test was applied to determine whether a significant difference ($\alpha < .05$) occurred between pre- and posttest scores (See Appendix K for the English Pretest.)

Chapter IV RESULTS

The observation of "Usted Y Su Artritis" resulted in positive survey evaluations from the technical experts and a possible increase in knowledge for the participants answering the questionnaires. The videotape survey using the 10 point Likert Rating scale showed an overall positive attitude for the technical expertise contained in the video. The overall rating was 7.71 with a range of 5.86 to 8.70 (Table 3). The next chapter contained a fuller description of the subjects' comments regarding each area of the survey. The purpose of this video was to present an exercise program for people who are Spanish-speaking and have arthritis. An increase in viewer knowledge was one of the foci for this video. As shown in Table 4, there was an increase in the number of correct answers after viewing the video. Likewise, some of the participants left the viewing room, fearing that they would lose their ride home, and did not return the posttest questionnaire; therefore 31 pretests and 22 posttests were completed. Pretest scores averaged 10 correct answers while the posttest scores averaged 11.23 correct answers. A t-test value of 1.87 ($P < .10$) was calculated. Using an alpha level of .05, this difference would be considered non-significant. A range of percent change from the pretest answers to the posttest answers ranged from 20.82 to (23.46) with an average of 6.13 % change from the pretest correct percentage (55.74%) to the posttest (61.87%).

Table 3
Videotape Survey

	Score		
<u>Technical Merit</u>	<u>M</u>	<u>SD</u>	<u>Range</u>
Picture	7.87	1.71	3-10
Camera	7.66	1.90	3-10
Lighting	7.62	2.17	2-10
Sound	5.86	2.11	1-10
Editing	6.89	1.94	3-10
Graphics	7.50	2.16	3-10
<u>Content Merit</u>			
Introduction	7.71	2.16	4-10
Exercise Safety	8.70	1.41	4-10
Exercise Variety	8.70	1.41	2-10
Overall Ease of Use	7.61	2.60	1-10
Spanish Grammar	8.56	1.69	5-10
Music	7.95	1.82	3-10
Dress	8.38	1.78	3-10
Warmup/Cooldown	8.19	1.75	5-10
Motivation	7.43	2.71	1-10
Video Length	7.26	2.71	2-10
Overall Organization	8.10	2.33	3-10
All Surveys (No.= 23)	7.71	.76	

Table 4

Questionnaire Data

Score (number correct in random order)					
Pretest		Posttest		Pretest	
Subject		Subject			
1	14	15	17	10	10
2	14	15	18	10	9
3	13	14	19	10	9
4	13	14	20	10	9
5	12	13	21	9	8
6	12	13	22	9	5
7	12	13	23	9	
8	12	12	24	9	
9	12	12	25	8	
10	11	11	26	8	
11	11	11	27	8	
12	11	11	28	8	
13	10	11	29	6	
14	10	11	30	5	
15	10	11	31	4	
16	10	10			
		<u>Pretest</u>	<u>Posttest</u>		
All scores' <u>M</u>		10.00	11.23		
All scores' <u>SD</u>		2.34	2.37		

Table 5
Scores of the Questionnaires

Pretest Question	Total Correct	Percent Correct	Posttest Question	Total Correct	Percent Correct	Percent Change
1	15	48.39	2	13	59.09	10.70
2	20	64.52	4	15	68.18	3.66
3	27	87.10	1	17	77.27	(9.83)
4	27	87.10	5	14	63.62	(23.46)
5	2	6.45	3	5	22.73	16.28
6	14	45.16	6	15	68.18	23.02
7	28	90.32	10	19	86.36	(3.96)
8	25	80.65	9	19	86.36	5.71
9	21	67.74	13	10	45.45	(22.29)
10	10	32.26	7	11	50.00	17.74
11	8	25.81	11	4	18.18	(7.63)
12	22	70.97	8	20	90.91	19.94
13	23	74.19	12	19	86.36	12.17
14	25	80.65	14	19	86.36	5.71
15	2	6.45	16	6	27.27	20.82
16	16	51.61	18	15	68.18	16.57
17	23	74.19	15	18	81.81	7.63
18	3	9.68	17	6	27.27	17.59
M (Pretest.N.= 31)		55.74	(Posttest N.= 22)		61.87	6.13

Chapter V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The data from the survey and the questionnaires were analyzed and two viewpoints of the video, "Usted Y Su Artritis" were statistically expressed. The first viewpoint was shown by the survey as taken by the technical experts while the second was illustrated by the difference between the scores of the questionnaires as taken by the participants.

Survey

The survey of the videotape used the Likert scale of 10 and the first part of the summary concerned the technical merit of the video. This section of the survey was rated lower (7.23 versus 8.05, on average) than the content merit section of the survey.

Technical Merit. The technical merit section was frequently discussed. More specifically, "picture" and "camera" had ratings of 7.87 & 7.66 respectively and three "blurry picture" camera shots. While the shots are indicative of the some student assistants' inexperience with the camera, the producer should review the various video shots after the studio work to determine if a re-shoot is necessary.

A lower rating (7.62) in "lighting" was mainly due to poor lighting on the narrator. This negative comment could be reduced by

consistent background lighting between "takes" (studio sessions) and a better quality lighting for all "takes." The lowest rating (5.86) in this section was the "sound." This occurred because the background music was too loud (when compared to the narration) and one section in the introduction of the video was muted. The final version of the video was edited with the changes to correct the above problems. The music soundtrack volume was lowered to levels below the narrative volume. The muted section in the introduction was due to a defect in the soundtrack of the master tape so a new set of soundtracks and visual material were applied to a new master tape.

"Editing" (6.89) and "graphics" (7.50) shared a common problem: shots were shown too briefly. The graphic or exercise segments should have played longer. This problem was created by the need to shorten the overall time of the video from over 68 minutes to 60 minutes for less expensive reproduction costs. The action to shorten many individual segments and delete some exercises achieved the overall time goal. An alternative action could have been to delete more exercises and allow for more playing time for the existing graphics and exercises. Otherwise the quality of the graphics were favorably evaluated.

Content Merit. This section was rated higher than the "technical" section, as stated previously. The "introduction" (7.71) may have needed some changes: an audio background to accompany the liability clause and more graphics within the introduction. The

former was the producer's decision while the latter was limited by breakdowns occurring with the equipment creating the graphics or other special effects and by the producer's decision to limit graphics only to appropriate areas. While the narrator was given latitude to speak at a comfortable pace, some reviewers thought that he spoke in too much of a monotone without enough energy. Others thought the narrator was good. Nonetheless, many thought the information was good quality.

The sections of "exercise safety" and "exercise variety" were rated well (8.70 for both). This exercise program has been used for ten years with physical therapists and rheumatologists who have eliminated the potentially harmful exercises during that time. Many non-Spanish speaking reviewers thought that the "Back Lift" (#55) and the "Three-Way Neck Stretch" (#27) exercises were harmful not realizing that accompanying the exercises were graphics commenting on those same concerns. Likewise some exercises appeared to be performed similarly but were explained differently. These findings were verified after the surveys were completed. The "number preceding the exercise being out of order" was another comment. The number appearing in the exercise title was purposefully out of order since the exercise program was divided into two exercise workouts and arranged differently from the book source it was excised. This information was not given to the reviewers.

The "ease of use" had no comments while the higher rated (7.61 versus 8.56) "Spanish grammar" did have comments. A

frequent comment criticized the lack of accents and other punctuation marks unique to the Spanish language. The producer was unaware that such unique graphic marks could be created for the "surveyed" version of the video; this problem has, however, been corrected. This final edit also corrected many of the spelling or grammatical errors that may have initially been overlooked by Ignacio Corona, Carlos Barillas, and Zulma Acevedo, the three interpreters used in the video.

The sections, "music", "dress", and "warmup/cooldown," received high ratings (7.95, 8.38, & 8.18 respectively) with only two comments among them. The "too ethnic" music should have been mixed more with contemporary tunes according to one reviewer. Another reviewer thought that more uniform apparel among the models would make the video look more professional. The lack of a budget limited both proposals, one for buying copyright clearances and the other for buying uniforms for the models.

The section, "motivation," had one comment by one reviewer: "too low energy used by the models." Perhaps this rating (7.43) could be improved by the insertion of a "smile" sign near the camera and by lessening the amount of studio time or sessions.

The lowest rated area (7.26) in this section, "video length," was ranked lower because many of the reviewers, who did not know Spanish, did not know that there were two workouts in the video of twenty minutes each and not one workout of forty minutes. "The

exercise segment was too long" was the frequent comment for this group of reviewers.

The "overall organization" section (8.10) yielded mixed comments. One reviewer liked the "De Anza College" sign in the background (where it was filmed), while two others disliked it. One reviewer preferred a more colorful background. All in all, many of the reviewers thought the video seemed well done.

Questionnaires

One of the foci for this video was to increase the specific knowledge on exercise for the Spanish-speaking viewer. While there was an increase in the number of correct answers (10.00 to 11.23), the t-test value of 1.87 ($P < .10$) did not indicate a significant difference (.05 alpha level). That is, this difference may not be significant enough to show, in statistical terms, an increase in knowledge gained as a treatment between the two questionnaires, pre- and posttest. The pre-determined alpha level ($P < .05$) was not met thus, no significant difference was shown. The percent change from the correct answers of the pretest to the posttest was also small (6.13 %).

The reasons for the small increase are varied and pure conjecture on the part of the producer. One reason could be the questionnaire itself. Maybe the information tested was so general that the pretest knowledge of the participants' was already known and not significantly different from the posttest knowledge. Also,

the unique knowledge on arthritis or exercise learned from the video may not have been tested via the questionnaires for a significant difference..

Defects in the video viewed for the questionnaires session may have hindered the amount of knowledge gained. The producer read the muted section of the video. This specific information may not have been understood by some of the participants. Furthermore, the grammatically incorrect graphics (no punctuation marks) could have hindered the understanding and knowledge acquisition for the subjects.

While the video brings a new element of visual information to the participants, the less-than-ideal environment for learning may have hindered the learning process in three possible ways. First, the producer may not have been able to answer all of the questions during the posttest period without actually giving the answers to the test-takers. Secondly, learning is improved when the viewers are able to stop the video and ask the teacher or other health consultant for a better explanation (Hartley, 1968). Stopping in this group setting was not possible until the end of the video.

Lastly, some of the group members viewing the video wanted to leave. Their van, which normally took them home, was to wait for them until after the posttest was completed. Although they were assured that the van would wait for them, many participants left the viewing room (they also did not return the completed posttests, as promised) and went home earlier than the producer (questionnaire

administrator) had hoped. The distraction of some viewers leaving may have hindered their learning. Lastly, the video may not have had sufficient technical quality to promote learning due to the previously discussed flaws. Thus, there may have been less knowledge gained, including the knowledge needed for the posttest.

Likewise, the way the information is presented may be improved for an increase in knowledge acquired. For example, Schramm (1971) found an increase in learning when the audience is motivated and interested; the best way to present the same information and motivate the viewer may not have been present in this video.

In summary, there are numerous techniques which could be recommended for improving a production like this one. Overall, taking a film or video production class prior to making a video of this length or caliber is advisable. This would lessen the number and/or the intensity of the mistakes encountered in its creation and shorten the time needed for production and postproduction.

Some of the changes were listed in the "content merit" section for any future project involving exercise and Spanish-speaking participants. For instance, inform the reviewers about any other literature accompanying the video or any other unique features involving the video so an honest opinion for the survey can be elicited. Having a bigger budget would have helped in obtaining a more professionally-trained staff, paying for copyrighted material, and getting work done in the private sector when the public sector

equipment is broken. Having a cue card with "SMILE" would also have helped.

There were no firm conclusions drawn from the findings of any educational benefits using the video due to the statistically insignificant difference (greater than alpha's $P < .05$). The educational value of the video was in question due to a possibility that the slight increase in the posttest score might be just chance and not true learning. While learning may have occurred, it was not shown statistically.

Trying different questionnaire questions or a different teaching method may elicit a significant statistical improvement in knowledge. The comments from the survey (Appendix J) illustrate most of the technical flaws and strengths present in the video. Though untested, the updated version of the video corrected some of the forementioned flaws and may elicit a significant knowledge improvement.

The video, "Usted Y Su Artritis", was not created with just those two goals in mind (technical and educational); other education may have occurred. Correct exercise form was demonstrated as well as a fun, healthy activity with a musical background was presented. The video presented for the first time in the United States a unique set of workouts for a unique sector of our population, the Spanish-speaking person who has rheumatoid arthritis, osteoarthritis, or ankylosing spondylitis. This is another important way of coping with arthritis and telling others "I can do it!"

References

- Arthritis Foundation. (1987). PACE level 1-People with Arthritis Can Exercise [Videotape]. Atlanta, GA: Arthritis Foundation.
- Baker, W.F. (1988). Educational television has broader meaning in TV-oriented society. Television-Radio Age, 35, 67.
- Balke, Bruno. (1984). Exercise and arthropathy. American Academy of Physical Education papers, 17, 49-58.
- Banwell, B. F. (1984). Exercise and mobility in arthritis. Nursing Clinics of North America, 19(4), 605-616.
- Beals, C. A., Lampman, R. M., Banwell, B. F., Braunstein, E.M., Albers, J. W., & Castor, C. W. (1985). Measurement of exercise tolerance in patients with rheumatoid arthritis and osteoarthritis. Journal of Rheumatology, 12(3), 458-461.
- Bulstrode, S. J., Barefoot, J., Harrison, R. A., & Clarke, A. K. (1987). The role of passive stretching in the treatment of ankylosing spondylitis. British Journal of Rheumatology, 26, 40-42.
- Chu, G.C. & Schramm, W.L. (1968) Learning from television: What the research says. Washington, D.C.: National Association of Educational Broadcasters. (Cited in Wood & Wylie, 1977) Dowell, L. J. (1975). Strategies for teaching physical education. Englewood Cliffs, NJ: Prentice-Hall.
- Elliot, G. (1984). Video production in education and training. London: Croom Helm.

- Fries, J. F. (1986). Arthritis: A comprehensive guide to understanding your arthritis (2nd ed.). Reading, Mass.: Addison-Wesley.
- Garforth, C. (1985). Mass media and communications technology. Media in Education and Development, 175-179.
- Gerlach, V.S. & Ely, D.P. (1980). Teaching and media (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Gilder, R.S. (1982). Left brain - right brain theory and the design of medical teaching materials. Journal of Audiovisual Media in Medicine, 5, 45-50. (Cited in Moss, 1983) Greenhill, L.P. (1964). Research on instructional television, past and future. In B.L. Griffith & D.W. MacLennan (Eds.). Improvement of teaching by television. Columbia, MO: University of Missouri Press.
- Hackman, M.Z. & Walker, K. B. (1990). Instructional communication in the televised classroom: The effects of system design and teacher immediacy on student learning and satisfaction. Communication Education, 39, 196-206.
- Harkcom, T. M., Lampman, R. M., Banwell, B. F., & Castor, C.W. (1985). Therapeutic value of graded aerobic exercise training in rheumatoid arthritis. Arthritis and Rheumatism, 28(1), 32-39.
- Hartley, J.R. (1968). An experiment showing some student benefits against behavioral costs in using programmed instruction. Programmed Learning and Educational Technology, 5, 219-229.
- Holscher, H.H. (1971). Simplified statistical analysis. Boston: Cahnerns Books.

- Johnson, B.K. (1988). Model what you teach: Science methods video. School Science and Mathematics, 88, 476-479.
- Kelley, C.F. (1964). The efficacy of television in schools. In G.C. Chu & W. Schramm (Eds.), Learning from television: What the research says (pp. 15-117). Stanford, California: Stanford University, Institute for Communication Research.
- Licht, S. (1984). A history of therapeutic exercise. In J.V. Basmajian (Ed.), Therapeutic exercise (pp. 1-44). Baltimore: Williams & Wilkins.
- Likert, R. (1932). A technique for the measurement of attitude. Archives of Psychology, 22, 1-55.
- Lorig, K., & Fries, J. K. (1986). The arthritis helpbook (2nd ed.). Reading, MA: Addison-Wesley.
- Maisano, D. (Producer). (1986). Jane Powell's fight back with fitness [Videotape]. Irvine, CA: Karl-Lorimar.
- McDaniel, L. C. (1973). Selected orthopedic disabilities. Thorofare, NJ: Charles B. Slack.
- Moss, R. (1983). Video: The educational challenge. London: Croom Helm.
- Nordemar, R., Ekblom, B., Zachrisson, L., & Lundquist, K. (1981). Physical training in rheumatoid arthritis: A controlled long-term study. Scandinavian Journal of Rheumatology, 10, 17-23.
- Nordemar, R. (1981). Physical training in rheumatoid arthritis: A controlled long-term study. Scandinavian Journal of Rheumatology, 10, 25-30.

- Noyes, F. R. & McGinniss, G. H. (1985). Controversy about treatment of the knee with anterior cruciate laxity. Clinical Orthopaedics, 198, 61-76.
- Parlar, A.M. (1987). For a captivating sales training tool, turn on the TV. Bank Marketing, 18, 24-25.
- Regina, T.F. (1988). Composing skills and television. English Journal, 77, 50-52.
- Reider, W. (1987). The VCR as high tech: The most significant educational tool since the textbook. Wilson Library Bulletin, 61, 16-18.
- Rice, E. A., & Hutchinson, J. L. (1952). A brief history of physical education (3rd ed.). New York: A.S. Barnes & Co.
- Rosky, E. (1981). O.T.R.: Protection of arthritic joints. In S.B. O'Sullivan, K.E. Cullen, & T.J. Schmitz. Physical rehabilitation: Evaluation and treatment procedures (pp. 241-247). Philadelphia: F. A. Davis.
- Schramm, W.L. (1962). What we know about learning from instructional technology. In W.L. Schramm. (Ed.). Educational television: The next ten years (pp. 52-76). Stanford, CA: Institute for Communication Research, Stanford University Press.
- Sheon, R. P., Moskowitz, R. W., Goldberg, V. M., and Hueter, B. (1987). Coping with arthritis. New York: McGraw-Hill.
- Sherrill, C. (1977). Adapted physical education and recreation. Dubuque, IA: Wm. C. Brown.

- Simmons, R. (Executive Producer). (1986). Richard Simmons's reach for fitness [Videotape]. Irvine, CA: Karl-Lorimar.
- Simpson, C. F., & Dickinson, G. R. (1983). Adult arthritis.Exercise. American Journal of Nursing, 83(2), 273-4.
- Sohn, R. S. & Micheli, L. J. (1985). The effect of running on the pathogenesis of osteoarthritis of the hips and knees. Clinical Orthopaedics, 198, 106-109.
- Steveken, M. E., Ytterberg, S. R., Young, M., Lasher, D., Arill, O., Krug, H., Mullin, Jr., G., Messner, R. P., & Mahowald, M. L. (1988). Minnesota arthritis training program (MATP) for patients with rheumatoid arthritis. Arthritis and Rheumatism (Suppl.), 31(1), R60.
- Swain, D. V. (1976). Film scriptwriting. New York: Hastings House.
- Swezey, R. L. (Ed.). (1985). Straight talk on ankylosing spondylitis. Sherman Oaks, CA: Ankylosing Spondylitis Association.
- Tomlinson, M. J., Barefoot,, B., & Dixon, A. S. (1986). Intensive in-patient physiotherapy courses improvemovement and posture in ankylosing spondylitis. Physiotherapy, 72, 238-240.
- Van Dalen, D.B., & Bennett, B.L. (1971). A world history of physical education. (2nd. ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Walker, H.M. & Lev, J. (1969). Elementary statistical methods. NY: Holt, Rinehart and Winston.

- Wood, J.M. (1964). Higher education. In B.L. Griffith & D.W.MacLennan (Eds.). Improvement of teaching by television.Columbia, MO: University of Missouri Press.
- Wood, D.N. & Wylie, D.G. (1977). Educational telecommunications. Belmont,CA: Wadsworth.
- Young, A. G. & Minor, M. A. (1986). Physical conditioning exercise (PCE) for arthritis patients: Description of method. Arthritis and Rheumatism (Suppl), 29, S144.

Appendix A

AGREEMENT TO PARTICIPATE IN VIDEOTAPE

AGREEMENT TO PARTICIPATE IN VIDEOTAPE
 ENTITLED "USTED Y SU ARTRITIS"
 SAN JOSE STATE UNIVERSITY & DE ANZA COLLEGE
 RESEARCHER: RONALD JOHNSON

I have been asked to participate in a videotape that illustrates physical exercises for Hispanic people with arthritis.

I understand that I will be asked to exercise in a similar manner as illustrated by the exercise leader to my own tolerance level. The possible risks are muscular aches, joint pain, and other physical inconveniences. The possible benefits, to me, are increased knowledge about exercise and arthritis, helping others become more active through my example, and increased health benefits through exercise. Alternative procedures include learning how to participate in a videotaping, resting between filming takes, and minor advising on how to improve this videotape. The illustration of this videotape may be shown to others in a non-commercial manner, but any information from this videotape that can be identified with me will remain confidential and will be disclosed only with my permission or as required by law.

Any questions about my participation in this videotape will be answered by Ronald Johnson (415-968-7023). Complaints about the procedures may be presented to Dr. Payne (408-924-3028), Graduate Advisor, or Dr. Bryant (408-924-3010), Department Chair. For questions or complaints about videotape participant's rights, or in the event of an exercise-related injury, contact Dr. Serena Stanford (408-924-2480), Associate Academic Vice President for Graduate Studies & Research.

My consent is given voluntarily without being coerced; I may refuse to participate in this videotape or in any part of this videotape; and I may withdraw at any time, without prejudice to my relations with De Anza College, San Jose State University, Stanford University, or the Arthritis Foundation.

I have received a copy of this consent form for my file.
 I HAVE MADE A DECISION WHETHER OR NOT TO PARTICIPATE. MY
 SIGNATURE INDICATES THAT I HAVE READ THE INFORMATION
 PROVIDED ABOVE AND THAT I HAVE DECIDED TO PARTICIPATE.

 DATE

 SUBJECT'S SIGNATURE

 RESEARCHER'S SIGNATURE

Appendix B

**ACUERDO PARA PARTICIPAR EN VIDEO
LLAMADO "USTED Y SU ARTRITIS"**

ACUERDO PARA PARTICIPAR EN VIDEO
 LLAMADO "USTED Y SU ARTRITIS"
 EL COLEGIO DE ANZA Y LA UNIVERSIDAD ESTATAL DE SAN JOSÉ
 INVESTIGADOR: RONALD JOHNSON

Se me ha pedido participar en un video para demostrar ejercicios físicos para Hispanos con artritis.

Yo comprendo que se me pedirá hacer los mismos ejercicios que el instructor pero a mi propio nivel de tolerancia. Los posibles riesgos son dolor en los músculos, dolor en las articulaciones y otras inconveniencias físicas. Los posibles beneficios, para mí, son adquirir conocimiento sobre estos ejercicios y artritis, ayudar a otros a volverse mas activos a traves de mi ejemplo y adquirir yo los beneficios de la buena salud a traves del ejercicio. Los procedimientos alternativos incluyen aprender como participar en un video, descansar entre las sesiones de la filmación y dar consejos sobre como mejorar este video. La ilustración de este video puede ser enseñada a otros sin fin lucrativo, pero cualquier información de este video que pueda identificarse conmigo, permanecera confidencial y solamente puede ser revelada con mi permiso o por la ley.

Cualquier pregunta sobre mi participación en este video sera contestada por Ronald Johnson (415-968-7023). Quejas sobre los procedimientos pueden ser presentadas al Dr. Payne (408-924-3028), Consejero Graduado, o Dr. Bryant (408-924-3010), Presidente del Departamento. Para preguntas o quejas sobre los derechos de los participantes de este video, o en caso de daños a consecuencia de el mismo llame al Dr. Serena Stanford (408-924-2480), Vice Presidente Asociado Academico para Estudios Graduados & Investigación.

Mi consentimiento es dado voluntariamente y sin coerción; puedo rehusar participar en este video o en cualquier parte de este video; y puedo retirarme en cualquier momento sin perjuicio a mis relaciones con el Colegio De Anza, la Universidad Estatal de San José, la Universidad Stanford o Fundación Artrítica.

He recibido una copia de esta forma de consentimiento para mi archivo. He tomado la decisión de participar. Mi firma indica que he leído la informacion descrita arriba y he decidido participar.

_____ FECHA	_____ FIRMA DEL PARTICIPANTE	_____ FIRMA DEL INVESTIGADOR
----------------	---------------------------------	---------------------------------

Appendix C

USTED Y SU ARTRITIS
MEDICAL ACCEPTANCE FORM

SAN JOSE STATE UNIVERSITY &
DE ANZA COLLEGE
USTED Y SU ARTRITIS
MEDICAL ACCEPTANCE FORM

NAME _____ DATE _____ SS# _____
ADDRESS _____ CITY _____ ZIP _____
PHONE # (____) _____ EMERGENCY # (____) _____
DATE OF BIRTH _____ AGE _____
Signature of Participant _____

Your patient desires to participate in an exercise videotape geared toward Hispanic people with arthritis. This videotape will be produced at De Anza College by Ronald Johnson, a Certified Corrective Therapist and Adaptive Physical Education Specialist. The exercise program to be illustrated was developed at the Stanford Arthritis Center by Kate Lorig, PhD and James Fries, MD. We need your assistance in verifying your patient's disability and functional limitations. Please complete the following and return the form to the address below.

IN ORDER FOR YOUR PATIENT TO PARTICIPATE IN OUR VIDEOTAPE WE MUST HAVE THIS FORM ON FILE. THANK YOU.

A. DIAGNOSIS AND/OR DISABILITY

B. FUNCTIONAL LIMITATIONS

C. CONTRAINDICATIONS

Physician/Physical Therapist _____ (Signature)
Telephone Number _____

Physician/Physical Therapist (Name Printed) _____

Facility	Address	City	Zip
RONALD JOHNSON	FOR MORE INFORMATION CALL		
726 C. MARIPOSA AVE.	RONALD JOHNSON AT		
MOUNTAIN VIEW, CA. 94041	(415) 968-7023		

Appendix D

ARTHRITIS VIDEOTAPE LIABILITY RELEASE FORM

ARTHRITIS VIDEOTAPE LIABILITY RELEASE FORM

DATE _____

PRINT NAME _____
(Last) (First)

IF MY APPLICATION FOR PARTICIPATION IN THE ARTHRITIS VIDEOTAPE IS ACCEPTED, I UNDERSTAND AND AGREE THAT THE STANFORD ARTHRITIS CENTER, ITS AFFILIATES, SAN JOSE STATE UNIVERSITY, DE ANZA COLLEGE AND RONALD JOHNSON WILL NOT HAVE OR ASSUME ANY FINANCIAL RESPONSIBILITY OR LIABILITY FOR THE EXPENSE OF MEDICAL TREATMENT OR OF COMPENSATION FOR ANY INJURY I MAY SUFFER DURING OR RESULTING FROM PARTICIPATION IN THIS EXERCISE VIDEOTAPE.

(Signature)
I GIVE PERMISSION TO _____ TO
COMPLETE A MEDICAL CONSENT FORM.

(Signature) (Address: Street)

(Telephone) (City) (State) (Zip)

Appendix E
MODEL RELEASE

MODEL RELEASE

Television Center
De Anza College
21250 Stevens Creek Boulevard
Cupertino, California 95014

I have agreed voluntarily to appear without compensation in a videotape produced by you and Ronald Johnson.

You shall have the right to exhibit and televise said videotape. As between you and me, the videotape, all copies thereof and all rights therein shall be your sole and exclusive property.

You shall have the right and may grant others the right to disseminate, print and publish my name and likeness and biographical material in connection with the publicity and promotion of the videotape but not for the direct endorsement of any product.

I hereby release and discharge you and your respective agents, employees, successors, assigns and licensees from any and all claims, liabilities, and obligations of any kind or nature which may arise from my appearance or participation in the videotape or any exhibition thereof.

I agree that you have no obligation to exhibit or televise my performance or otherwise use me on your videotape.

Very truly yours,

----- DATE -----
(signed)

(printed)

ADDRESS (street & apt. #)

(city, state, & zip code)

Appendix F
ENGLISH VIDEOSCRIPT

USTED Y SU ARTRITIS

English Videoscript

The contents will have the segment time (ST) and running time (RT) listed after each exercise title. The following is the nearly verbatim videoscript to be used in the filming and production of the arthritis videotape (Lorig & Fries, 1986). Alterations in the videoscript were done for clarification or brevity and then translated into Spanish:

EXERCISE AND YOUR ARTHRITIS

Graphic/Physical Action

Spoken Script

Liability clause

Visual only

(Spanish & English) "Not all exercises are suitable for everyone and this, or any other exercise program, may result in injury. To reduce the risk of injury in your case, consult your doctor before beginning this exercise program. The instructions and advice presented are in no way intended as a substitute for medical counseling."

Introduction:**ST (1:42) RT (1:42)**

"Hello, my name is ---. I am the narrator for the exercises on this videotape made for Spanish-speaking people who have arthritis. Treating your arthritis through exercise is one of the most important things you can do.

Unfortunately, many people with arthritis think that exercise is harmful. Other people who do exercise become discouraged because progress is slow or their exercises are painful. Don't fret! With proper rest and the right set of exercises, exercises can be done in a nearly harmless and painless manner. Progress may still be slow but you can still have fun and become fit. Let us briefly examine the benefits of exercise, the different types of exercise, and some basic guidelines. With this knowledge,

BENEFITS OF EXERCISE

Graphics

(see the underlined in the script

A different participant speaks each benefit.

you can plan a successful and enjoyable program.

Many people have obtained different benefits from exercise. The participants will state some of the benefits:

1-exercise helps me obtain more flexibility and strength in the muscles and ligaments surrounding the joints.

2-I like to exercise to maintain or increase the strength of my bones.

3-endurance exercise is great for me because I now have more physical endurance and a better circulation.

4-with exercise, I can avoid constipation and overcome fatigue.

5-did you know that exercise allows nutrition to be brought to the joint cartilage and waste products to be removed?

6-I feel better about myself because I can reach my goals, like losing weight, for example.

7-I like to exercise, especially with my friends."

BASIC TYPES OF EXERCISE.

RT(1:23) RT (3:05)

Graphics

(See the underlined in the script)

"There are three basic types of exercise: stretching,

strengthening, and endurance.

Stretching exercises are designed to maintain or increase the joint mobility, which may decrease pain and improve function. They involve stretching the soft tissues around the joint as far as they will go comfortably and then pushing them a little farther, just past the beginning point of discomfort or pain.

Strengthening exercises maintain or increase strength in muscles.

One example is the isometric exercise which strengthens muscles with as little stress on the joints as possible due to no movement on the joint.

You can feel the muscles in your arm working; however, no movement of the joints is taking place. Endurance exercises, such as walking or swimming, are necessary because they increase your aerobic capacity better than either stretching or strengthening exercises can. This exercise videotape does not review specific endurance exercises, although all three types of exercise should be in your exercise program."

WHEN SHOULD I EXERCISE?

ST (:27) RT (3:32)

"When should I exercise?" is the basis for the first guideline for exercise. The best time to exercise is when (a) you have little pain to tolerate, (b) you have the least stiffness, (c) you are not tired, and (d) your medication is having maximal effect. From these factors, decide a best time to do your daily exercise routine."

WHAT EQUIPMENT DO I NEED?

ST (:49) RT (4:21)

Show the various
equipment.

"The equipment needs, the second guideline, are few in this exercise program. For the strengthening exercises you will need a cane, a rope, a 4-6 inch dowel, and an exercise belt of some kind. This belt should have some give to it. The inner tube from a bicycle, a bungie cord (holds packages on bicycles), or a strong stretch belt will do fine as replacements. If all else fails, a regular leather belt will suffice. The exercise belt is a closed loop, 30 to 48 inches in circumference. The cane can be replaced by a cutoff broom handle."

**WHAT SHOULD I AVOID OR
MINIMIZE DURING EXERCISE?**

ST (1:49) RT (6:10)

"The last guideline covers 'What should I avoid or minimize during

Graphics

(See the underlined in
the script)

exercise?'. The answer is
excessive physical and mental
stress. Your exercises should
minimize stress on the affected
joints. Approach cautiously and
check with your doctor exercises
such as aerobics, weightlifting or
running if your weight-bearing
joints are affected with arthritis.
If an exercise for one joint
excessively stresses another joint,
modify the exercise or substitute
another exercise for it. Each
exercise should be started slow
but steady. Build up your
exercise program by adding
distance,time, or additional
weight Expect slow progress,
especially if your arthritis is
severe, your joint limitations have
existed for a long time, and your
affected joints are prone to
flareups.
Pain is an important sign of
physical stress. If exercise-

induced pain persists for longer than two hours after exercise, you are doing too much. Do not stop, just cut back on the number of repetitions, the amount of force used in the exercise, or the amount of time done exercising. Also use the various relaxation, pain management, and breathing techniques explained in your video booklet to lessen some of the physical and mental stresses.

Before proceeding to specific exercises, take a mental inventory of your body. Are these parts of your body you like to strengthen or stretch? If so, define which parts. In choosing which stretching or strengthening exercise to do, decide which movements are most limited or painful and concentrate on them initially. Include some exercises that you would like and change your routine from time to time.

Graphics

(See the underlined in the script)

You should do the selected stretching exercises three to ten times, two to four times a day. The strengthening exercises should be done three to ten times, once a day. Each isometric exercise, held for a count of six seconds, three to four times a day, is sufficient for this type of strengthening exercise. The endurance exercises should work up to or beyond 20 minutes three times a week. When putting your exercise program together, it should contain three phases: warmup, aerobic, and cool-down. The warmup phase contains the Workout #1 or #2. The aerobic phase is done by the endurance exercise that you choose. The cool-down phase could be a slow-paced endurance exercise, the stretching of the major muscles of the body, and perhaps, a period of relaxation. Excluding the

relaxation period, the whole program need not be more than 30 minutes long and done three times per week. The amount of time you spend exercising depends on the pain and inflammation you are experiencing and the rest you need. Keep at it and your efforts will be rewarded in many ways."

ST (1:05) RT (7:37)

"The exercise segment will contain two workouts; each has half of the 56 exercises contained within the Stanford Arthritis Self-Management Program and each requires the same level of ability. Each workout is divided into three sections (sitting, standing, and lying) with stretching and strengthening exercises for each section. The workouts are designed for the person with mild to moderate arthritis and should

be viewed completely before starting any of the workouts.

Now get ready to do the first workout!"

["Start the tape here" for exercises only; set the VCR memory and counter to "000"]

FIRST WORKOUT

STRETCHING EXERCISES:

SITTING

In the first exercise,
stretching exercises involve sitting
in a chair. The equipment needed
for this section are a chair, a dowel,
and a table.

31. The Shoulder-Blade Pinch

ST (:21) RT (7:58)

[MEDIUM CU-UPPER BODY]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"The Shoulder-Blade Pinch is the name for a good exercise for stretching the chest muscles and strengthening the middle and upper back. Sit on the edge of a bed or chair. Pinch your shoulder blades together by moving your elbows as far back as possible."

27. The Three-Way Neck Stretch ST

(1:35) RT (9:33)

[CU-NECK/HEAD, DISSOLVE to other person doing #2, DISSOLVE to other person doing #3.]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"This 3-part exercise is entitled The Three-Way Neck Stretch. It helps you look around objects or in dressing yourself. If possible, repeat each exercise three times. [Part 1] First, relax and slowly drop your chin to your chest, then slowly raise your head and very

gently drop the head backward.
Do not proceed further backward
if you feel a sharp pain down
your arm. Return head to the
upright position slowly. [Part 2]
For the next position, turn to look
over your right shoulder, then
turn to look as far over the left
shoulder as possible.

REMEMBER: Be sure that you only
make a half-circle in each
direction. A complete circle may
cause severe pain for people with
bone spurs or disc problems.
[Part 3] For the third part, tilt
your head to the right and then to
the left. Try to touch your
ear to your shoulder.

Graphics

(See the underlined in
the script)

If you experience
moderate to severe neck pain
with these exercises, if you have
pain that radiates down your arm
with neck movement, or if
numbness, tingling, or marked
weakness are present in the arm.

you should consult your physician
before proceeding with these
exercises."

25. The Heel-Toe Dance

ST (:35) RT (10:08)

[MEDIUM CU-LOWER BODY (knees
down)]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"This exercise helps the circulation of the lower legs and in dancing due to the rotation at the ankle. Sit in a chair with your feet flat on the ground in order to do The Heel-Toe Dance. With heels on the floor, lift feet and toes as high as you can. Keeping the heels on the floor, move feet and toes to the right. Then come up on your toes as high as you can and move your heels to the right. Reverse and walk feet to the left in the same manner. "

26. The Foot Roll

ST (:28) RT (10:36)

[MEDIUM CU-LOWER BODY,

DISSOLVE to second person using
other dowel]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"This exercise, The Foot Roll, feels great and it stretches the ligaments of the foot. Place a dowel (large mop handle, closet rod, rolling pin) under the arch of the foot and roll it back and forth. You should be able to do it with each foot independently."

9. The Elbow Chop

ST (:47) RT (11:23)

[MEDIUM CU-UPPER BODY (knees
up)]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"This exercise is designed to help you bend and straighten the elbow completely in order to feed yourself

or to play cards. The Elbow Chop has a diagonal pattern in this exercise similar to that of chopping wood. Clasp hands together and bend both elbows until your hands touch your right shoulder. Then bring hands down to touch the left knee, straightening elbows completely. Remember to push the elbow a little further than it wants to go. Reverse directions, going from left shoulder to right knee."

1. One-Two-Three Finger Exercise

ST (:54) RT (12:17)

[CU-HANDS on table or counter]

[SOUNDTRACK: Music down to BG

before narration. Up after

narration.]

"For optimum function you should be able to touch the tips of your fingers to the palm. The One-Two-Three Finger Exercise helps you achieve that goal. When stretching the

fingertips toward the palm use the "one- two-three" approach. Begin with the joint closest to the tip of the finger, then move on to the middle joint. When your fingertips are touching the palm or as close as possible, bend the knuckle joint. You start the exercise with your fingers individually then repeat with the fingers together. Use your other hand to guide the movement if necessary."

STRENGTHENING EXERCISES:

SITTING

These strengthening exercises are done in a chair. No other equipment is needed.

47. The Knee Scissor

ST (:38) RT (12:55)

[Angle MS-WHOLE BODY sitting on a chair]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"Here is The Knee Scissor, an exercise used to strengthen the muscles that straighten the knee. It will also strengthen the muscles that bend the knee. This helps you kick a ball or walk easier. Sit in a straight-backed chair. Place the exercise belt around both ankles. Straighten one knee while you pull back with the other 88 until the belt is very tight. Hold for six seconds. Relax. To reduce stress on the knee joint, lean back slightly as you do this exercise."

48. The Heel Press

ST (:25) RT (13:20)

[Angle MS-WHOLE BODY sitting
on a chair]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"To strengthen the muscles at the back of the thigh that bend the knee, do The Heel Press. You are able to walk or get up from a chair easier. First, sit in a straight-backed chair. Then, bend the knee, pressing the heel against the leg of the chair. Hold for six seconds. Relax."

50. The Head Press

ST (:28) RT (13:48)

[MEDIUM CU-UPPER BODY (waist up)]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"If you have found circular exercises to be unsatisfactory, this exercise should be more appropriate. The Head Press is an easy way to strengthen the muscles that bend and straighten the neck. Place your forearm against your forehead and press with your head. Hold for six seconds, allowing no movement.

Show the action against
a forearm and the wall.

Relax. Then place your forearm on
the back of the head and push. Hold
for six seconds. Relax. If you
cannot use your arm as the
stationary object, a wall or a
headrest will do as well."

56. The Jaw Loosener

ST (:35) RT (14:23)

[CU-HEAD]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

[This action was deleted
in the final video copy.]

"Called the Jaw Loosener, this
exercise will teach you to keep
the teeth apart. This will help you
relax better. Let the lower jaw
hang slack so that none of the teeth
touch and an opening of a quarter of
an inch, or approximately the
thickness of a thumb, exists between
the teeth. Your lips may be together
or apart. Practice this exercise five
times a day or more for at least 30
seconds."

STRETCHING EXERCISES: STANDING

(Four participants in a semi- circle
behind the leader) You are standing
in these exercises. Needed
equipment are a cane, a wall or
table, a chair, and a pill bottle.

11. The Shoulder Rotator

ST (1:42) RT (16:05)

[MEDIUM CU-UPPER BODY (waist
 up), DISSOLVE to next subject's
 exercise, DISSOLVE to last subject's
 exercise version.] [SOUNDTRACK:
 Music down to BG before narration.
 Up after narration.]

"If you have difficulty touching the
 back of your neck, combing your
 hair, or zipping a back zipper, then
 you probably need to do The
 Shoulder Rotator. This works on the
 outward rotation of the shoulder and
 helps you reach overhead. Here are
 two ways to accomplish this
 movement. Clasp your hands

Show both versions
of the exercise.

together at the back of your neck and pull the elbows as far back as possible. You should feel a stretch at the front of the shoulder and chest. If you are not yet ready for the first exercise, begin with this method. Hold your arm close to your side with elbow bent. Keeping elbow at your side, rotate hand and forearm outward as far away from your stomach as possible. You may use your other hand to assist with the stretch. You do not need to do both of these exercises. One exercise repeated three to ten times, two to four times a day, is sufficient. Pick the one that suits you best, or change exercises occasionally for variety."

13. The Wand Exercise

ST (:25) RT (16:30)

[MEDIUM CU-UPPER BODY (waist up)]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"Another exercise to help you reach overhead is The Wand Exercise. Use a cane, yardstick, or mop handle as your wand. Place one hand on each end and raise the wand as high as possible. You might try doing this in front of a mirror. You don't have to move both ends to the same height, play around with it. This

Show both positions.

exercise may be easier lying down or sitting."

17. The Back Kick

ST (:41) RT (17:11)

[MEDIUM CU-LOWER BODY (waist down)]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"This exercise, The Back Kick, is designed to increase the backward

motion of the hip, which is the largest joint in the body and is important for walking and running. From a standing position, hold on to a counter or chair for support and move the leg up and back, knee straight. Start gently and build up to more intense activity. Repeat for the other leg."

4. The Thumb Walk

ST (:38) RT (17:49)

[CU-HANDS, DISSOLVE to second subject with pill bottle]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

(show the "O" and the fingers flared out)

"The Thumb Walk is used to grab objects or to shake hands. Try to form a letter "O" with each attempt of this exercise. Touch the tip of the thumb to the tip of the index fingers, then spread your fingers as wide as you can.

Proceed on to touch the tip of the thumb to the tips of your other fingers, spreading the fingers wide after each attempt. If you cannot quite bring the thumb to touch the finger, use the other hand to push them closer together"

(Show the pushing action.

Also show the action with hand around a cylindrical "pill" bottle.)

STRENGTHENING EXERCISES:

STANDING

You will stand for these strengthening exercises. An elastic band and a chair or wall will be the necessary equipment.

40. The Side Pull

ST (:45) RT (18:34)

[MS-UPPER BODY]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

Show the "push against the wall" action.

"This exercise builds up the muscles that push the arms apart. Place the exercise belt around your forearms for this exercise, The Side Pull. With the elbows straight palms facing each other, move your arms out to the side until the belt is tight. Hold for six seconds. Relax. If you do not have an exercise belt, perform the same movement, pushing against a wall, door frame, or some other stationary object."

42. The Bow and Arrow

ST (:40) RT (19:14)

[MEDIUM CU-UPPER BODY,
DISSOLVE other person doing the
reverse action.]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"The Bow and Arrow is another fun exercise for strengthening many of the arm muscles. Hold the exercise belt in both hands. Push out to the

side with one arm and pull back with the other, as if shooting a bow and arrow or a giant rubber band. Hold for six seconds, then relax. Reverse arm positions."

43. The "Cheek to Cheek"

ST (:20) RT (19:34)

[MEDIUM CU-BUTTOCKS]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

Show the "sitting" and "lying down" positions.

"Doing the Cheek-to-Cheek will strengthen the muscles that move your leg backward. Squeeze the buttocks tightly together. Hold for six seconds. Relax. This exercise may be done while lying down or sitting."

54. The Back Push

ST (:35) RT (20:09)

[MEDIUM CU-WHOLE BODY]

[SOUNDTRACK: Music down to BG

before narration. Up after
narration.]

"To help strengthen the muscles that
straighten the back, sit in a straight-
backed chair or against the wall and
enact the Back Push. Push your
shoulders and shoulder blades into
the chair or wall (show this action).
Hold for six seconds. Relax. You will
feel the stomach muscles tighten as
well; the stomach muscles help
support the back."

STRETCHING EXERCISES:

LYING

Lay down when doing these
stretching exercises. No equipment
is needed.

15. The Spread Eagle

ST (:35) RT (20:44)

[MS-WHOLE BODY lying on the floor]

[SOUNDTRACK: Music down to BG

before narration. Up after
narration.]

"The Spread Eagle is an exercise that increases hip motion to the side, which is necessary for riding a bicycle, getting in and out of a car, or riding a horse. Lie on your back. Spread your legs as far apart as possible and then pushing them a little farther. You might want someone to measure the distance between your knees so you can keep track of your progress. If moving both legs is difficult, try one at a time."

9. The Hip Rotator

ST (:52) RT (21:36)

[MS-WHOLE BODY lying on the floor]

[SOUNDTRACK: Music down to BG

before narration. Up after narration.]

"This exercise, entitled The Hip Rotator, increases the ability of the hip to rotate (roll in and out). This is important for activities such as

dancing or rolling over and getting out of bed. Lie on your back, hands out to the side or behind your head. Bend your hips and knees and place feet flat. Cross your right leg over the left knee. Rotate hips to the right, trying to touch the knee to the floor. Keep your upper body flat on the floor. Repeat to the other side. While this is a good exercise for stretching the low and middle back, it may be too strenuous for the back."

20. Knee Bend 1

ST (:35) RT (22:11)

[MS-WHOLE BODY lying on the floor]

[SOUNDTRACK: Music down to BG

before narration. Up after

narration.]

"This exercise improves your ability to climb stairs and get out of chairs. Lie on your back with both knees bent, feet flat in performing this Knee Bend exercise. Bring your knee toward your chest. Using your hands

to assist, gently bend the knee, trying to touch your heel to your buttock. This exercise should not be done while standing when your knee is afflicted with arthritis. The weight of your body adds stress to the knee joint. "

29. Knee-to-Chin Stretch

ST (1:11) RT (23:22)

[MS-WHOLE BODY lying on the floor]

[SOUNDTRACK: Music down to BG

before narration. Up after narration.]

"If you notice pain that shoots down your leg, numbness, tingling, or marked weakness or if your back pain is new and moderate to severe, you should consult your physician before proceeding with this exercise. Those with ankylosing spondylitis will also want to also do deep-breathing exercises to ensure good mobility of the rib cage.

For a nice low back stretch, do the Knee-to-Chin Stretch. First, lie on the floor with knees bent, feet flat. Bring one knee toward your chin, using your hands to assist with the stretch. Maintain this position for five seconds and lower the leg slowly. Repeat with the other knee. To stretch the upper and middle back at the same time, raise your head and shoulder from the floor as you bring your knee toward your chin. Don't raise the head if it creates or increases pain.

33. The Cat

ST (:42) RT (24:04)

[MS-WHOLE BODY on all four limbs]

[SOUNDTRACK: Music down to BG

before narration. Up after narration.]

"This exercise stretches the lower back muscles and strengthens the abdominals yet it should not be done by persons with severe knee, ankle,

or hand problems because it places stress on these joints. The exercise, The Cat, assumes a crawling position on all fours, with knees bent, arms straight. Taking a deep breath, arch your back as a frightened cat does. Then slowly drop the arch to reverse the curve, exhaling completely."

32. The Back Lift

ST (:36) RT (24:40)

[MS-WHOLE BODY, DISSOLVE to second person doing second version]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"The Back Lift is a more vigorous way to stretch the upper and middle back. Lay on your stomach with your hands on your hips and raise your head and chest onto your forearms so that your chest clears the floor or mattress. If you feel no discomfort, raise up onto your

extended arms for a better stretch.
This exercise should be avoided by
people with moderate to severe low
back pain."

STRENGTHENING EXERCISES: LYING

Lay down when doing these
strengthening exercises. Only an
elastic band is needed.

44. The Leg Spreader

ST (:45) RT (25:25)

[MS-WHOLE BODY lying on the
floor]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"The muscles that move your legs out
to the side must be strong if you are
to walk well. Such is the purpose of
the Leg Spreader. Lie on your back,
with the exercise belt placed around
your ankles. (If your knees are
painful place the belt above the

knees.) Spread your legs apart until the exercise belt is tight as possible. Hold for six seconds, then relax. Do not let your foot roll in or out. You may do each leg separately if you wish."

Show both versions.

52. The Partial Sit-up

ST (:41) RT (26:06)

[MS-WHOLE BODY lying on the floor]

[SOUNDTRACK: Music down to BG

before narration. Up after

narration.]

"It is not necessary to do a full sit-up to exercise the stomach muscles. Firm stomach and back muscles are important to provide the support necessary for an erect posture and to avoid back strain. The Partial Sit-up will place less stress on the joints and is sufficient. Lie on your back on a firm surface, knees bent, feet flat. Raise your head and shoulders as far off the surface as possible. Hold for six seconds, then lower slowly.

Breathe out as you raise your body, count to six out loud as you hold, and breathe in as you lower your body. Do not hold your breath. If your neck is painful during this exercise, you can support it by placing your hands at the back of the neck."

55. The Back Lift

ST (:38) RT (26:44)

[MS-WHOLE BODY, DISSOLVE to second person lifting also the legs]
[SOUNDTRACK: Music down to BG before narration. Up after narration.]

Lift both feet up.

"This exercise, The Back Lift, will also strengthen the muscles that straighten the back, but it is more strenuous. Lie on your stomach, arms at your sides. Lift your head, shoulders, and arms up off the floor or bed. Hold for six seconds. Relax. If this does not feel too stressful, try lifting your

legs off the floor at the same time.
 This is generally not a good exercise
 for the person with moderate to
 severe low back pain."

NOTE YOUR VCR COUNTER NUMBER
HERE. THIS WILL HELP YOU
LOCATE THE START OF THE SECOND
WORKOUT.

SECOND WORKOUT

STRETCHING EXERCISES:

SITTING

Sit in a chair when doing
these exercises. The necessary
equipment is a table and a light
hammer.

22. The Knee Straightener

ST (:55) RT (27:39)

[MS-WHOLE BODY, DISSOLVE to
 second person doing extra stretch.]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"The ability to straighten the knee is very important for walking or any standing activity. When spends a lot of time sitting, the muscles and ligaments in the back of the knee tend to tighten, making it difficult to completely straighten the knee. The Knee Straightener is designed to stretch those tissues with a minimum amount of stress on the joints. Sitting in a straight-backed chair, place your foot on a chair or high footstool. Bend the knee slightly and then straighten by pushing the back of the knee toward the floor."

6. Wrist Table Stretch

ST (:35) RT (28:14)

[CU-HANDS on table] [SOUNDTRACK:
Music down to BG before narration.
Up after narration.]

"For a vigorous wrist stretch use the Wrist Table Stretch. This exercise will help you cut food and get up from a chair. Hang the hand over the edge of a table or arm rest with the palm down and raise the hand up as far as possible, using your other hand to assist with the stretch. Then pull the hand down, stretching just past the point of discomfort."

8. The Door Opener

ST (:46) RT (29:00)

[CU-HANDS/WRISTS on table,
DISSOLVE to person with light
weight]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"The Door Opener is an exercise used to stretch the muscles and ligaments that rotate the forearm, allowing you to turn doorknobs and unlock doors. Start with your forearm resting on a table, palm down. Turn your hand so

Show the action using
a light hammer.

the palm faces up. If you use your other to assist with the stretch, grasp the lower part of the forearm, not the hand. An alternate way to assist with this particular stretch is to place your arm at your side, elbow bent, palm down. Hold a light hammer or similiarly weighted object in your hand. As you turn your palm up the weight of the object will assist you with the stretch."

7. The Slide

ST (:49) RT (29:49)

[CU-HANDS]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"If you notice that your fingers drift toward the little finger side of the hand (a common deformity in rheumatoid arthritis), this exercise, called The Slide, is for you. The exercise works to keep your knuckles

Show "assistive hand" variation.

and wrist in correct alignment with your forearm, promoting optimal function. Place your forearm on a table, palm down. Slide your fingers and hand toward the body, not moving the forearm. Use your other hand to assist if necessary. Repeat with other hand."

2. Three-Two-One Finger Exercise

ST (:54) RT (39:43)

[CU-HANDS]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"If any of the joints in your fingers will not straighten completely, try this exercise, which is named the Three-Two One Finger Exercise. With your fingertips as close to the palm as possible, begin to uncurl your hand. Begin with the knuckle joint, move to the middle joint, and finally exercise the joint closest to the tip of

the finger. REMEMBER: If you have severe hand deformity or involvement, you may want to consult your doctor in developing your initial program."

STRENGTHENING EXERCISES:

SITTING

These strengthening exercises are done in a chair. The necessary equipment is a table and a pill bottle.

Lateral Trunk Flexion

ST (:43) RT (31:26)

[MS-WHOLE BODY sitting on ledge of chair]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"The ability to support and stabilize your upper body is important for sitting or lifting up objects on your side while standing. This exercise tones and strengthens the lateral

trunk muscles. Sitting in a chair, place your feet on the insides of the front legs of the chair and the left hand gripping the chair. Lean over the right side of the chair with the upper body facing forward and try to touch the floor with the right hand. Sit upright then lean to the left. Try to touch the floor with the left hand with the right hand gripping the chair.

Show the "standing" variation.

Repeat in each direction. This may be done standing up."

53. The Back Sit

ST (:39) RT (32:05)

[MS-WHOLE BODY sitting on the ledge of the chair]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"A fun alternative to the sit-up, that is easier on the neck and also strengthens the stomach muscles, is called The Back Sit. Sit upright on a

firm surface. Lean partially backward, hold for six seconds, then return to sitting. As your stomach muscles strengthen you should be able to lean farther backward. Breathe out as you lean back, count to six out loud as you hold, and breathe in as you return to sitting."

37. The Finger Slide

ST (:34) RT (32:39)

[CU-HANDS]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"This will help prevent drifting of the fingers toward the little-finger side of the hand. In doing The Finger Slide, place your hand flat, fingers spread, on the table. Lift and slide each finger toward the thumb. Resist slightly with the other hand."

36. The Finger Lift

ST (:43) RT (33:22)

[CU-HANDS]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

Do the "separate
finger" variation.

"To strengthen the muscles that
straighten the fingers requires some
form of The Finger Lift. Lay your
hand flat on a table and lay your
other hand across the fingers to be
exercised. Lift the fingers of the
bottom hand, pushing against the top
hand. Hold for six seconds;
relax. If you have significant
weakness, do each finger
separately. You should exert only
gentle pressure for this exercise."

35. The Finger Press

ST (:42) RT (34:04)

[CU-HANDS, DISSOLVE to second
person with pill bottle]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

Show the action with a
pill bottle.

"To strengthen the muscles that bend the fingers and help you pick up objects, try The Finger Press. Press the tip of the thumb to the tip of the index finger. Hold for six seconds, maintaining a perfect "O" shape, then relax. Continue, pressing the tip of the thumb to the tip of each finger. To help maintain the "O" shape, place a pill bottle or other cylinder in your hand."

STRETCHING EXERCISES: STANDING

These exercises are done in a standing position. A table and a light hammer are needed.

10. The Pendulum

ST (:50) RT (34:54)

[MS-WHOLE BODY, DISSOLVE to second subject leaning on chair, DISSOLVE to third person with medium- weight object]

[SOUNDTRACK: Music down to BG

before narration. Up after
narration.]

"This exercise, The Pendulum, is good as the beginning exercise for the very painful or limited shoulder. It facilitates relaxation of the shoulder muscles as well as free joint movement in all directions. From a standing or sitting position, lean slightly forward. Let your arm hang freely in front of you. Relax and feel the weight of your arm. Keeping the arm straight, begin with small circles and gradually increase their size. You may want to hold a medium-weight object in your hand (light purse, light hammer) during this exercise. Remember to exercise just past the point of discomfort. Don't get carried away with your circles."

24. The Heel Toe

ST (:22) RT (35:16)

[MEDIUM CU-LOWER BODY]

[SOUNDTRACK: Music down to BG

before narration. Up after
narration.]

"This stretches tendons, calf muscles, and the ankle joints and it helps with the circulation. Sit in a chair or on the edge of the bed with both feet flat on the floor is the first step to The Heel-Toe. First, raise your toes and forefeet as high as you can, keeping your heels on the floor. Then, keep your toes on the floor and raise your heels as high as you can."

23. The Achilles Stretch

ST (:42) RT (35:58)

[MEDIUM SHOT (MS)-WHOLE BODY]

SOUNDTRACK: Music down to BG

before narration. Up after
narration.]

"This exercise is designed to stretch your Achilles tendon, which is the large tendon you feel at the back of your ankle. It is, appropriately enough, named The Achilles Stretch. It is important to maintain flexibility

in this tendon for standing and walking. Joggers should be sure to stretch this tendon before starting out. Starting at the end of a table and hold onto the sides. Bend the knee of the leg you are not stretching so it almost touches the table. Put the leg to be stretched behind you, keeping both feet flat on the floor. Now lean forward, keeping your back knee straight. You should feel a good stretch in the calf of the leg. This exercise can also be done leaning against a wall or fence."

Show while leaning
against the wall.

14. The Shoulder Pulley

ST (:35) RT (36:33)

[MS-WHOLE BODY, DISSOLVE to
person sitting down] [SOUNDTRACK:
Music down to BG before narration.
Up after narration.]

"This exercise helps you throw
overhand or move things overhead
easier. Throw a piece of rope over

Show while using a rope
on a pulley.

the top of an open door, creating a modified pulley system. Named The Shoulder Pulley, you hold one end of the rope in each hand. As you pull down on one end, the other arm will be raised up, pushing the arm a little higher than it wants to go and then pull down, raising the opposite arm."

5. The Palm Press

ST (:35) RT (37:08)

[MEDIUM CU (CLOSEUP)- ELBOWS
AND HANDS on table.]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"The Palm Press makes it easier to play cards or knit. First, clasp your hands together, palms touching and elbows bent for this exercise. Press the right hand backward with the left, then reverse and press the left hand backward with the right hand.

Remember to push the hand just past the point of discomfort."

3. Fingers Flat Exercise

ST (:50) RT (37:58)

[Zoom to CLOSEUP-HANDS]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"This exercise maintains or increases the range of motion of our hands. The Fingers Flat Exercise straightens out the joints of the fingers. Lay your hand as flat as possible on the table. Place the heel of your other hand across your fingers and gently press down, straightening the fingers. REMEMBER: If you have severe hand deformity or involvement, you may want to consult your doctor in developing your initial program."

STRENGTHENING EXERCISES:

STANDING

Stand when doing these strengthening exercises. An elastic band and a chair or wall are needed.

41. The Robot

ST (:44) RT (38:42)

[MEDIUM CU-UPPER BODY,
DISSOLVE to other persons doing
other versions]
[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

Show the "push against
the wall" variation.

"Called The Robot, this exercise will strengthen the muscles that raise and lower your arm, like in raising boxes overhead. Place the exercise belt around your forearms, palms down. Keeping elbows straight, pull up with one arm and down with the other until the belt is tight. Hold for six seconds, then relax. Reverse arm positions and repeat. If you do not have an exercise belt, perform the same movement using a table,

wall, or your other forearm as the stationary object."

39. The Biceps Bulge

ST (:54) RT (39:36)

[MEDIUM CU-UPPER BODY,

DISSOLVE to second person using only the arms]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

Show second variation.

"Strengthening the muscles that bend and straighten the elbow is the job of The Biceps Bulge. Place your exercise belt slightly above each wrist, palms facing up. Bend one elbow and straighten the other, pulling the belt tight. Hold for six seconds. Relax. Reverse arm positions. If you do not have an exercise belt, cross your forearms, palms up, and press together. Hold for six seconds. Relax and reverse arm positions."

38. The Wrist Press

ST (:50) RT (40:26)

[CU-HANDS/WRISTS] [SOUNDTRACK:

Music down to BG before narration.

Up after narration.]

"This exercise, named The Wrist Press, will strengthen the muscles that bend and straighten the wrist. This helps you get out a chair. Rest your hand on a table or armrest. Place the heel of the other hand on top. Raise the bottom hand, pushing against the top hand. Hold for six seconds, then relax. Reverse positions of the hand and repeat. Remember, while you are pressing the hands together, allow no joint movement."

49. The Tiptoe

ST (:39) RT(41:05)

[MS-WHOLE BODY, then CU-ANKLE,

DISSOLVE to the second person

sitting]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"The next exercise is called The
Tiptoe. It helps propel you forward
when walking. Holding on lightly to
a counter, chair, or table for support,
raise up on your tiptoes. Hold for six
seconds. Lower slowly.

Show second version.

An alternative exercise if the
first one is too stressful (especially if
you are overweight) is to place the
sole of your foot against a stationary
object (wall, chair leg) and push.
Hold for six seconds. Relax. Repeat
with the other foot."

STRETCHING EXERCISES:

LYING

These exercises are done in a
lying position. No equipment is
needed.

18. The Leg Lift

ST (:29) RT (41:34)

[MS-WHOLE BODY]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"If you cannot stand up to do the Back Kick, this exercise, The Leg Lift, also helps to increase the backward motion of the hip. Lie face down and lift the straight leg as high up as possible (push it just past the point of pain). This exercise should not be done by people with low back or disc problems."

28. The Pelvic Tilt

ST (:56) RT (42:30)

[MS-WHOLE BODY, DISSOLVE to
persons in other two positions]
[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"This exercise, The Pelvic Tilt, should be the beginning point for the person with low back problems. It stretches the lower back while strengthening

the stomach muscles. Lie on the bed or floor with both knees bent, feet flat. Place your hands on your abdomen. Flatten the small of your back against the floor by tightening your buttocks and pulling in your stomach. If this concept is difficult for you, think of bringing your pubic bone toward your chin. Once you have mastered the pelvic tilt in the lying position, try it while standing and sitting.

Show while sitting.

REMEMBER: "If you notice pain that shoots down your leg, numbness, tingling, or marked weakness or if your back pain is new and moderate to severe, you should consult your physician before proceeding with this exercise. Those with ankylosing spondylitis will also want to also do deep-breathing exercises to ensure good mobility of the rib cage.

30. The Low Back Rock

ST (:35) RT (43:05)

[MS-WHOLE BODY, DISSOLVE to
person with adaptive strap]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"The Low Back Rock stretches your low back. Lie on your back with your knees bent and feet flat. You need to pull your knees up to chest, one at a time, grasping under the thighs to assist with the stretch. Rest in this position for five seconds, then gently rock knees from one side to the other, keeping upper back and shoulders on the floor."

12. The Shoulder Cradle

ST (:35) RT (43:40)

[MS-WHOLE BODY, DISSOLVE to
person lying down]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"If your shoulder is still very painful, this exercise may be better tolerated."

Entitled The Shoulder Cradle, your arm is supported at the elbow by the opposite hand, which raises the arm up over your head. You can rest your forearm on your head as you push your shoulder just past the point of pain. If this exercise is too easy, it may be done sitting up against the wall.

34. Stretch Like a Cat, Shake Like a

Dog

ST (:35) RT (44:15)

[MS-WHOLE BODY, PAN everyone doing it]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"This is an unusual loosening exercise called Stretch Like a Cat, Shake Like a Dog. First stretch your arms and legs like a cat waking up, then pretend you are a dog just waking and shake all over."

STRENGTHENING EXERCISES: LYING

These exercises are done in a lying position. An elastic band is all that is needed.

Hip Adduction

ST (:40) RT (44:55)

[MS-WHOLE BODY]

[SOUNDTRACK: Music down to BG before narration. Up after narration.]

"This exercise tones the inner thigh muscle and is designed to help you walk smoother. For the Hip Adduction, lie on your side, bend top leg forward, and bend the knee. Lift lower leg straight up and down repeatedly. Lie on your other side and repeat with the other leg.

45. The Straight-Leg Raise

ST (:51) RT(45:46)

[MS-WHOLE BODY, DISSOLVE to second person doing other version]

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

Show action with the
other knee bent.

Use the elastic belt.

"This old, familiar exercise, The
Straight-Leg Raise, will strength the
muscles that bend the hip as well as
the muscle that runs near the front
of the knee. Lie on your back, arms
in a comfortable position. Tighten
the muscle that runs across the front
of the knee and then raise your leg
one to two feet off the ground,
keeping the knee straight. Hold for
six seconds. Relax. If you
have low back problems you may
want to do this exercise with the
other knee bent. As your muscles
become stronger, place the
exercise belt around your ankles
and perform the same exercise. Pull
the belt tight, hold for six seconds,
and then lower the leg slowly."

46. The Quad Set

ST (:54) RT (46:40)

[MEDIUM CU-LOWER BODY,
DISSOLVE to second person sitting
up] [SOUNDTRACK: Music down to
BG before narration. Up after
narration.]

"The Quad Set is a good exercise for the person with very weak muscles around the knees or painful knees to start. The exercise will strengthen the muscles that straighten the knee. These muscles are crucial for walking, going up and down stairs, or getting out of low furniture. Sit with your back supported, legs stretched out in front of you . (You may bend one knee, if this is more comfortable.) Tighten the muscle that runs across the front of the knee by pulling your toes toward your head and pushing the back of the knee down into the bed or floor. Hold for six seconds. Relax.

If lying down is too easy, this exercise may be done lying down."

Show while lying down.

51. The Neck Strengthener

ST (:32) RT (47:38)

[CU-NECK/HEAD, DISSOLVE to
second person pressing head
upward against the forearm]
[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

Show this action, but
press against the forearm.

"The neck muscles can be
strengthened while lying in bed,
using The Neck Strengthener. Lift
your head up off the pillow. Hold for
six seconds, then relax. Press your
head down into the pillow.
Hold for six seconds, then relax. If
lifting the head is too painful,
press against the forearm."

CONCLUSION

ST (1:05) RT (48:43)

[SOUNDTRACK: Music down to BG
before narration. Up after
narration.]

"Now that we are finished with the
stretching and strengthening

Graphics

(See the underlined in the script)

Show the video cover.

exercises. It is necessary to
remind you to do some kind of
endurance exercise that is
pleasing to you. Each stretching
exercise should be repeated three to
ten times, two to four times a day,
depending on the pain. The
strengthening exercises should be
repeated three to ten times, but only
once per day. You also have an idea
 of which exercises to do in your
 exercise program. Now is
 the time to read the video booklet
 and possibly, the "Arthritis
 Helpbook" by Kate Lorig, PhD. and
 James F. Fries, M.D. for more
 exercises before doing the exercises."

"Now some final remarks from
the authors of the Arthritis
Helpbook:"

"People who exercise regularly
(three to seven times a week),
practice relaxation, and/or use any of
the other self-management
techniques have less pain and are

more active than those people who are not arthritis self-managers. In addition, these people report that they go to the doctor less often (one and a-half visits less a year)." Kate Lorig

"Remember...once you take charge you can do more for your arthritis than anyone else. You can do more for your arthritis than you ever thought possible. Make a commitment to do this program to take...control of your health starting today." James F. Fries

[Concluding remarks]

Everyone yells, "You can do it!"

III.CREDITS

ST (1:30) RT (50:13)

[SOUNDTRACK: Music in the background and no narration.]

Producer / Editor:

Ronald Johnson

Director of Photography:

Mark Gomes

**With the assistance of the De
Anza College Television Center
staff:**

Duane Kubo

Hoa Phan

Goli Davidson

Laura Kinley

Scott Spense

Rob Myers

Narrator:

Ignacio Corona

Translators:

Zulma Acevedo

Carlos Barillas,

Ignacio Corona

Participants

Ella Bonilla

Dora Perez

Mabel Cunha

Frank Perez

Ethel Guttenberger

Faustino Rodriques

Mary Hidalgo

Manuela Rodriques

Marge Jordan

Many thanks to the help received
from the following sources:

Stanford Arthritis Center
Health Education Research
750 Welch Road, Suite 315
Palo Alto, CA 94304
(415) 723-7935

The Arthritis Foundation
1314 Spring St., N.W.
Atlanta, GA 30309
(404) 872-7100

Northern California Chapter
The Arthritis Foundation
203 Willow, Suite 201
San Francisco, CA 94109
(415)673-6882

Appendix G
Spanish Videoscript

Appendix G
Spanish Videoscript

Clausula de Responsabilidad

Liability Clause

No todos los ejercicios son apropiados para todo el mundo y este programa, o cualquier otro programa, puede causarle una lesión. Para reducir el riesgo de una lesión, consulte con su médico antes de empezar este programa de ejercicios. Las instrucciones y consejos, presentados aquí, no son un sustituto por consulta médica.

The contents will have the segment time (ST) and running time (RT) listed after each exercise title. The following is the nearly verbatim videoscript to be used in the filming and production of the arthritis videotape (Lorig & Fries, 1986). Alterations in the videoscript were done for clarification or brevity:

EJERCICIO Y SU ARTRITIS

Introduction:

ST (1:42) RT (1:42)

¡Hola! Me llamo Yo soy el narrador y este es un video creado para las personas de habla Hispana con artritis. El ejercicio es una de las cosas más importantes que usted debe hacer para luchar contra la artritis. Desafortunadamente muchas personas con artritis

creen que el ejercicio es dañino. Otras personas que ejercitan se desaniman porque el progreso es lento y los ejercicios son dolorosos. ¡No se preocupe! Con suficiente descanso y ejercicios correctos, ejercicios pueden ser casi inofensivo y no provocar dolor. El progreso puede ser lento, pero en cambio, puede divertirse y estar en forma.

Permítame examinar brevemente cuáles son los beneficios del ejercicio, los diferentes tipos de ejercicios y algunas guías básicas para hacerlos. Con este conocimiento usted puede planear con éxito un programa que le guste.

BENEFICIOS DEL EJERCICIO

BENEFITS OF EXERCISE

Muchas personas obtienen diferentes beneficios del ejercicio. Los participantes han declarado algunos de sus beneficios:

- 1-el ejercicio me ayuda a producir más flexibilidad y fuerza en los músculos y los ligamentos alrededor de las articulaciones.
- 2-el ejercicio me gusta para mantener ó ganar más fuerza en los huesos.
- 3-los ejercicios de tolerancia son buenos para mí porque hay más resistencia física y una mejor circulación.
- 4-con ejercicio, yo puedo reducir el problema del estreñimiento y superar la fatiga.
- 5-¿sabe usted que el ejercicio motiva una buena nutrición?
Solamente el movimiento nutre las articulaciones al

cartilago y permite la eliminación de desperdicios.

6-me siento mejor cuando puedo realizar mis metas como bajar de peso, por ejemplo.

7-me gusta hacer ejercicio, especialmente con mis amigos.

TIPOS BASICOS DE EJERCICIOS

ST (1:23) RT (3:05)

BASIC TYPES OF EXERCISE

Hay tres tipos básicos de ejercicios: ejercicios de estiramiento, ejercicios para fortalecer los músculos y ejercicio de tolerancia. Los ejercicios de estiramiento aumentan o mantienen la flexibilidad por todos lados de las articulaciones para reducir el dolor y aumentar la función. Los ejercicios de estiramiento consisten en el estiramiento de los tejidos alrededor de las articulaciones lo más que se pueda tratando de incrementar los ejercicios un poco más allá después de empezar a sentir dolor. Esto es importante porque así usted podrá ejercitar sus músculos un poco más cada día. El objetivo de los ejercicios de fortalecimiento es el mantener ó incrementar la fuerza en los músculos para estabilizar las articulaciones. Un ejemplo es un ejercicio isométrico el cual fortalece los músculos con la menor tensión posible en las articulaciones debido a la falta de movimiento. Usted puede sentir el trabajo de los músculos de los brazos, aún cuando no ocurra el movimiento de las articulaciones ocurre. Los ejercicios de tolerancia, como caminar o nadar, son necesario porque ellos incrementarán su capacidad aeróbica mejor que los ejercicios de estiramiento ó fortalecimiento. Aunque este video de ejercicios no incluye ejercicios específicos de tolerancia, es una parte importante

de su programa de ejercicio, como los ejercicios de estiramiento ó fortalecimiento.

¿CUANDO DEBO HACER EJERCICIO? ST (:27) RT (3:32)

WHEN SHOULD I EXERCISE?

"¿Cuándo debo hacer ejercicio?" es la base de la primera guía de ejercicio. El mejor tiempo para ejercitar es cuando: (a) tiene un poco de dolor que tolerar, (b) tiene la mínima rigidez, (c) no está cansado, y (d) cuando su medicamento produce máximo efecto. Siguiendo esta guía decida cuales el mejor tiempo para hacer su rutina diaria de ejercicios.

¿QUE EQUIPO NECESITO? ST (:49) RT (4:21)

WHAT EQUIPMENT DO I NEED?

El segunda guía trata sobre el tipo de equipo que necesita. En realidad, el equipo necesario para este programa es poco. Para los ejercicios de fortalecimiento, usted necesita un bastón, una cuerda, una clavija de cuatro a seis pulgadas y una banda elástica de cualquier tipo. Esta banda debe tener cierta elasticidad. El neumático de una bicicleta, una "bungie" cuerda (sujeta paquetes en la bicicleta), o cinturón fuerte elástico puede servir como reemplazo. Si no tiene todo esto, un cinturón de cuero es suficiente. La banda elástica debe ser de treinta a cuarenta y ocho pulgadas de circunferencia. El bastón puede ser reemplazado por el palo de la escoba.

¿QUE DEBO EVITAR O REDUCIR DURANTE LOS EJERCICIOS?

WHAT SHOULD I AVOID OR MINIMIZE DURING EXERCISE?

ST (2:11) RT (6:32)

La última guía contiene lo que, "¿Usted debe de evitar o reducir durante el ejercicio?". La respuesta es excesiva tensión física y mental. Los ejercicios deben de reducir la tensión en las articulaciones artríticas. Haga cautelosamente y consulte a su doctor sobre los ejercicios aeróbicos, el levantamiento de pesas ó el correr, si sus articulaciones que sostienen su peso están afectadas con artritis. Si el ejercicio para una articulación pone demasiada presión sobre otra articulación, usted puede modificar el ejercicio ó sustituirlo por otro. Cada ejercicio debe empezarlo lento pero constante. Incremente su programa de ejercicios añadiendo distancia, tiempo ó peso. Espere un progreso lento, especialmente si su artritis es severa, si las limitaciones en sus articulaciones han existido por un largo tiempo, o las articulaciones propensas al retroceso.

El dolor es una señal de tensión física muy importante. Si el dolor a causa del ejercicio persiste por más de dos horas después del ejercicio, usted esta haciendo demasiado; no pare, solamente reduzca el número de repeticiones, la fuerza en el ejercicio, o el tiempo que pasa haciendo el ejercicio. También haga las técnicas de relajación, respiración y manejo del dolor descritas en su panfleto para reducir algunas tensiones físicas y mentales.

Antes de hacer ejercicios particulares, haga un inventario mental de su cuerpo. ¿Son estas las partes del cuerpo que quiere usted estirar ó fortalecer? Si es así, defina cuáles son las partes. Al escoger que ejercicio de estiramiento o fortalecimiento debe de hacer,

decida cuáles movimientos son los más limitados o dolorosos y concéntrese en ellos inicialmente. Incluye aquellos ejercicios que le gusten y cambie la rutina de vez en cuando. Usted debe de hacer los ejercicios selectos de estiramiento de tres a diez veces, de dos a cuatro veces diario. Cada ejercicio isométrico, mantenido por seis segundos, tres a cuatro veces al día, es suficiente para este tipo de ejercicio de fortalecimiento. Los ejercicios para fortalecer deben de hacerse de tres a diez veces, una vez diario. Los ejercicios de tolerancia deben de hacerse continuamente por veinte ó más minutos diario tres veces por semana.

Cuando haga su programa de ejercicio, el programa debe de contener tres partes: calentamiento, ejercicios aeróbicos y enfriamiento. La parte del calentamiento contiene los ejercicios número 1 o número 2. La parte de los ejercicios aeróbicos contiene los ejercicios de aguante o tolerancia que usted seleccione. La parte de enfriamiento puede contener los ejercicios de aguante o tolerancia, pero hechos más despacio, el estiramiento de los músculos principales del cuerpo y quizás un período de relajamiento. El programa entero no debe de ser más de 30 minutos, tres veces por semana. La cantidad que usted ejercite depende del nivel de dolor e inflamación que usted sienta y del descanso que necesita. Hágalos y su esfuerzo será recompensado de muchas maneras.

["Start the tape here" for exercises only; set the VCR memory and counter to "000"]

ST (1:05) RT (7:37)

Este segmento del ejercicio tiene dos partes. Cada parte incluye la mitad de los 56 ejercicios contenidos en el Stanford Arthritis Self-Management Program (Programa de Stanford para el Manejo Propio de la Arthritis) y está dividido en tres partes (sentarse, estar de pie y acostarse) con ejercicios de estiramiento y fortalecimiento para cada parte. Estos segmentos del ejercicio están diseñados para personas con artritis leve a moderada.

FIRST WORKOUT

STRETCHING EXERCISES: SITTING

En el ejercicio primero, ejercicios de estiramiento incluye sentarse en una silla. El equipo que necesita para esta sección son una silla, una clavija y la mesa.

31. The Shoulder-Blade Pinch ST (:21) RT (7:58)

Estiramiento de las Paletas de los Hombros

MEDIUM CU-UPPER BODY

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio, Estiramiento de las Paletas de los Hombros, estira los músculos del pecho y fortalece los músculos de la espalda. Siéntese en la orilla de la cama o de una silla y, trate de juntar las paletas de los hombros; moviendo los codos hacia atrás tanto como sea posible.

27. The Three-Way Neck Stretch ST (1:35) RT (9:33)**Tres Formas para Estrechar el Cuello**

CU-NECK/HEAD, DISSOLVE to other person doing #2, DISSOLVE to other person doing #3.

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio, llamado Tres Formas para Estrechar el Cuello, repita tres veces. Este ejercicio le ayuda a mirar objetos a su alrededor o para vestirse.

A. Primero, relaje los músculos del cuello y deje caer la barbilla muy despacio hacia el pecho; luego levante la cabeza muy despacio también. No fuerce la cabeza hacia atrás si siente dolor agudo o si siente dolor en el brazo. Luego vuelva muy despacio la cabeza a su posición normal.

B. Para la proxima posición, vuelva la cabeza para mirar sobre el hombro derecho, y después vuelva la cabeza para mirar sobre el hombro izquierdo, muy suavemente hasta que sienta molestia.

C. Para la tercera parte, incline la cabeza hacia la derecha y luego la izquierda. Trate de tocar el hombro con la oreja, muy suavemente.

Si el dolor del cuello es reciente y varía de moderado a severo, es mejor que consulte con su doctor antes de hacer estos ejercicios. También consulte con el doctor si nota un dolor que irradia hacia su brazo cuando mueve el cuello, o si siente adormecimiento, hormigueo o debilidad.

25. The Heel-Toe Dance**ST (:35) RT (10:08)****Baile de Punta y Talón****MEDIUM CU-LOWER BODY (knees down)****SOUNDTRACK: Music down to BG before narration. Up after narration.**

El Baile de Punta y Talón le ayuda con la circulación y el baile. Siéntese en una silla con los pies planos en el suelo para el baile de punta y talón. Apoyándose en los talones, levante los pies y los dedos tan alto como pueda (A). Con los talones en el suelo, mueva los pies y los dedos hacia la derecha (B). Después, apoyándose en la punta del pie mueva los talones hacia la derecha (C). Repita el ejercicio y mueva los pies hacia la izquierda de la misma manera. Esto ayuda a la rotación de los tobillos.

26. The Foot Roll**ST (:28) RT (10:36)****Clavija****MEDIUM CU-LOWER BODY, DISSOLVE to second person using other dowel.****SOUNDTRACK: Music down to BG before narration. Up after narration.**

Ponga una clavija (palo grueso de una escoba) bajo el arco del pie y muévela hacia adelante y atrás. Este ejercicio lo hará sentirse bien, ayuda con la circulación y al mismo tiempo que estira los ligamentos del arco del pie. Puede hacer la clavija para el pie con un pie a la vez.

9. The Elbow Chop

ST (:47) RT (11:23)

El Tajo

MEDIUM CU-UPPER BODY (knees up)

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio ayuda a mejorar la flexibilidad de los codos y facilita llevar el alimento a la boca o jugar cartas. El Tajo consiste en estrechar las manos con los dedos sin doblar tocando en diagonal, primero el hombro derecho y luego la rodilla izquierda intercambiando alternativamente al hombro izquierdo y la rodilla derecha, como lo indica la demostración. Fuerce los codos un poco un poco más de lo necesario.

1. One-Two-Three Finger Exercise

ST (:54)RT (12:17)

Uno, Dos y Tres... ¡Dedos!

CU-HANDS on table or counter

SOUNDTRACK: Music down to BG before narration. Up after narration.

Para jalar objetos con las manos, debe usted tocar la palma de la mano y se debe hacer en tres movimientos como se muestra en las siguientes acciones. Empiece el Uno, Dos, y Tres... ¡Dedos! con la articulación más cerca a la punta del dedo, luego muévase a la del medio. Inicie el ejercicio dedo por dedo y repítalo luego con todos los

dedos juntos. Si es necesario ayúdese con la otra mano y trate de cerrar la mano lo más posible aplicando presión MUY suavemente.

STRENGTHENING EXERCISES: SITTING

Ejercicios para fortalecimiento consiste en sentarse en una silla.No se necesita otra equipo.

47. The Knee Scissor

ST (:38) RT (12:55)

Tijeras con las Rodillas

Angle MS-WHOLE BODY sitting on a chair

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio también fortalece los músculos que enderezan la rodilla. Ayuda a patear una bola o caminar más fácilmente. Siéntese en una silla con respaldo recto. Sostenga la banda elástica con los dos tobillos. Estire hacia adelante una pierna mientras que hala hacia atrás con la otra hasta que la banda elástica esté muy estirada. Mantenga esta posición por 6 segundos, y luego suéltela. Repita con la otra pierna. Para reducir la tensión en las articulaciones, recuéstese un poco hacia atrás mientras hace tijeras con las rodillas. Repita dos veces con cada pierna.

48. The Heel Press

ST (:25) RT (13:20)

Presión en el Talón

Angle MS-WHOLE BODY sitting on a chair

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio fortalece los músculos de la parte de atrás de la pierna que permiten doblar la rodilla. Puede caminar o levantarse de una silla mejor. Siéntese en una silla con respaldo recto. Doble la rodilla al mismo tiempo que hace presión en el talón contra la silla donde está sentado. Mantenga esta posición por 6 segundos y luego suéltela. Repita con el otro talón.

50. The Head Press

ST (:28) RT (13:48)

Presionando la Cabeza

MEDIUM CU-UPPER BODY (waist up)

SOUNDTRACK: Music down to BG before narration. Up after narration.

Si ejercicios circulares fueron, pocos satisfactorios, presionar la cabeza debe ser mas apropiado. Este es un modo fácil para fortalecer los músculos que doblan y enderazan el cuello. Ponga el antebrazo sobre la frente y haga presión con la cabeza. Mantenga la posición por 6 segundos sin permitir ningún movimiento. Descance, después ponga el antebrazo detrás de la cabeza y haga presión. Mantenga esta posición por 6 segundos. Descance. Si no puede usar el antebrazo como el objeto firme, use la pared o el reclinador en el automovil.

56. The Jaw Loosener**ST (:35) RT (14:23)****Aflojamiento de la Mandibula****CU-HEAD**

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio le enseñará cómo mantener los dientes separados para aflojar la mandíbula y ayudándolo a relajarse. Relaje la mandíbula inferior para separar los dientes y mantenga un cuarto de pulgada o aproximadamente el grosor del pulgar entre las mandíbulas. Sus labios pueden estar abiertos o cerrados. Practique este ejercicio cinco veces o más al día, por lo menos treinta segundos cada vez.

STRETCHING EXERCISES: STANDING (Four participants in a semicircle behind the leader)

Estos ejercicios de estiramiento consisten en pararse. El equipo necesario es un bastón, una pared o una mesa, una silla y botella de píldoras.

11. The Shoulder Rotator**ST (1:42) RT (16:05)****Rotación de Hombros**

MEDIUM CU-UPPER BODY (waist up), **DISSOLVE** to next subject's exercise, **DISSOLVE** to last subject's exercise version.

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este es un ejercicio de rotación beneficioso para hacer movimientos como tocar la parte de atrás del cuello o peinarse. Agarre las manos

detrás de su cuello y mueva los codos hacia atrás lo más posible. Si le es difícil hacer Rotación de Hombros puede optar por este otro ejercicio de movimientos menos rigurosos: mueva suavemente su antebrazo en forma lateral lo más lejos de su estómago posible. Uno de éstos ejercicios, repetidos de dos a cuatro veces al día, es suficiente. Escoja el ejercicio que más le convenga o cambie de ejercicio ocasionalmente para variar.

13. The Wand Exercise

ST (:25) RT (16:30)

Ejercicio con la Vara

MEDIUM CU-UPPER BODY (waist up)

SOUNDTRACK: Music down to BG before narration. Up after narration.

Use un bastón, una regla o el palo de la escoba como vara. Ponga las manos al extremo de la vara y levante la vara sobre la cabeza lo más alto posible. Usted puede hacer este ejercicio para ayudar a levantar las manos sobre la cabeza. Ejercicio con la Vara viéndose en un espejo. No tiene que levantar ambos extremos a la misma altura. Trate diferentes posiciones. Si al levantar la vara siente dolor en la mano, trate de fortalecer el agarre de la misma. Este ejercicio es más fácil si lo hace sentado o acostado.

17. The Back Kick

ST (:41) RT (17:11)

Puntapié Hacia Atrás

MEDIUM CU-LOWER BODY (waist down)

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio está diseñado para aumentar el movimiento de retroceso de la cadera. El Puntapié Hacia Atrás es importante para caminar, correr o esquiar. Estando de pie, apóyese sobre una mesa y mueva una pierna hacia atrás y levántela. No doble la rodilla. Comience el ejercicio despacio aumentando la intensidad y mantenga las caderas hacia el frente. Repita con la otra pierna.

4. The Thumb Walk

ST (:38) RT (17:49)

Caminando en los Pulgares

CU-HANDS, DISSOLVE to second subject with pill bottle

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio usado para agarrar objetos o dar la mano. El siguiente ejercicio, llamado Caminado en los Pulgares, es un ejercicio sencillo. Proporciona gran flexibilidad a los dedos y consiste en formar la letra "O" tocando levemente la punta del pulgar con la punta de cada uno de sus dedos respectivamente como se demuestra! Si los dedos no pueden tocar el pulgar, use la otra mano para acercarlos. Puede usar una botella de píldoras para formar la letra "O".

[Show the action with the hand around the pill bottle.]

STRENGTHENING EXERCISES: STANDING

Para los ejercicios de fortalecimiento, debe ponerse de pie. Necesita una banda elástica y una silla o pared.

40. The Side Pull**ST (:45) RT (18:34)****Fortalecimiento Lateral****MS-UPPER BODY**

SOUNDTRACK: Music down to BG before narration. Up after narration.

Fortalecimiento Lateral endurece los músculos que separan los brazos. Sostenga la banda elástica alrededor de ambos antebrazos con las palmas de las manos hacia abajo. Mantenga los codos rectos y empuje en direcciones opuestas hasta que sienta la banda elástica apretada. Mantenga ésta posición por 6 segundos y luego suéltela. Repita intercambiando la posición de los brazos.

42. The Bow and Arrow**ST (:40) RT (19:14)****Arco y Flecha**

MEDIUM CU-UPPER BODY, DISSOLVE other person doing the reverse action.

SOUNDTRACK: Music down to BG before narration. Up after narration.

Con el Arco y Flecha, los músculos de los brazos también se fortalecen mucho y se pueden separar objetos fácilmente. Sostenga la banda elástica con las dos manos. Empuje hacia un lado con un brazo y tire hacia atrás con el otro, cómo si estuviera disparando flechas con un arco. Mantenga esta posición por 6 segundos y luego suéltela. Cambie las manos de posición y repita. Si las manos estan muy

adoloridas, puede hacer este ejercicio con la banda elástica apoyada en las muñecas.

43. The "Cheek to Cheek"

ST (:20) RT (19:34)

Apretamiento del Trasero

MEDIUM CU-BUTTOCKS

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio, llamado Apretamiento del Trasero, es muy simple y útil y puede practicarse estando de pie, sentado o acostado. Apriete las nalgas o glúteos fuertemente; mantenga esta posición por 6 segundos y luego, relájelos.

[3 second pause for the narrator]

54. The Back Push

ST (:35) RT (20:09)

Empujar la Espalda

MEDIUM CU-WHOLE BODY

SOUNDTRACK: Music down to BG before narration. Up after narration.

Para fortalecer los músculos que enderezan la espalda, siéntese en una silla con espaldar recto o siéntese contra la pared. Empuje la espalda contra el espaldar de la silla o la pared. Empujé los hombros y las paletas contra la pared o la silla (show this action). Mantenga esta posición por 6 segundos. Relajese. Para Empujar la Espalda,

usted va sentir los músculos del estómago apretados. Los músculos del estómago ayudan a sostener la espalda.

STRETCHING EXERCISES: LYING

Acuéstese para hacer estos ejercicios de estiramiento. No necesita equipo adicional.

15. The Spread Eagle

ST (:35) RT (20:44)

Extensión del águila

MS-WHOLE BODY lying on the floor

SOUNDTRACK: Music down to BG before narration. Up after narration.

La Extensión del águila es para las caderas. Es muy importante ya que la cadera, tanto como el hombro, tiene gran movilidad. Con este ejercicio se incrementan los movimientos laterales de las piernas y consiste en acostarse de espaldas y separar las piernas lo más posible hasta llegar al punto donde ya no sea posible separarlas más. Cada vez que haga este ejercicio aumente un poco más la distancia entre las piernas. Si le resulta difícil mover ambas piernas a la vez, pruebe con una primero y la otra después.

19. The Hip Rotator

ST (:52) RT (21:36)

Rotación de las Caderas

MS-WHOLE BODY lying on the floor

SOUNDTRACK: Music down to BG before narration. Up after narration.

La Rotación de la Cadera es un ejercicio muy completo para mejorar el grado de movimiento de las caderas, lo cual es necesario para levantarse con facilidad (por ejemplo, de la cama). Acuéstese boca arriba y ponga las manos alrededor de la cabeza; cruce una pierna sobre la otra y trate de tocar el suelo con la rodilla de la pierna de abajo. Mantenga el cuerpo en posición recta; repita luego con la otra pierna. Este ejercicio puede resultarle muy difícil a las personas con problemas de la espalda.

20. Knee Bend 1

ST (:35) RT (22:11)

Doblar de las Rodillas

MS-WHOLE BODY lying on the floor

SOUNDTRACK: Music down to BG before narration. Up after narration.

El Doblar de las Rodillas mejora la habilidad para subir escaleras y levantarse de la silla. Acuéstese boca arriba con las rodillas dobladas y los pies planos sobre el piso. Ayudandose con las manos mueva una de las rodillas hacia el pecho y trate de tocar las nalgas o glúteos con el talón. Hagalo muy suavemente.

29. Knee-to-Chin Stretch

ST (1:11) RT (23:22)

Estirar la Rodilla a la Barbilla

MS-WHOLE BODY lying on the floor

SOUNDTRACK: Music down to BG before narration. Up after narration.

Acuéstese en el suelo con las rodillas dobladas y los pies planos en el suelo. Traiga con sus manos bajo la rodilla hacia su cuerpo hasta tocar la barbilla. Mantenga esta posición de Estirar la Rodilla a la Barbilla por 6 segundos y baje la pierna muy despacio. Repita el mismo movimiento con la otra rodilla. Para estirar todos los músculos de la espalda, siempre en el suelo, levante la cabeza y los hombros hasta que no toquen el suelo y al mismo tiempo, traiga la rodilla hacia la barbilla. Si al levantar la cabeza, siente dolor en el cuello, no haga esta parte del ejercicio.

Si nota que el dolor de la espalda baja es reciente y varía de moderado a severo, es mejor que consulte su doctor antes de hacer estos ejercicios. También consulte con el doctor si nota que el dolor irradia hacia su espalda baja o pierna cuando mueva ésta, o si siente adormecimiento, hormigueo o debilidad. Las personas, con la condición llamada espondilosis anquilosante, querrán hacer ejercicios de respiración profunda para mantener buena movilidad de las costillas.

33. The Cat

ST (:42) RT (24:04)

El Gato

MS-WHOLE BODY on all four limbs

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio estira la espalda baja y fortalece los músculos abdominales. Apoye las manos y las rodillas en el suelo como si

fuera a gatear; respire profundo y al mismo tiempo arqueé la espalda. Vuelva muy suavemente a la posición original al mismo tiempo que exhala el aire por completo. Las personas con problemas serios en las rodillas, los tobillos o las manos no deberían de hacer El Gato porque pone demasiada tensión en estas articulaciones.

32. The Back Lift

ST (:36) RT (24:40)

Levantar la Espalda

MS-WHOLE BODY, DISSOLVE to second person doing second version.

SOUNDTRACK: Music down to BG before narration. Up after narration.

Una manera de mejorar la flexibilidad del epinazo es el acostarse boca abajo. Levantese apoyandose sobre los antebrazos. Si no siente dolor, levantese sobre los brazos extendidos. Personas con dolor de moderado a severo en la parte baja de la espalda no deben hacer Levantar la Espalda.

STRENGTHENING EXERCISES: LYING

Acuéstese cuando haga estos ejercicios de fortalecimiento. El equipo necesario es una banda elástica.

44. The Leg Spreader

ST (:45) RT (25:25)

Abrir las Piernas

MS-WHOLE BODY lying on the floor

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio fortalece los músculos que ayudan a caminar.

Acuéstese de espalda y sostenga la banda elástica por los tobillos (si le duelen los tobillos, entonces póngala un poco más arriba). Separe las piernas hasta que la banda elástica se haya estirado. Mantenga esta posición por 6 segundos; luego suéltela. No deje que su pie se voltee hacia fuera. Usted puede usar cada pierna separadamente con **Abrir la Piernas**.

52. The Partial Sit-Up

ST (:41) RT (26:06)

Sentadilla Parcial

MS-WHOLE BODY lying on the floor

SOUNDTRACK: Music down to BG before narration. Up after narration.

Para ejercitar los músculos del estómago, no es necesario sentarse por completo; sentándose a medias como lo muestra la acción de Sentadilla Parcial, es suficiente para hacer este ejercicio y esto no pone mucha presión en las articulaciones. Acuéstese sobre la espalda en una superficie firme. Levante la cabeza y los hombros tan alto como le sea posible. Mantenga esta posición por 6 segundos y baje el cuerpo muy despacio. Exhale al levantar el cuerpo y respire al bajarlo. No deje de respirar; si le duele el cuello al hacer este ejercicio, puede apoyarse en las manos doblándolas debajo de el cuello.

55. The Back Lift

ST (:38) RT (26:44)

El Levantamiento de la Espalda

MS-WHOLE BODY, DISSOLVE to second person lifting the legs as well as the arms

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio, llamado El Levantamiento de la Espalda, ayuda su postura, fortaleciendo los músculos que enderezan a la espalda y puede ser difícil. Acuéstese sobre el estomago con sus brazos a ambos lados. Levante la cabeza, los hombros y brazos del piso o la cama. Mantenga por 6 segundos. Relájese. Si no es difícil para usted, trate de levantar las piernas del piso al mismo tiempo. Este ejercicio generalmente no es un ejercicio bueno para la persona con dolor moderado a severo de la espalda inferior.

MARQUE EL NUMERO EN EL CONTADOR DE MAQUINA DE VIDEO. ESTO LE AYUDARA A ENCONTRAR EL COMIENZO DEL SEGUNDO EJERCICIO.

SECOND WORKOUT

STRETCHING EXERCISES: SITTING

Siéntese para hacer estos ejercicios de estiramiento. El equipo necesario es una mesa y un martillo liviano.

22. The Knee Straightener

ST (:55) RT (27:39)

Extender las Rodillas

MS-WHOLE BODY, DISSOLVE to second person doing an extra stretch.

SOUNDTRACK: Music down to BG before narration. Up after narration.

La habilidad de enderezar las rodillas es muy importante para caminar o cualquier actividad que requiera estar de pie. Cuando uno pasa mucho tiempo sentado, los músculos y los ligamentos detrás de la rodilla tienden a endurecerse haciendo difícil el enderezar la rodilla. Extender las Rodillas esta diseñado para fortalecer estos tejidos con la presión mínima en las articulaciones. Siéntese en una silla con espalda recta, ponga un pie sobre un banco u otra silla, doble la rodilla un poco y extiéndala presionando la parte trasera de la rodilla hacia el piso (suelo). Si encuentra este ejercicio fácil, añada otro estiramiento. Con mucho cuidado inclínese hacia al frente manteniendo la espalda recta. Usted va a sentir el estiramiento en los músculos a lo largo de la parte trasera de la pierna.

6. Wrist Table Stretch

ST (:35) RT (28:14)

Estirar las Muñecas

CU-HANDS on table

SOUNDTRACK: Music down to BG before narration. Up after narration.

La práctica de este ejercicio ayuda a mejorar la flexibilidad de la muñeca en sus movimientos como cortar comida o empujar la silla al levantarse. Estira la Muñeca consiste en colocar una de las manos en el borde de una mesa y con la ayuda de la otra mano levante la mano hacia arriba, luego bajela hasta el punto que sienta algo de dolor.

8. The Door Opener

ST (:46) RT (29:00)

El Abridor de Puertas

CU-HANDS/WRISTS on table, DISSOLVE to person with light weight

SOUNDTRACK: Music down to BG before narration. Up after narration.

El Abridor de Puertas sirve para estirar los músculos y ligamentos que hacen rotar el antebrazo cuando abrimos las puertas o giramos las perillas de las puertas. Comience con el antebrazo descansando sobre la mesa y la palma de la mano hacia abajo. De vuelta a la mano para que la palma quede hacia arriba. Si necesita usar la otra mano para ayudarse con el estiramiento, agarre la parte más baja del antebrazo y no la mano. Otra alternativa es sostener un martillo liviano ó un objeto de similar peso en la mano. Cuando volteé la mano el peso del objeto le ayudara al estiramiento.

STRENGTHENING EXERCISES: SITTING

Estos ejercicios de fortalecimiento se hacen en la silla. El equipo necesario es una mesa y una botella de píldoras.

Flexión Lateral del Tronco

ST(:43) RT(31:26)

Lateral Trunk Flexion

MS-WHOLE BODY sitting on ledge of chair

SOUNDTRACK: Music down to BG before narration. Up after narration.

La habilidad de sostener y estabilizar la parte superior del cuerpo es importante para sentarse o para levantar las cosas a su lado estando

de pie. Este ejercicio, Flexión Lateral del Tronco, define y fortalece los músculos laterales del tronco. Sentado en una silla ponga las piernas dentro de las patas delantera de la silla y con la mano izquierda agarrese del asiento. Inclínese hacia el lado con la parte superior del cuerpo mirando al frente y trate de tocar el suelo con la mano derecha. Enderécese y trate de tocar el suelo con la mano izquierda y agarre el asiento con la mano derecha. Este ejercicio puede hacerse de pie.

53. The Back Sit

ST (:39) RT (32:05)

Reclinamiento

MS-WHOLE BODY sitting on ledge of chair

SOUNDTRACK: Music down to BG before narration. Up after narration.

El Reclinamiento es una alternativa de las sentadillas, fortalece los músculos del estómago y es más fácil en la nuca. Siéntese recto en la silla firme. Reclínese un poco hacia atrás, mantenga por 6 segundos y después siéntese. Cuando los músculos del estómago se fortalecen, usted podrá reclinarse más atrás. Exhale cuando se recline cuente hasta seis y mantégala. Inhale cuando se siente.

37. The Finger Slide

ST (:34) RT (32:39)

El Resbalar del Dedo

CU-HANDS

SOUNDTRACK: Music down to BG before narration. Up after narration.

Ponga la mano plana con los dedos estirados sobre la mesa. Levante y mueva cada dedo hacia el dedo pulgar. Haga una poca resistencia con la otra mano. El Resbalar del Dedo le ayudara a prevenir que los dedos no se muevan hacia el dedo meñique.

36. The Finger Lift

ST (:43) RT (33:22)

El Levantar del Dedo

CU-HANDS

SOUNDTRACK: Music down to BG before narration. Up after narration.

Para fortalecer los músculos que enderezan los dedos, ponga la mano plana sobre la mesa. Ponga la otra mano encima de los dedos que va a hacer ejercicios. Levante los dedos de la mano de abajo y haga presión hacia la mano de arriba. Mantenga esta posición por 6 segundos y descanse; si se siente débil, levante cada dedo uno por uno. Usted solo tiene que hacer poca presión en El Levantar del Dedo.

35. The Finger Press

ST (:42) RT (34:04)

Presión del Dedo

CU-HANDS, DISSOLVE to second person with pill bottle

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio, llamado Presión del Dedo, se recomienda para fortalecer los músculos que se usan para doblar los dedos y para recoger objetos. Pruebe usar una pequeña pelota o un objeto cilíndrico en la mano para hacer un círculo en forma de "O". Presione la punta del pulgar hasta alcanzar la punta del índice. Presionando suavemente mantenga esta posición por 6 segundos y luego suéltela. Haga lo mismo con cada uno de los dedos.

STRETCHING EXERCISES: STANDING

Estos ejercicios de estiramiento se hacen de pie. Necesita una mesa y un martillo liviano.

10. The Pendulum

ST (:50) RT (34:54)

Péndulo

**MS-WHOLE BODY, DISSOLVE to second subject leaning on chair,
DISSOLVE to third person with medium-weight object**

SOUNDTRACK: Music down to BG before narration. Up after narration.

El Péndulo se recomienda para iniciar la serie de ejercicios para los hombros y se puede practicar de pie o sentado, dejando caer libremente el brazo. Se inicia éste con pocos movimientos circulares con el brazo estirado, como lo muestra la acción, los cuales se van ampliando poco a poco. Para ayudarse puede tomar un objeto de peso mediano en su mano como un martillo liviano. (Si fuera muy doloroso para las manos tomar y mantener un objeto, Ud. tiene la opción de practicar este ejercicio sin usar un objeto).

Recuerde de hacer estos ejercicios un poco después del punto de molestia. No haga demasiado los movimientos circulares.

24. The Heel-Toe

ST (:22) RT (35:16)

El Talón y los Dedos de los Pies

MEDIUM CU-LOWER BODY

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio estira los tendones, los músculos de las pantorrillas y las articulaciones del tobillo y ayuda a la circulación. Para practicar este ejercicio, siéntese en una silla o al borde de la cama con los dos pies tocando levemente el suelo. Primero, levante los dedos y la parte delantera de los pies tan alto como pueda apoyándose en los talones. Después, manteniendo los dedos de los pies en el suelo, levante los talones tan alto como le sea posible.

23. The Achilles Stretch

ST (:42) RT (35:58)

El Tendón de Aquiles

MEDIUM SHOT (MS)-WHOLE BODY

SOUNDTRACK: Music down to BG before narration. Up after narration.

El Tendón de Aquiles es de gran utilidad para caminar y permanecer de pie. Póngase de pie y apóyese en una mesa al hacerlo. Doble la rodilla cercana a la mesa de apoyo y mantenga la otra pierna recta. Los pies deben mantenerse firmes al mismo tiempo que desplaza el

cuerpo hacia la mesa. Usted debe sentir el estiramiento de la pantorrilla. Puede hacerlo apoyado contra la pared.

14. The Shoulder Pulley

ST (:35) RT (36:33)

Polea de los Hombros

MS-WHOLE BODY, DISSOLVE to person sitting down

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este es un ejercicio para los hombros que consiste en colocar una cuerda o soga sobre una puerta tomando ambas puntas con las manos, y luego tirando de un extremo de la cuerda hacia abajo y levantando el extremo contrario con la otra un poco más alto de lo requerido. Vea la siguiente acción para la Polea de los Hombros. Este ejercicio puede hacerse sentado.

5. The Palm Press

ST (:35) RT (37:08)

Presión con las Palmas de las Manos

MEDIUM CU (CLOSEUP)-ELBOWS AND HANDS on table.

SOUNDTRACK: Music down to BG before narration. Up after narration.

Presión con las Palmas de las Manos facilita los movimientos de la muñeca para jugar a las cartas o tejer. Primero junte las manos palma con palma y los dedos un poco entrelazados (A). Haga presión sobre la mano derecha con la mano izquierda (B), después repita el ejercicio haciendo presión sobre la mano izquierda con la mano

derecha. Haga presión en las palmas de la mano y no en la punta de los dedos. Doble la mano un poco más allá del punto doloroso.

3. Fingers Flat Exercise

ST (:50) RT (37:58)

Estiramiento de los Dedos

Zoom to CLOSEUP-HANDS

SOUND TRACK: music down to BG (background) while narration is occurring and up otherwise.

Estiramiento de los Dedos es un ejercicio para estirar las articulaciones de los dedos de la mano. Ponga la mano sobre la mesa lo más plana posible. Ponga la palma de la otra mano sobre los dedos y suavemente haga presión al mismo tiempo que endereza los dedos.

Si sus deformaciones son severas, debe consultar primero con el doctor o una terapeuta para desarrollar su programa inicial de estiramiento de los dedos.

STRENGTHENING EXERCISES: STANDING

De pie cuando haga estos ejercicios de fortalecimiento. Necesita una banda elástica, una mesa y una silla o una pared.

41. The Robot

ST (:44) RT (38:42)

El Autómata

MEDIUM CU-UPPER BODY, DISSOLVE to other persons doing other versions

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio fortalece los músculos que suben y bajan los brazos al levantar objetos. Ponga la banda elástica entre los antebrazos con las palmas de la mano hacia abajo. Manteniendo los codos rectos, mueva un brazo hacia arriba y el otro hacia abajo hasta que la banda elástica se estire como un Autómata. Mantenga la posición por 6 segundos y después descance. Cambie las posiciones de los brazos y repita el ejercicio. Si no tiene una faja haga los mismos movimientos usando una mesa, la pared o use el otro antebrazo como el objeto firme.

39. The Biceps Bulge

ST (:54) RT (39:36)

Codo Doblado

MEDIUM CU-UPPER BODY, DISSOLVE to second person using only the arms

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio fortalece los músculos de los codos para empujar o traer objetos hacia su cuerpo. Usando una banda elástica ponga sus manos adentro y apoye la banda elástica más arriba de las muñecas con las palmas de las manos hacia arriba. Doble un codo y estire el otro al mismo tiempo que estira la banda elástica. Mantenga esta posición por 6 segundos, luego suéltela. Repita intercambiando los brazos.

38. The Wrist Press

ST (:50) RT (40:26)

Presión de la Muñeca

CU-HANDS/WRISTS

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicios es muy útil para fortalecer los músculos que doblan y enderezan la muñeca y para levantarse de la silla. De Presión de la Muñeca ponga una mano sobre una mesa. Apoye la muñeca de la otra mano sobre la mano que está descansando en la mesa. Levante la mano de abajo y trate de empujar con ella la mano que esta arriba. Mantenga esta posición por 6 segundos y suéltela. Cambiede manos y repita el mismo ejercicio recordando que las articulaciones no deben moverse, sólo los músculos.

49. The Tiptoe

ST (:39) RT (41:05)

Puntillas

MS-WHOLE BODY, then CU-ANKLE, DISSOLVE to the second person sitting

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio llamado Puntillas le ayuda a moverse hacia adelante cuando camina. Haga Puntillas mientras se agarra suavemente de una mesa o de un mueble para que le dé apoyo. Párese en puntillas, y mantenga esta posición por 6 segundos. Baje los talones muy despacio. Si está sobrepesado este ejercicio puede poner mucha tensión en sus articulaciones. Otra posible alternativa es que ponga la planta del pie contra la pared y empuje hacia adelante con los

músculos solamente. Mantenga esta posición por 6 segundos y suéltela. Repite con el otro pie.

STRETCHING EXERCISES: LYING

Acostado cuando hacer estos ejercicios de estiramiento. No equipo es necesario.

18. The Leg Lift

ST (:29) RT (41:34)

Levantar la Pierna

MS-WHOLE BODY

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio también está diseñado para incrementar la movilidad de las caderas. Consiste en acostarse boca abajo y si la posición es cómodo, levantar las piernas una por una lo más alto posible. Personas con problemas en la espalda baja o los discos no deben hacer este ejercicio, llamado Levantar la Pierna.

28. The Pelvic Tilt

ST (:56) RT (42:30)

Presión con la Espalda Baja

MS-WHOLE BODY, DISSOLVE to persons in other two positions

SOUNDTRACK: Music down to BG before narration. Up after narration.

Todo persona con problemas en la espalda debería comenzar con este ejercicio. Este ejercicio fortalece los músculos del estómago y estira los músculos de la espalda baja. Acuéstese en la cama o en el suelo

con las rodillas dobladas y los pies descansando en el suelo. Ponga las manos sobre el abdomen. Aplaste la cintura contra el suelo apretando las nalgas y contrayendo el estómago. Una vez que usted pueda hacer Presión con la Espalda Baja sin problemas mientras está acostado, pruebe hacerlo mientras esté de pie o sentado.

Si nota que el dolor de la espalda baja es reciente y varía de moderado a severo, es mejor que consulte su doctor antes de hacer estos ejercicios. También consulte con el doctor si nota que el dolor irradia hacia su espalda baja o pierna cuando mueva ésta, o si siente adormecimiento, hormigueo o debilidad. Las personas, con la condición llamada espondilosis anquilosante, querrán hacer ejercicios de respiración profunda para mantener buena movilidad de las costillas.

30. The Low Back Rock

ST (:35) RT (43:05)

Mecer la Parte Baja de la Espalda

MS-WHOLE BODY, DISSOLVE to person with adaptive strap

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio de mecer la parte baja de la espalda estira la parte baja de la espalda. Acuéstese boca arriba con las rodillas dobladas y los pies planos. Traiga las rodillas hacia el pecho una por una asiendo la parte trasera del muslo para ayudarse con el estiramiento. Descanse en esta posición por 6 segundos. Después suavemente mueva las

rodillas de un lado al otro. Mantenga la espalda y los hombros planos en el piso.

12. The Shoulder Cradle

ST (:35) RT (43:40)

La Cuna

MS-WHOLE BODY, DISSOLVE to person lying down

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio para los hombros es bien tolerado aún por aquellas personas con mucho dolor. Este ejercicio ayuda a alcanzar sitios altos. La Cuna consiste en levantar un brazo, ayudado por el otro, hasta colocar el brazo sobre la cabeza, al mismo tiempo que se empuja el hombro muy suavemente hacia arriba hasta sobrepasar el punto donde duele. Puede ser más fácil hacer este ejercicio estando acostado.

34. Stretch Like a Cat, Shake Like a Dog ST (:35) RT (44:15)

Estºrece Como el Gato y Sacúdase Como el Perro

MS-WHOLE BODY, PAN everyone doing it

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este ejercicio fue recomendado por uno de nuestros amigos con artritis. No sólomente te ayuda a comenzar el día pero es divertido. La artritis es una enfermedad seria pero la risa ayuda. Una de las excusas más comunes en las personas que no hacen ejercicio es falta

de tiempo. Este ejercicio le permite aprovecharse del tiempo al hacer dos cosas a la vez. Ya que usted pasa cierto tiempo en el baño todos los días. ¿Porqué no usar este tiempo para hacer algunos ejercicios? Acostado en el suelo o la cama: primero estire los brazos y las piernas como el gato cuando se despierta. Sentado y pretenda que usted es un perro despertándose y sacúdase.

STRENGTHENING EXERCISES: LYING

Esto ejercicio de fortalecimiento se hacen acostado en el piso. Una banda elástica es toda lo que necesita.

Hip Adduction **ST(:40) RT(44:55)**

Aducción de la Cadera

MS-WHOLE BODY, DISSOLVE to second person doing other version

SOUNDTRACK: Music down to BG before narration. Up after narration.

Aducción de la Cadera define los músculos interiores del muslo y ayuda a caminar cómodamente. Acuéstese de lado mueva la pierna de arriba hacia el frente y doble la rodilla. Levante la pierna extendida de abajo hacia arriba y abajo varios veces. Acuéstese en el otra pierna.

45. The Straight-Leg Raise **ST (:51) RT (45:46)**

Fortalecimiento de la Pierna Recta

MS-WHOLE BODY, DISSOLVE to second person doing other version

SOUNDTRACK: Music down to BG before narration. Up after narration.

Para el Fortalecimiento de la Pierna Recta, acuéstese de espaldas poniendo los brazos en una posición cómoda. Apriete el músculo que pasa al frente de la rodilla y levante la pierna del suelo por aproximadamente 10 o 20 pulgadas sin doblar la rodilla. Mantenga esta posición por 6 segundos y luego suéltela. Si usted tiene problemas en la espalda baja, usted deberá hacer este ejercicio con la otra rodilla doblada. Cuando los músculos se fortalecen más, usted debe poner la banda elástica alrededor los tobillos y hacer el mismo ejercicio. Estire la banda elástica, mantenga por 6 segundos y después baje la pierna despacio.

46. The Quad Set

ST (:54) RT (46:40)

Serie para Cuadriceps

MEDIUM CU-LOWER BODY, DISSOLVE to second person sitting up

SOUNDTRACK: Music down to BG before narration. Up after narration.

Este es un ejercicio muy útil para las personas que tienen las rodillas débiles o con mucho dolor. Los músculos de las rodillas son esenciales para caminar, para subir y bajar las escaleras o para levantarse de los sillones bajos. Para la Serie para Cuadriceps, acostarse en el suelo, estire las piernas hacia el frente. Apriete el músculo que pasa al frente de la rodilla trayendo los dedos de los pies hacia la cabeza, al mismo tiempo que empuja la parte de atrás

de la rodilla hacia el suelo. Mantenga esta posición por 6 segundos y luego suéltela. Repita con la otra rodilla. Si acostado le es demasiado fácil, haga este ejercicio sentado con la espalda apoyada en la pared para que ésta le sirva de apoyo.

51. The Neck Strengtheners

ST (:32) RT (47:38)

Fortalecimiento del Cuello

CU-NECK/HEAD, DISSOLVE to second person pressing head upward against the forearm

SOUNDTRACK: Music down to BG before narration. Up after narration.

Los músculos de el cuello pueden estirarse mientras esté acostado. Levante la cabeza de la almohada y manténgala en esta posición por 6 segundos; luego descanse. Presione la cabeza hacia abajo hasta hundirla en la almohada; mantenga esta posición 6 segundos. Descanse. Llamado Fortalecimiento del Cuello. Si el levantar la cabeza es doloroso, presione la cabeza hacia arriba contra el antebrazo.

CONCLUSION: SUMMARY & RELATED ADVICE

ST (1:05) RT (48:43)

SOUNDTRACK: Music in the background during the narration.

Fade in after the narration.

Ahora que hemos terminado con los ejercicios para estirarse y fortalecerse, es necesario recordarle a usted hacer ejercicios de resistencia que le satisfasga. Los ejercicios de estiramiento deben de

hacerse de tres a seis veces por sesión y de dos a cuatro sesiones diarias, según sea el nivel del dolor. Los ejercicios para fortalecer los músculos deben hacerse de tres a diez veces pero una vez al día. También usted tiene una idea de los ejercicios que le gustaria incluir en su programa. Ahora puede leer el libreto del video y posiblemente "The Arthritis Helpbook" by Kate Lorig, PhD. and James F. Fries, M.D. (libro acerca de la artritis) para mayor información antes de hacer los ejercicios.

Estas son unas notas finales de los autores del "Arthritis Helpbook":

"Las personas que hacen ejercicios regularmente (de tres a siete veces por semana), practican relajamiento y usan técnicas de manejo propio sienten menos dolor y son mas activos que las personas que no practican ninguna técnica de manejo propio. Además estas personas dicen que no visitan al doctor a menudo."

Kate Lorig

"Piense que una vez que se decida usted puede hacer mas por su artritis que cualquier otra persona. Usted puede hacer mas por su artritis que lo que crea posible. Prometa seguir este programa y controlar su salud ahora mismo usted lo puede hacer."

James F. Fries

[Concluding remarks from the participants]

Everyone yells, "¡Usted lo puede hacer!"

III. FIN: REFERENCIAS, ORGANISACIONES Y CREDITOS.

ST (1:30) RT (50:13)

SOUNDTRACK: Music in the background during the narration.

Fade in after the narration.

CREDITOS

Productor / Editor

Ronald Johnson

Director de la Fotografía

Mark Gomes

Con la ayuda del Televisión

Centro del De Anza Colegio personal

Duane Kubo

Goli Davidson

Hoa Phan

Scott Spense

Rob Myers

Laura Kinley

Narrador

Ignacio Corona

Traductores

Zulma Acevedo

Carlos Barillas

Ignacio Corona

Participantes

Ella Bonilla

Mabel Cunha

Ethel Guttenberger

Mary Hidalgo

Marge Jordan

Frank Perez

Faustino Rodriques

Manuela Rodriques

Appendix H
ENGLISH PAMPHLET

USTED Y SU ARTRITIS

Arthritis refers to more than one hundred identifiable conditions where inflammation and/or pain affect an area in and around a joint. It can significantly affect one's social, economic, and/or occupational status, as well as personal health. A program of reducing the long-term negative effects of arthritis was developed by the Stanford Arthritis Center in 1979.

This program encompassed a variety of self-management treatments such as relaxation, nutrition, exercise, and problem-solving. However, this pamphlet is not intended to describe all treatments offered in the self-management program. If interested in additional information, please write to the following address and ask for information contained in the book, The ARTHRITIS Helpbook. An abridged form of this book is available in Spanish:

Stanford Arthritis Center
Health Education Research
750 Welch Road, Suite 315
Palo Alto, CA 94304

This book contains the complete description of a self-management program for coping with the pain and inflammation associated with arthritis. One chapter, "Use It or Lose It: Exercises for your Arthritis," is the basis for the videotape. The chapter was transformed into an audiovisual medium,

rearranged into two workouts, and supplemented with a Spanish soundtrack (narration and music) and Spanish-language graphics.

Unique Videotape Features

This exercise videotape is designed for a Spanish-speaking person with arthritis, a person who wants a safe exercise program with mild to moderate intensity, or a health care professional, friend, or family member who seeks information about an exercise program for arthritic persons. If you fit any of those categories, this videotape could be helpful. It can lead to, among other benefits, increases in one's flexibility and muscular strength. Before beginning the exercise program, consult with your physician. If approved, the program is simple, convenient, and effective.

There are four helpful features in this videotape. **BACKGROUND COLORS.** The level of the background colors, grey and maroon, change in the graphics.

Background Color

all gray	2/3 gray 1/3 maroon	1/3 gray 2/3 maroon	all maroon

Introduction	First workout	Second workout	Conclusion

The different background color matches the video location.

EXERCISE NUMBERS. The signs have numbers before each exercise title listed in English. These numbers correlate to the number of the exercise described in Chapter 7 in The ARTHRITIS Helpbook. This helps provide an additional view of the exercises in this videotape.

FUNCTIONAL BENEFITS. Each exercise provides functional benefits for the exerciser. At least one of those benefits will be illustrated in each exercise segment.

INDIVIDUAL ABILITIES. In many of the exercises, the models performed the exercises differently. This showed that persons with different physical abilities can exercise the same body part with different exercises.

The introduction of this videotape covers numerous topics:

EXERCISE AND YOUR ARTHRITIS

BENEFITS OF EXERCISE

BASIC TYPES OF EXERCISE

WHEN SHOULD I EXERCISE?

WHAT EQUIPMENT DO I NEED?

WHAT SHOULD I AVOID OF MINIMIZE DURING EXERCISE?

The last segment in the introduction details specific information about the exercise portion of the videotape.

Topics covered only in this pamphlet are the information on pain management and the preparation necessary before you exercise. Specifically, this includes two areas: equipment needs and second type of pre-exercise preparation.

One of the questions raised in the videotape, "What equipment do I need?" was partially answered in the introduction of the videotape. In addition you were told that you will need appropriate shoes and clothing. The shoes should be comfortable with good shock absorption and stability, especially when doing endurance running or walking. The clothing should be elastic or loose so the stretching exercises can be performed freely without restriction from the apparel.

Pre-exercise preparation covers two areas: a physical warmup and the application of heat and/or cold.

WARMUP. Warmup before exercise helps activate muscles and help prevent injuries. Start with a slow, gentle stretch. This can be done while lying in bed. Begin the stretch with small, pain-free movements. For example, loosen up the arms with upward and sideward movements; loosen up the legs by stretching each leg toward the chest, and if possible, make bicycle turns in the air. This pre-exercise warmup precedes the exercise warmup briefly explained in the video introduction.

HEAT. Apply heat and/or cold prior to exercise. Apply it the way you want. Heat, from a hot shower or bath or an electric heating pad, tends to relax muscles and tendons and relieve pain. Stand up slowly in the shower to prevent dizziness. Also, do not lie directly on a heating pad when warming up to prevent electrocution. Massage is another modality used to convey heat to the soft tissues around the stiff joints. It is best to avoid deep massage of an inflamed joint to prevent further joint injury.

COLD. Cold, from an ice cube or a sack of frozen vegetables, radiates deeper, decreases pain and increases joint motion. Apply it over the affected joint for no more than 20 minutes. Applying a combination of heat and cold is another means of receiving relief from pain. Repeat a cycle of three minutes of heat and one minute of cold two to three times. Avoid cold if you are particularly sensitive to cold or have decreased sensation or circulation such as Raynaud's Disease or vasculitis.

PAIN MANAGEMENT. Pain management is another important part of this self-management program. Chapter 8 in The ARTHRITIS Helpbook actually covers relaxation exercises. Read the whole chapter, experiment with several of the exercises, and try the one you like best twice a week for two weeks to see if it helps you lower your perception of pain. Once 2 to 3 exercises are pleasing to you, find the best times and places to practice them; with the proper environment and some practice cues, the relaxation exercises should be beneficial in three to four weeks. If you have tried these exercises to the best of your ability and the long-term feelings are unpleasant, maybe you will do better using other aspects of the program to control your pain.

This pamphlet and the videotape, *Usted Y Su Artritis*, are only part of the self-management program. The whole program seeks to control pain and inflammation associated with arthritis by increasing knowledge about arthritis and different lifestyle changes in order to control arthritis. Along with relaxation methods, problem-solving, self-help aids, and drug therapy,

to name a few, exercise is also one very important part of the self-management program.

Please note: the narrator has the option of saying words other than the words printed in the signs. Any errors or deletions are the sole responsibility of the producer.

Special thanks is extended to: Arthritis Foundation, Stanford Arthritis Center employees, De Anza College Television Center crew, San Jose State University teachers, the participants, the evaluators, the interpreters, and most of all, my wife. My deepest appreciation to all these fine people.

Appendix I
SPANISH PAMPHLET

**USTED
Y SU
ARTRITIS**

**UN PANFLETO PARA EL
VIDEO DE EJERCICIOS
PARA PERSONAS CON
ARTRITIS DE LEVE A
MODERADO**

USTED Y SU ARTRITIS

Artritis se refiere a más de cien condiciones identificable de donde inflamación o dolor afecta una area o alrededor de la articulación. Esto puede afectar significativamente la salud personal, el rango, la posición económica o el trabajo. Un programa para reducir los efectos negativos de la artritis a la larga ha sido desarrollado por al Centro de Artritis de Stanford en 1979.

Este programa contiene una variedad de las técnicas para el manejo propio como relajación, nutrición, ejercicio, y solución de problema. Pero, este panfleto no intenta describir todas las técnicas que ofrece el programa. Si quiere más información, escriba, por favor, al destinatario y puede preguntar por la información sobre el libro, The ARTHRITIS Helpbook. Una forma condensada del libro se obtiene en Español en:
Stanford Arthritis Center
Health Education Research
750 Welch Road, Suite 315
Palo Alto, CA 94304

Este libro contiene la descripción completa del programa para el manejo propio, para hacerle frente al dolor e

inflamación de la artritis. Un capítulo, llamado "Use It or Lose It: Exercises for your Arthritis," es la base de este video. El capítulo transformado en un medio audio-visual, cambiado a dos ejercicios y suplementado con sonido e ilustraciones en Español.

Facciones Unicas del Video

Este video de ejercicios ha sido creado para la persona de habla Hispana con artritis, para la persona que quiere un programa de ejercicios seguros con la intensidad de leve a moderado, o un trabajador de la salud, un amigo, o un miembro de la familia que busca información sobre un programa de ejercicios para las personas con artritis. Si usted está en una de las categorías, este video puede ayudarle. Puede ayudarle, entre otros beneficios, a incrementar la flexibilidad y fuerza del músculo. Antes de empezar este programa de ejercicios, consulte con su médico. Si el programa es aprobado, este es simple, conveniente y efectivo.

Hay cuatro facciones útiles en este video.

COLORES DEL FONDO. La intensidad de los colores del fondo, gris y rojo oscuro, cambian en las gráficas.

Colores del Fondo

Todo	2/3 gris	1/3 gris	todo
gris	1/3 rojo	2//3 rojo	rojo
	oscuro	oscuro	oscuro

Introducción Primer Segundo Conclusión
ejercicio ejercicio

Los colores diferentes del fondo coinciden con el lugar en el video.

EJERCICIO NUMERADOS. Las gráficas están numeradas antes de cada título del ejercicio en Inglés. Estos números coinciden con los números de los ejercicios descritos en el Capítulo 7 del libro, The ARTHRITIS Helpbook. Este le ayuda también a ver los ejercicios en el video.

BENEFICIO FUNCIONALES. Cada ejercicio le da beneficios funcional a la persona que lo sigue. Por lo menos uno de los beneficios será demostrado en cada segmento del ejercicio.

ABILIDAD INDIVIDUAL. En muchos ejercicios el modelo hace los ejercicios diferentes. Esto demuestra que las personas con habilidades diferentes pueden ejercitar la misma parte del cuerpo con ejercicios diferentes.

La introducción del video cubre muchos tópicos :

**EJERCICIO Y SU ARTRITIS
BENEFICIOS DE EJERCICIOS
TIPOS BASICOS DE EJERCICIOS
¿CUANDO DEBO DE HACER
EJERCICIO?
¿QUE EQUIPO NECESITO?
¿QUE DEBO EVITAR O REDUCIR
DURANTE LOS EJERCICIOS?**

El último segmento de la introducción detalla la información específica sobre los ejercicios del video. Los tópicos en este panfleto se relacionan solamente al manejo del dolor y la preparación necesaria antes de hacer ejercicios. Específicamente, este incluye dos áreas: equipo necesario y la preparación antes de hacer ejercicios.

Una de las preguntas en el video "¿Que equipo necesito?" fue cubierta en parte en la introducción de este video. Usted necesita zapatos y ropa apropiada. Los zapatos deben ser cómodos con amortiguación buena y estabilidad, especialmente cuando se corre o camina. La ropa debe ser elástica o suelta para que los ejercicios de estiramiento puedan hacerse sin restricción en el movimiento.

La preparación del pre-ejercicio consiste de dos áreas: el calentamiento físico y la aplicación de calor o frio. El calentamiento antes del ejercicio

ayuda a activar los músculos y prevenir lesiones. Empiece con un suave y lento estiramiento. Esto puede hacerse acostado en la cama. Empiece el estiramiento con movimientos pequeños que no duela. Por ejemplo, relaje los brazos con movimientos ascendentes y laterales; afloje las piernas estirando y llevando las rodillas al pecho y si es posible, haga rotaciones de bicicletas en el aire. Evite hacer ejercicios en un lugar frío sin calefacción. Este pre-ejercicio de calentamiento precede el ejercicio de calentamiento explicado brevemente en la introducción del video.

CALOR. Aplique calor o frío antes de hacer ejercicios. Aplíquelo de la manera que quiera. Calor, ya sea de la ducha caliente, o una almohadilla eléctrica, o una bolsa de agua caliente, tiende a relajar los músculos y ligamentos y alivia el dolor. Pruebe el calor antes del uso, por ejemplo, en la ducha, para evitar quemaduras. También, masaje es otro modo de relajación de los músculos pero evite masajear demasiado las articulaciones inflamadas.

FRÍO. Frío de una bolsa de hielo, o un paquete de vegetales congelados o

cubitos de hielo, puede dar mejores resultados en relajación de los músculos. El frío penetra más profundamente que el calor. El frío adormece reduciendo así el dolor y aumentando el movimiento de las articulaciones. Aplique el frío sobre las articulaciones y déjelo por quince a veinte minutos para obtener el efecto del adormecimiento. Aplicando una combinación de calor y frío es otra manera de reducir el dolor. Repita un ciclo de tres minutos de calor con un minuto de frío dos o tres veces al día. Evite el frío si usted es sensitivo particularmente al frío o tiene sensación o la condición "Raynaud's Disease" o inflamación de los vasos.

MANEJO del DOLOR. El manejo del dolor es otra parte importante del programa para manejo propio. El Capítulo 8 en el libro, The ARTHRITIS Helpbook, explica las muchas técnicas para relajación. Lea todo el capítulo, si puede leer Inglés. Si no, lea el capítulo similar en la versión en Español del libro. Pruebe varias técnicas de relajación por dos semanas y quedese con dos o tres técnicas que quiera usted. Después de encontrar el mejor tiempo y lugar, usted puede reducir su percepción del dolor de artritis. Si no,

quizás otra técnica para el manejo propio del dolor puede hacerlo.

Este panfleto y el video, Usted Y Su Artritis, son solamente una parte del programa para el manejo propio. El programa entero esta diseñado a controlar el dolor y la inflamación de la artritis e incrementar el conocimiento sobre la artritis y los cambios diferentes de vida. Además de los métodos de relajación, La solución de problemas, ayuda propia, terapia con medicamentos, el ejercicio es una parte importante del programa para el manejo propio.

Recuerde: el narrador tiene la opción de decir palabras diferente a las de las gráficas. Cualquier error o omisión es la responsabilidad del productor.

Mi agradecimiento a: Arthritis Foundation, empleados de Stanford Arthritis Center y De Anza College Television Center, profesorado de Universidad Estatal de San José, los evaluadores, los interpretes y mas que todo mi esposa. Mi sincera gratitud a todas estas personas.

DE ANZA COLLEGE TELEVISION
CENTER
STANFORD ARTHRITIS CENTER

Appendix J
VIDEOTAPE SURVEY

Appendix J

VIDEOTAPE SURVEY

The following is a survey to help determine the quality of the videotape, Usted Y Su Arthritis.

The scale on the right side represents your opinion and the range of the rating extends from 1 (POOR) to 10 (EXCELLENT). Circle the number that is closest to your opinion in that area or circle "NO". The "NO" (no opinion) is used when you feel you have insufficient information to respond.

If you have any questions or you have completed this survey, please call Ron Johnson at (415) 968-7023. The results will remain confidential.

Technical Merit

	Poor	Excellent	
PICTURE: sharpness, clarity	1 2 3 4 5 6 7 8 9 10		NO
CAMERA: closeness, angle	1 2 3 4 5 6 7 8 9 10		NO
LIGHTING: consistency, brightness	1 2 3 4 5 6 7 8 9 10		NO
SOUND: clarity, evenness	1 2 3 4 5 6 7 8 9 10		NO
EDITING: transition between edits	1 2 3 4 5 6 7 8 9 10		NO
GRAPHICS: quality	1 2 3 4 5 6 7 8 9 10		NO
COMMENTS/RECOMMENDATIONS:			

Content Merit

	Poor	Excellent
INTRODUCTION: information quality	1 2 3 4 5 6 7 8 9 10	NO
EXERCISE SAFETY	1 2 3 4 5 6 7 8 9 10	NO
EXERCISE VARIETY	1 2 3 4 5 6 7 8 9 10	NO
OVERALL EASE of USE	1 2 3 4 5 6 7 8 9 10	NO
SPANISH GRAMMAR	1 2 3 4 5 6 7 8 9 10	NO
MUSIC	1 2 3 4 5 6 7 8 9 10	NO
DRESS: appropriate for exercise	1 2 3 4 5 6 7 8 9 10	NO
WARMUP/COOLDOWN: discuss/show	1 2 3 4 5 6 7 8 9 10	NO
MOTIVATION: to perform	1 2 3 4 5 6 7 8 9 10	NO
VIDEO LENGTH	1 2 3 4 5 6 7 8 9 10	NO
OVERALL ORGANIZATION	1 2 3 4 5 6 7 8 9 10	NO
COMMENTS/RECOMMENDATIONS:		

Videotape Survey Comments

<u>Area</u>	(total of 23 surveys)
<u>Technical Merit</u>	<u>Comments</u>
Picture	Blurry shots
Camera	Blurry shots
Lighting	Bad lighting on models
Sound	Background too loud, muted area
Editing	"Cuts" too short in time
Graphics	"Graphic" or exercise time short
<u>Content Merit</u>	
Introduction	More graphics, clause audio
Exercise Safety	Harmful exercises?
Exercise Variety	Exercises out of order
Overall Ease of Use	None
Spanish Grammar	No accents, some bad grammar
Music	Too ethnic
Dress	Not professional enough
Warmup/Cooldown	None
Motivation	Too low energy
Video Length	Too long in time?
Overall Organization	De Anza sign: bad taste?

Appendix K
ENGLISH PRETEST
QUESTIONNAIRE

Appendix K
Pretest Questionnaire

Circle True (T) or False (F).

1. You should consult your doctor before beginning an exercise program.
T F
2. Exercise is usually harmful for people with arthritis.
T F
3. Endurance exercises improve the blood circulation.
T F
4. Exercise allows nutrition to be brought to the joint cartilage and waste products to be removed.
T F
5. Endurance exercises are a necessary part of your exercise program because they increase your flexibility better than stretching or strengthening exercises.
T F
6. One of the best times to exercise is when your medication is having its maximal effect.
T F
7. Exercise for arthritic persons usually involves expensive equipment.
T F

8. Your exercise should minimize stress on the joints affected with arthritis.
T F
9. Each exercise should be started quickly and continued steadily.
T F
10. In arthritis, "no pain, no gain" is a good rule for an exercise program.
T F
11. You are doing too much if the pain after the exercise lasts more than one day.
T F
12. Initially, you should exercise the joints with the least range of motion.
T F
13. Your exercise program should contain, at least, three phases: warmup, aerobic, and cool-down.
T F
14. The whole program should be done four or more times per week.
T F
15. Isometric exercises improve your circulation.
T F
16. You should exercise just past the point of discomfort.
T F

17. Deep-breathing exercises ensure good mobility of the rib cage.

T F

18. A full sit-up is necessary to exercise the abdominal muscles.

T F

Appendix L
SPANISH PRETEST
QUESTIONNAIRE

Cuestionario Preliminar

Haga un circulo alrededor de lo verdadero (T) o falso (F).

- 1. Tiene que consultar con su médico antes de empezar este programa de ejercicios.**
T F
- 2. Ejercicio es usualmente dañino por la gente con artritis.**
T F
- 3. Los ejercicios de tolerancia mejoran la circulación de la sangre.**
T F
- 4. Ejercicio nutre el cartilago de las articulaciones y permite la eliminación de los desechos.**
T F
- 5. Los ejercicios de tolerancia son necesarios en su programa de ejercicios porque incrementaran su flexibilidad mejor que los ejercicios de estiramiento o los ejercicios para fortalecimiento.**
T F
- 6. El mejor tiempo para hacer ejercicios es cuando su medicamento tiene el efecto máximo.**
T F
- 7. Ejercicio para las personas con artritis usualmente requiere un equipo costoso.**
T F

8. Los ejercicios deben de reducir la tensión en las articulaciones artríticas.
T F
9. Cada ejercicio debe de empezarlo rápidamente pero constante.
T F
10. Con artritis, "no dolor, no beneficio" es una regla buena en su programa de ejercicios.
T F
11. Usted ha hecho demasiado si el dolor después del ejercicio persiste por más de un día.
T F
12. Inicialmente, usted debe de ejercitar las articulaciones que tienen los movimientos limitados.
T F
13. Su programa de ejercicios debe de contener tres partes: calentamiento, ejercicios aeróbicos y enfriamiento.
T F
14. El programa entero debe de hacerse cuatro o más veces por semana.
T F
15. Los ejercicios isométricos mejora la circulación de la sangre.
T F
16. Usted debe de ejercitar las articulaciones un poco después que se vuelvan dolorosas.
T F

17. Los ejercicios de respiración profunda mantienen buena movilidad de las costillas.

T F

18. Una sentadilla completa es necesario para ejercitar los músculos abdominales.

T F

Appendix M
SPANISH POSTTEST
QUESTIONNAIRE

Cuestionario Segundo

Haga un circulo alrededor de lo verdadero (T) o falso (F).

1. Los ejercicios de tolerancia mejoran la circulación de la sangre.
T F
2. Tiene que consultar con su médico antes de empezar este programa de ejercicios.
T F
3. Los ejercicios de tolerancia son necesarios en su programa de ejercicios porque incrementarán su flexibilidad mejor que los ejercicios de estiramiento o los ejercicios para fortalecimiento.
T F
4. Ejercicio es usualmente dañino por la gente con artritis.
T F
5. Ejercicio nutre el cartílago de las articulaciones y permite la eliminación de los desechos.
T F
6. El mejor tiempo para hacer ejercicios es cuando su medicamento tiene el efecto máximo.
T F
7. Con artritis, "no dolor, no beneficio" es una regla buena en su programa de ejercicios.
T F

8. Inicialmente, usted debe de ejercitar las articulaciones que tienen los movimientos limitados.
T F
9. Los ejercicios deben de reducir la tensión en las articulaciones artríticas.
T F
10. Ejercicio para las personas con artritis usualmente requiere un equipo costoso.
T F
11. Usted ha hecho demasiado si el dolor después del ejercicio persiste por más de un día.
T F
12. Su programa de ejercicios debe de contener tres partes: calentamiento, ejercicios aeróbicos y enfriamiento.
T F
13. Cada ejercicio debe de empezar rápidamente pero constante.
T F
14. El programa entero debe de hacerse cuatro o más veces por semana.
T F
15. Los ejercicios de respiración profunda mantienen buena movilidad de las costillas.
T F

16. Los ejercicios isométricos mejora la circulación de la sangre.
T F
17. Una sentadilla completa es necesario para ejercitar los
músculos abdominales.
T F
18. Usted debe de ejercitar las articulaciones un poco después que se
vuelvan dolorosas.
T F

Appendix N
BOOK COPYRIGHT

Ronald Johnson
726 C. Mariposa Ave.
Mountain View, California 94041
Home : (415) 968-7023

Margaret Patch
Rights & Permissions
Addison-Wesley Publishing Company, Inc.
Reading, Massachusetts 01867

Dear Ms. Patch,

Ron Johnson is producing an exercise videotape for Hispanic-speaking people who have arthritis. It is the joint effort assisted by his graduate committee and the technical support at San Jose State University, and the self-help management group at the Stanford Arthritis Center, including Dr. Kate Lorig.

Our efforts include the use of exerpts in the 1986 edition of The Arthritis Helpbook coauthored by Kate Lorig, R.N., Dr.P.H., and James Fries, M.D. The exercises to be used in the videotape will be taken verbatim, with your permission, from the pages 45 to 79

inclusively. The pictures will not be used and the words will be translated into Spanish. The exerpts from your book will be cited only in Ron Johnson's master's thesis while the translated words will be utilized in the exercise videotape. No profits will be gained from the use of this videotape, when completed. Verbal permission for use of the material was gained on July 20, 1988 from Dr. Kate Lorig. We are seeking permission for use of the exerpts on pages 45 to 79. A quick reply is desired.

Thank you,

Ronald A. Johnson and
Dr. Kate Lorig, via the
telephone.

Appendix O
AUDIO COPYRIGHT

Ronald Johnson
726 C. Mariposa Ave.
Mountain View, California 94041
Home : (415) 968-7023

Rights & Permissions
Discos Latin International Inc.
P.O. Box 20328
Los Angeles, CA 90006

Dear Sirs,

Ron Johnson is producing an exercise videotape for Spanish-speaking people who have arthritis. It is the joint effort assisted by his graduate committee and the technical support at San Jose State University, and the self-help management group at the Stanford Arthritis Center, including Dr. Kate Lorig.

We are seeking permission for use of certain songs contained in the album called "El Super Mariachi los Camperos en La Fonda". No profits will be gained from the use of this videotape, when completed. A quick reply is desired.

Thank you,

Ronald A. Johnson

Appendix P
VIDEOSCRIPT GRAPHICS

VIDEOSCRIPT GRAPHICS

Clausula de Responsibilidad

Liability Clause

"No todos los ejercicios son apropiados para todo el mundo y este programa, o cualquier otro programa, puede causarle una lesión. Para reducir el riesgo de una lesión, consulte con su médico antes de empezar este programa de ejercicios. Las instrucciones y consejos, presentados aquí, no son un sustituto por consulta médica."

xx

EJERCICIO Y SU ARTRITIS

xx

BENEFICIOS DEL EJERCICIO

BENEFITS OF EXERCISE

xx

Los participantes han declarado algunos de sus beneficios:

xx

1-más flexibilidad y fuerza en los músculos y los ligamentos

2-más fuerza en los huesos

3-más resistencia física y una mejor circulación

4-yo puedo reducir el problema del estreñimiento y superar la fatiga

5-una buena nutrición para las articulaciones al cartílago y permite la eliminación de desperdicios

6-puedo realizar mis metas como bajar de peso

7-me gusta hacer ejercicio con mis amigos

XX

TIPOS BASICOS DE EJERCICIOS

BASIC TYPES OF EXERCISE

XX

Ejercicios de estiramiento

Ejercicios para fortalecimiento

Ejercicios de tolerancia.

XX

¿CUANDO DEBO HACER EJERCICIO?

WHEN SHOULD I EXERCISE?

[illegible]

El mejor tiempo para hacer ejercicios es cuando:

- (a) tiene un poco de dolor que tolerar,
- (b) tiene la mínima rigidez,
- c) no está cansado, y
- (d) su medicamento produce máximo efecto.

XX

¿QUE EQUIPO NECESITO?

WHAT EQUIPMENT DO I NEED?

¿QUE DEBO EVITAR O REDUCIR DURANTE LOS EJERCICIOS?

WHAT SHOULD I AVOID OR MINIMIZE DURING EXERCISE?

XX

Los ejercicios de tolerancia deben de hacerse continuamente durante 20 ó más minutos por día 3 veces por semana.

El programa de ejercicio debe de contener tres partes: el calentamiento, los ejercicios aeróbicos y el enfriamiento.

La parte del calentamiento contiene los ejercicios número 1 o número 2.

La parte de los ejercicios aeróbicos contiene los ejercicios de aguante o tolerancia que usted seleccione.

La parte de enfriamiento puede contener los ejercicios de aguante o tolerancia, pero hechos más despacio, el estiramiento de los músculos principales del cuerpo y quizás un período de relajamiento.

Este segmento del ejercicio tiene dos partes. Cada parte incluye la mitad de los 56 ejercicios contenidos en el Stanford Arthritis Self-Management Program (Programa de Stanford para el Manejo Propio de la Artritis) y está dividido en tres partes (sentado, de pie y acostado) con ejercicios de estiramiento y fortalecimiento para cada parte. Estos segmentos del ejercicio están diseñados para personas con artritis leve a moderada.

MARQUE EL NUMERO EN EL CONTADOR DE MAQUINA DE VIDEO.
ESTO LE AYUDARA A ENCONTRAR EL COMIENZO DEL PRIMER
EJERCICIO.

XX

PRIMER EJERCICIO

First Workout

XX

EJERCICIOS DE ESTIRAMIENTO AL ESTAR SENTADO

Stretching Exercises: Sitting

El equipo que necesita para esta sección son una silla, una clavija y la mesa.

XX

Estiramiento de las Paletas de los Hombros

31. The Shoulder-Blade Pinch

XX

Tres Formas para Estrechar el Cuello

27. The Three-Way Neck Stretch

XX

Si el dolor del cuello es reciente y varía de moderado a severo, es mejor que consulte con su doctor antes de hacer estos ejercicios. También consulte con el doctor si nota un dolor que irradia hacia su brazo cuando mueve el cuello, o si siente adormecimiento, hormigueo o debilidad.

XX

Baile de Punta y Talón

25. The Heel-Toe Dance

[illegible]

Clavija

26. The Foot Roll

XX

El Tajo

9. The Elbow Chop

[illegible]

Uno, Dos y Tres... ¡Dedos!

1. One-Two-Three Finger Exercise

[illegible]

EJERCICIOS DE FORTALECIMIENTO AL ESTAR SENTADO

Strengthening Exercises: Sitting

Necesita una banda elástica.

XX

Tijeras con las Rodillas

47. The Knee Scissor

XX

Presión en el Talón

48. The Heel Press

XX

Presionando la Cabeza

50. The Head Press

XX

EJERCICIOS DE FORTALECIMIENTO AL ESTAR DE PIE

Strengthening Exercises: Standing

Apretamiento del Trasero

43. The "Cheek to Cheek"

xx

Empujar la Espalda

54. The Back Push

xx

EJERCICIOS DE ESTIRAMIENTO AL ESTAR ACOSTADO

Stretching Exercises: Lying

No necesita equipo adicional.

xx

Extensión del águila

15. The Spread Eagle

xx

Rotación de las Caderas

19. The Hip Rotator

xx

Doblar de las Rodillas

20. Knee Bend

xx

Estirar la Rodilla a la Barbilla

29. Knee-to-Chin Stretch

xx

Si nota que el dolor de la espalda baja es reciente y varía de moderado a severo, es mejor que consulte su doctor antes de hacer estos ejercicios.

También consulte con el doctor si nota que el dolor irradia hacia su espalda

El Gato

33. The Cat

Levantarse la Espalda

32. The Back Lift

EJERCICIOS DE FORTALECIMIENTO AL ESTAR ACOSTADO

Strengthening Exercises: Lying

El equipo necesario es una banda elástica.

Abrir las Piernas

44. The Leg Spreader

Sientadilla Parcial

52. The Partial Sit-Up

El Levantamiento de la Espalda

55. The Back Lift

[illegible]

Si sus deformaciones son muy severas, usted deberá consultar primero con el doctor o una terapeuta para desarrollar su programa inicial.

xx

EJERCICIOS DE FORTALECIMIENTO AL ESTAR SENTADO

Strengthening Exercises: Sitting

El equipo necesario es una mesa y una botella de píldoras.

xx

Flexión Lateral del Tronco

Lateral Trunk Flexion

xx

Reclinamiento

53. The Back Sit

xx

El Resbalar del Dedo

37. The Finger Slide

xx

El Levantar del Dedo

36. The Finger Lift

xx

Presión del Dedo

35. The Finger Press

xx

EJERCICIOS DE ESTIRAMIENTO AL ESTAR DE PIE

Stretching Exercises: Standing

Necesita una mesa y un martillo ligero.

xx

Péndulo

10. The Pendulum

xx

El Talón y los Dedos de los Pies

24. The Heel-Toe

xx

El Tendón de Aquiles

23. The Achilles Stretch

xx

Polea de los Hombros

14. The Shoulder Pulley

xx

La Presión con las Palmas de las Manos

5. The Palm Press

xx

Estiramiento de los Dedos

3. Fingers Flat Exercise

xx

Si sus deformaciones son severas, debe consultar primero con el doctor o una terapeuta para desarrollar su programa inicial de fortalecimiento de los dedos.

xx

EJERCICIOS DE FORTALECIMIENTO AL ESTAR DE PIE

Strengthening Exercises: Standing

XX

41. The Robot

XX

39. The Biceps Bulge

XX

38. The Wrist Press

XX

49. The Tiptoe

XX

EJERCICIOS DE ESTIRAMIENTO AL ESTAR ACOSTADO

Stretching Exercises: Lying

Ningún equipo es necesario.

XX

Levantar la Pierna

18. The Leg Lift

XX

La Presión con la Espalda Baja

28. The Pelvic Tilt

XX

XX

30. The Low Back Rock

XX

12. The Shoulder Cradle

XX

34. Stretch Like a Cat, Shake Like a Dog

XX

Strengthening Exercises: Lying

Una banda elástica es todo lo que necesita.

XX

Hip Adduction

XX

Fortalecimiento de la Pierna Recta

45. The Straight-Leg Raise

xx

Serie para Cuadriceps

46. The Quad Set

xx

Fortalecimiento del Cuello

51. The Neck Strengthener

xx

CONCLUSION

xx

Ahora que hemos terminado con los ejercicios para estirarse y fortalecerse, es necesario recordarle a usted hacer ejercicios de resistencia que le satisfaga.

xx

Los ejercicios de estiramiento deben de hacerse de 3 a 6 veces por sesión y de 2 a 4 sesiones diarias, según sea el nivel del dolor.

xx

Los ejercicios para fortalecer los músculos deben hacerse de 3 a 10 veces pero una vez durante el día.

xx

Estas son unas notas finales de los autores del Arthritis Helpbook:

xx

"Las personas que hacen ejercicios regularmente (de tres a siete veces por semana), practican relajamiento y usan técnicas de manejo propio sienten menos dolor y son más activos que las personas que no practican ninguna

técnica de manejo propio. Además estas personas dicen que no visitan al doctor a menudo." Kate Lorig

xx

"Piense que una vez que se decida usted puede hacer mas por su artritis que cualquier otra persona. Usted puede hacer más por su artritis de lo que crea posible. Prometa seguir este programa y controlar su salud ahora mismo. Usted lo puede hacer." James F. Fries

xx

Fin:

CREDITOS

Productor / Editor

Ronald Johnson

Director de la Fotografía

Mark Gomes

Con la ayuda del

Television Centro del De Anza Colegio

personal

Goli Davidson

Hoa Phan

Scott Spense

Rob Myers

Laura Kinley

Narrador

Ignacio Corona

Traductores

Zulma Acevedo

Carlos Barillas

Ignacio Corona

Participantes

Ella Bonilla

Mabel Cunha

Ethel Guttenberger

Mary Hidalgo

Marge Jordan

Dora Perez

Frank Perez

Faustino Rodriques

Manuela Rodriques

Appendix Q
EXPERT EVALUATORS

EXPERT EVALUATORS

	<u>Spanish</u>	<u>Exercise</u>	<u>Production</u>
1. Robert Pensinger, SJSU prof		x	
2. Lupe Solis, KLOK radio	x		x
3. Mary Watson, Foothill CC			x
4. Jeff Norment, SJCC	x		
5. Jessie Villa, arthritis pt.	x	x	
6. Rita O'Loughlin, Foothill CC		x	
7. Cheryl Fant, Foothill CC	x	x	
8. Mauro Chavez, Evergreen VC	x		x
9. Joan Worley, West Valley CC		x	x
10. Michelle Bowers, De Anza CC			x
11. Carl Fisher, Evergreen VC			x
12. Dr. Chess, SJSU prof			x
13. Louey Duarte, SJSU student	x	x	x
14. Celina Rodriguez, KSTS 48	x		x
15. Osiel Gutierrez, SJCC		x	x
16. Marcos Ciscerone, De Anza CC	x		x
17. Robert Austin, De Anza CC		x	
18. Lupe Wilber, Hispanic	x		
19. Karl Knopf, Foothill CC		x	
20. Yolanda Walker, arthritis pt.	x	x	
21. Aurelia Otwell, arthritis pt.	x	x	
22. Nathalie Baker, Hispanic	x	x	
23. Lulu Lopez, KSTS 48	<u>x</u>		<u>x</u>
TOTALS	14	11	12