

FIFTH EDITION

ANYBODY'S

GUIDE TO

TOTAL FITNESS



THE ONLY EXERCISE BOOK YOU'LL EVER NEED

LEN KRAVITZ

Illustrated by Jill Pankey

FIFTH EDITION

ANYBODY'S

GUIDE TO

TOTAL FITNESS

Len Kravitz, Ph.D.
University of Mississippi

Designed and Illustrated by
Jill Pankey

Edited by
Susan Pate, Ph.D.



KENDALL/HUNT PUBLISHING COMPANY
4050 Westmark Drive Dubuque, Iowa 52002

Copyright © 1986, 1989, 1992, 1995, 1998 by Len Kravitz

ISBN 0-7872-4990-4

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright owner.

Printed in the United States of America
10 9 8 7 6 5 4 3 2

EDITORIAL ADVISORY BOARD

Carol L. Christensen, Ph.D. Applied Exercise Physiologist. Professor in the Department of Human Performance at San Jose State University.

Craig J. Cisar, Ph.D. Applied Exercise Physiologist. Professor in the Department of Human Performance at San Jose State University.

Gail G. Evans, Ph.D. in Physical Education. Emphasis in Biomechanics. Professor in the Department of Human Performance at San Jose State University.

Susan Kutner, M.D. Board Certified Surgeon in practice with the Kaiser-Permanente Medical Group, San Jose, CA.

Lori Leeds, R.P.T. Manager of the Los Gatos-Saratoga Community Hospital Orthopedic and Sports Physical Therapy Center.

Thomas A. MacLean, Ph.D. Director, Presbyterian New Heart in Albuquerque, NM.

Susan Pate, Ph.D. Director/Choreographer and Movement/Mime Specialist. Professor in Theater and Dance at California State University, Chico.

Robert Pearl, M.D. Board Certified Plastic and Reconstructive Surgeon. Faculty Member at Stanford University Hospital and Santa Clara Kaiser-Permanente Hospital.

Jay D. Pruzansky, D.P.M. Diplomate, American Board of Podiatric Surgery. Associate, American College of Podiatric Sports Medicine. In clinical practice in San Jose, CA.

Norman T. Reynolds, M.D. Board Certified Psychiatrist in clinical practice in Los Gatos, CA.

Richard V. Schroeder, M.S. in Physical Education. Emphasis in Exercise Physiology. Director of the De Anza College Exercise Physiology Laboratory, Cupertino, CA.

Phillip A. Sienna, Ed.D. in Physical Education. Emphasis in Exercise Physiology. Director of the Mission College Human Performance Laboratory, Santa Clara, CA.

ACKNOWLEDGMENTS

I would like to express my deep appreciation and gratitude to my editorial advisory board of Dr. Carol L. Christensen, Dr. Craig J. Cisar, Dr. Gail G. Evans, Dr. Susan Kutner, Lori Leeds, R.P.T., Dr. Thomas A. MacLean, Dr. Susan Pate, Dr. Robert Pearl, Dr. Jay D. Pruzansky, Dr. Norman T. Reynolds, Richard V. Schroeder, M.S., and Dr. Phillip A. Sienna. Their advice, expertise, and thoughtful review of this book were invaluable.

I sincerely thank the following people who have made generous contributions to this project and deserve special acknowledgement: Emmanuel Athans, Molly Burke, Mert and Tanya Carpenter, Kim Drummond, Janice Earle, Carrie Ekins, Eric Finch, Dixie Fisher, Sue Forster-Cox, Glenda Gilliam, Marla Graves, Jerry Gonsalves, Jean Harding, Louise Herndon, Michael Le Doux, Shirley H. M. Reekie, Pauline Reimer, Joe Samuels, Wendy Russum, Dolores Sargent, Amy Scofield, Carol Stewart, Ph.D., Debbie Sporleder, Carol Sullivan, Pamela Staver, and Teri Wexted.

I would also like to thank the following special people who have been a source of inspiration and have guided me in countless ways: Covert Bailey, Dr. Barton Byers, Dr. Laurence Berkowitz, Ed and Shirley Burke, Don Callahan, Roy Cerrito, Retta Chavkin, Dr. Barbara Conry, Yvonne Cotton, Peter and Kathie Davis, Anita Del Grande, Jerry Dollard, Dr. Jacqueline Douglass, Ronda Gates, Dr. Telemachos A. Greanias, Dr. William F. Gustafson, C. Lansing Hays, Ellen Herbst, Dr. Vivian H. Heyward, Dr. Clair W. Jennett, DeAun Kizer, Bob Kravitz, Joyce Malone, Frank Napier, Dr. Bruce Ogilvie, Lawrence R. Petulla, Doug Sporleder, Marty Urand, and Neil Wiley.

For their enthusiastic support, I am grateful to my friends at the Los Gatos Athletic Club, the faculty and staff of Human Performance at San Jose State University, and everyone at Aerobics Plus.

I am also deeply indebted to my friend Chuck Drummond for providing such wise counsel and friendship.

To Dr. Susan Pate, my editor and lifetime friend, I thank you in a thousand different ways.

To Jill Pankey, my illustrator, I thank you for your artistic imagination and for the many hours of hard work you devoted to this book to make it come to life.

INTRODUCTION

A HEALTHY WAY OF LIFE

Living and enjoying life to its fullest is a wonderful goal. And you can have it! Fitness is a way of life which allows you to function and perform at your best. It's a harmonic balance of prescribed exercise, healthy eating habits, preventative health care, effective stress management, and a common sense lifestyle. Your level of fitness helps determine the quality of your life. You are in control of how you look, feel, and live.

The following information is based on sound physiological principles and research. With a minimal investment of your time you can follow these concepts and create a fitness plan that will help you obtain the most out of your life.

I have presented a specific aerobics program for you. You may wish to supplement it with a running, swimming, or cycling program of your own.

Be patient, use your knowledge, set your goals, listen to your body, and commit yourself to a healthy way of life.

ANYBODY'S

GUIDE TO

TOTAL FITNESS

CONTENTS

EDITORIAL ADVISORY BOARD	vii
ACKNOWLEDGMENTS	viii
INTRODUCTION	ix
STARTING OUT	1
EXERCISE: WHAT IT WILL DO FOR YOU	2
STICKIN' TO IT!	3
THE KEY COMPONENTS OF FITNESS	4
ENERGY FOR EXERCISE	6
ON YOUR MARK, GET SET . . . WAIT!	7
HOW FIT ARE YOU?	8
THE "S.P.O.R.T." PRINCIPLE	20
THE FORMULA FOR AEROBIC FITNESS	21
PERSONALIZED TARGET ZONE	22
THE TEN COMMANDMENTS OF BODY SHAPING	24
TRAINING TIPS	25
MAXIMIZE YOUR RESULTS, MINIMIZE YOUR RISKS	26
THE MOST COMMON MISTAKES IN EXERCISE	35
IN CASE OF INJURY	38
COMMON AEROBIC INJURIES	39
GUIDE TO A BETTER BACK	41
FITNESS GEAR AND WHERE TO TRAIN	47
IN SEARCH OF THE PERFECT AEROBIC SHOE	48
HOW TO JOIN A HEALTH CLUB	50
CREATING A HOME GYM	52
FINDING THE RIGHT INSTRUCTOR	53

LET'S WORK OUT	55
WARM UP FIRST	56
AEROBICS: THE MAIN EVENT	59
STEPPING UP	64
BODY CONDITIONING WORKOUTS.....	74
THE CHEST, SHOULDER, AND ARM DEVELOPERS	75
FOR THE ABDOMINALS: THE FABULOUS FIVE	78
THIGHS, HIPS, AND BUTTOCKS	81
INNER THIGH EXTRAS	84
SUPER SCULPTURING WITH WEIGHTS.....	85
A CIRCUIT WORKOUT	92
POWER SCULPTURING EXERCISES	94
POWER SCULPTURING WORKOUT	103
STRETCH RIGHT!.....	104
 CONTEMPORARY HEALTH ISSUES	 109
SELF-CONCEPT	110
THE ALL-AROUND BEST-BALANCED EATING PLAN	111
FOOD GUIDE PYRAMID.....	117
READ THE NEW FOOD LABELS	118
SPECIAL FOCUS: WEIGHT MANAGEMENT	120
ALCOHOL ILL-USE	125
TOBACCO USE	127
OTHER DRUGS OF ABUSE	128
STRESS MAINTENANCE	129
 FITNESS FACTS AND FICTION	 131
QUESTIONS AND ANSWERS	132
FAMOUS EXERCISE MYTHS	142
FITNESS TRIVIA QUIZ.....	148
HEALTH TRIVIA QUIZ	150
HEALTH AND FITNESS TERMS	152
THE MUSCLE SYSTEM.....	158
NEW ACSM POSITION STAND ON EXERCISE	161

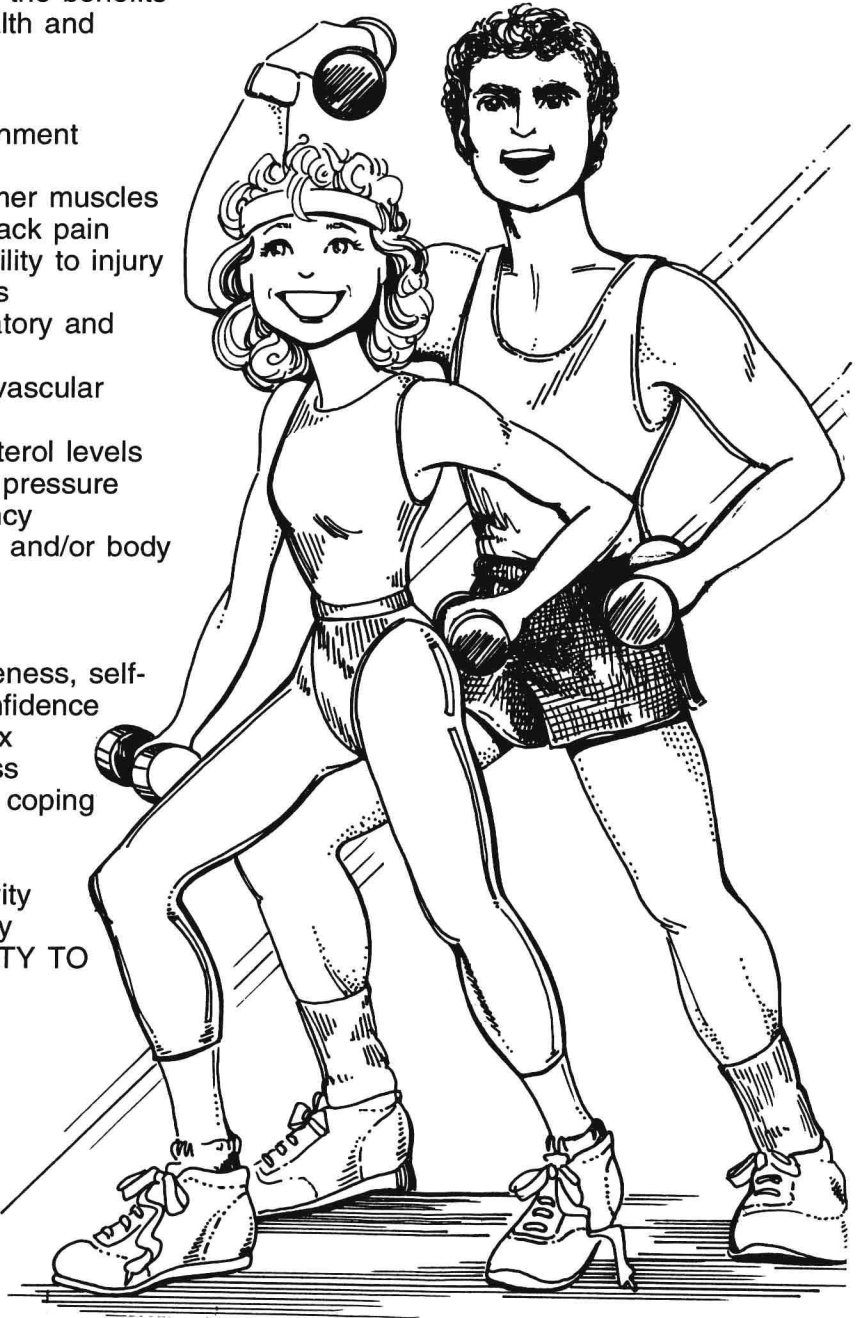
STARTING OUT



EXERCISE: WHAT IT WILL DO FOR YOU

Here are some of the benefits of a well-balanced health and fitness program:

- A healthy appearance
- Good posture and alignment
- Fluid, easy movement
- Stronger joints and firmer muscles
- Lowered risk for low back pain
- A decreased susceptibility to injury
- Fewer aches and pains
- A more efficient circulatory and respiratory system
- Lowered risk of cardiovascular disease and stroke
- Improved blood cholesterol levels
- Better control of blood pressure
- Increased life expectancy
- A decrease in body fat and/or body weight
- Controlled appetite
- Better digestion
- Improved mental awareness, self-esteem, and self-confidence
- Improved ability to relax
- Better handling of stress
- Help in preventing and coping with depression
- More restful sleep
- Increased job productivity
- More energy and vitality
- AN INCREASED ABILITY TO ENJOY LIFE**



STICKIN' TO IT!

10 RULES FOR EXERCISE SUCCESS

More than half of the people starting an exercise program drop out after six months. These tips will steer you towards success in exercise.

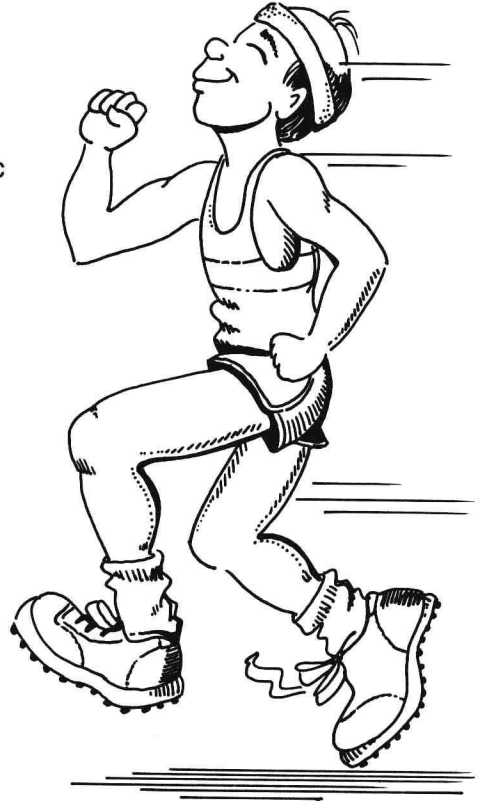
1. Write out a **health** and **fitness** evaluation list—what you do right (don't smoke, good eating habits, no substance abuse, etc.) and what you need to correct (lack of regular exercise, posture, high emotional stress, etc.). Then figure out what you can do to shift more entries to the “right” side.
2. Set realistic long- and short-term fitness goals. Make sure you break them down into manageable steps. Write this out like a personal contract, including objectives of your health and fitness action plan, and the date you plan to start specific activities. Solicit the support from someone close to you. Keep track of your progress, revising your fitness plan if needed, and reward yourself as goals are achieved (a show, new outfit, a book, etc.).
3. Find a workout companion with a fitness level and goals similar to yours. Pick some exercise activities or classes that you both enjoy, and commit to participating in them. Talk to other individuals who have reached goals similar to yours. Find out what strategies helped them keep on track.
4. Schedule your exercise three to five days per week. Choose a “special” time of day and be selfish about preserving that time for your body and general well-being.
5. Listen to your body and progress slowly in the beginning. Most injuries in fitness come from doing too much, too soon, too fast, and too hard. (Don't exercise if you are sick.)
6. Don't let early awkwardness or uneven skill development get you down (it happens to everyone). And try not to compare yourself to others.
7. Wear comfortable exercise clothing and proper shoes. Your clothing should permit you to move freely and allow your body to cool itself. Do not wear fabrics that hinder evaporation.
8. Plan your exercise at least two hours after a big meal or at least an hour before.
9. Be patient; exercise has many immediate and delayed benefits. Your time will come! Don't get angry at yourself if you miss a workout or slip on a health goal. Try to focus on what caused the lapse and how you may better deal with it in the future. Most importantly, stay positive and believe in yourself. You are in control.
10. Be aware of the signs of overexertion: breathlessness, dizziness, tightness or pain in the chest, loss of muscle control, and nausea. If you experience any of these signs, stop immediately. See your physician to determine the cause.

THE KEY COMPONENTS OF FITNESS

Your body is a complex mechanism designed for action. Being physically fit means that the heart, blood vessels, lungs, and muscles function at optimal efficiency. Here are five key components of health-related physical fitness that you need to be concerned with:

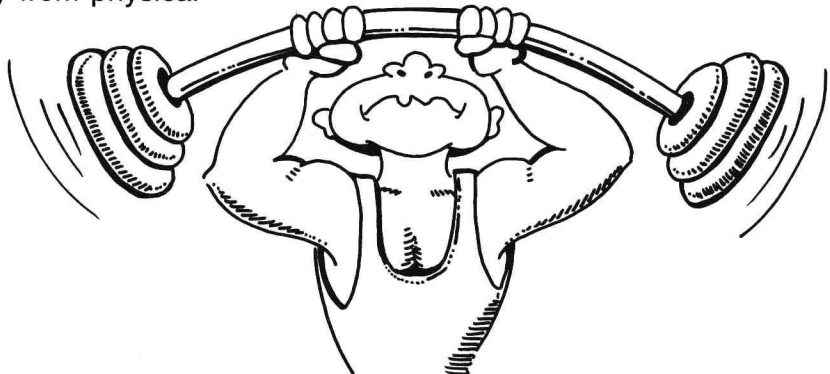
1. **Cardiorespiratory Endurance/**

Aerobic Conditioning is the ability of the body's heart, lungs, blood vessels, and major muscle groups to persist in continuous rhythmic exercise such as brisk walking, jogging, swimming, aerobic dancing, rowing, cycling, step training, skating, and cross-country skiing. Regular aerobic conditioning may prevent or reduce the likelihood of cardiovascular disease. Cardiorespiratory endurance is the most important component of health-related fitness.

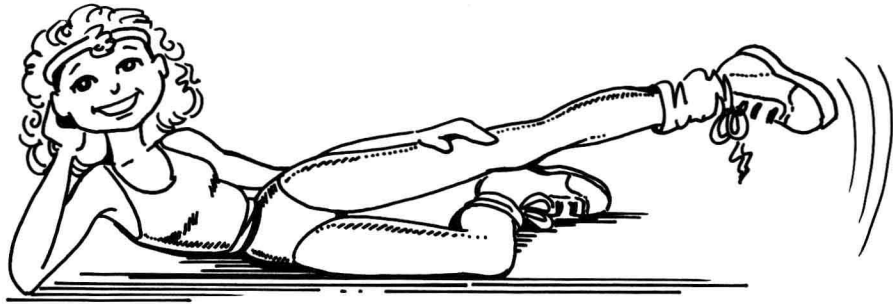


2. **Muscular Strength** is the ability of the muscles to exert maximal or near maximal force against resistance. Stronger muscles protect the joints they surround and reduce the incidence of injury from physical activity.

An increase in muscle mass will also boost the body's metabolism.



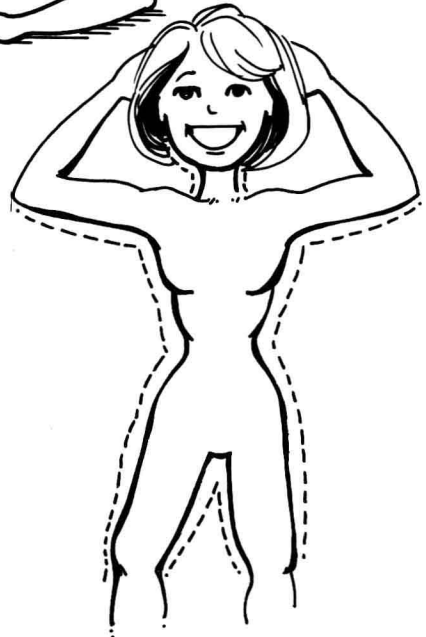
3. **Muscular Endurance** is the ability of skeletal muscle to exert force (not necessarily maximal) over an extended period of time. Strength, skill, performance, speed of movement, and power are closely associated with this component. Muscular endurance helps to prevent injuries and improve posture.



4. **Flexibility** is the range of motion of the muscles and joints of the body. It has to do with your skeletal muscles' natural and conditioned ability to extend beyond their normal resting length. Increased flexibility will enhance performance and reduce the incidence of injury.



5. **Body Composition** is the relationship of percentage of body fat to lean body weight (muscle, bone, water, vital organs). Being overfat, which usually starts in childhood, has a limiting effect on the other components of fitness. High body fat is associated with a number of health problems including heart disease, high blood pressure, stroke, diabetes, cancer and back pain.

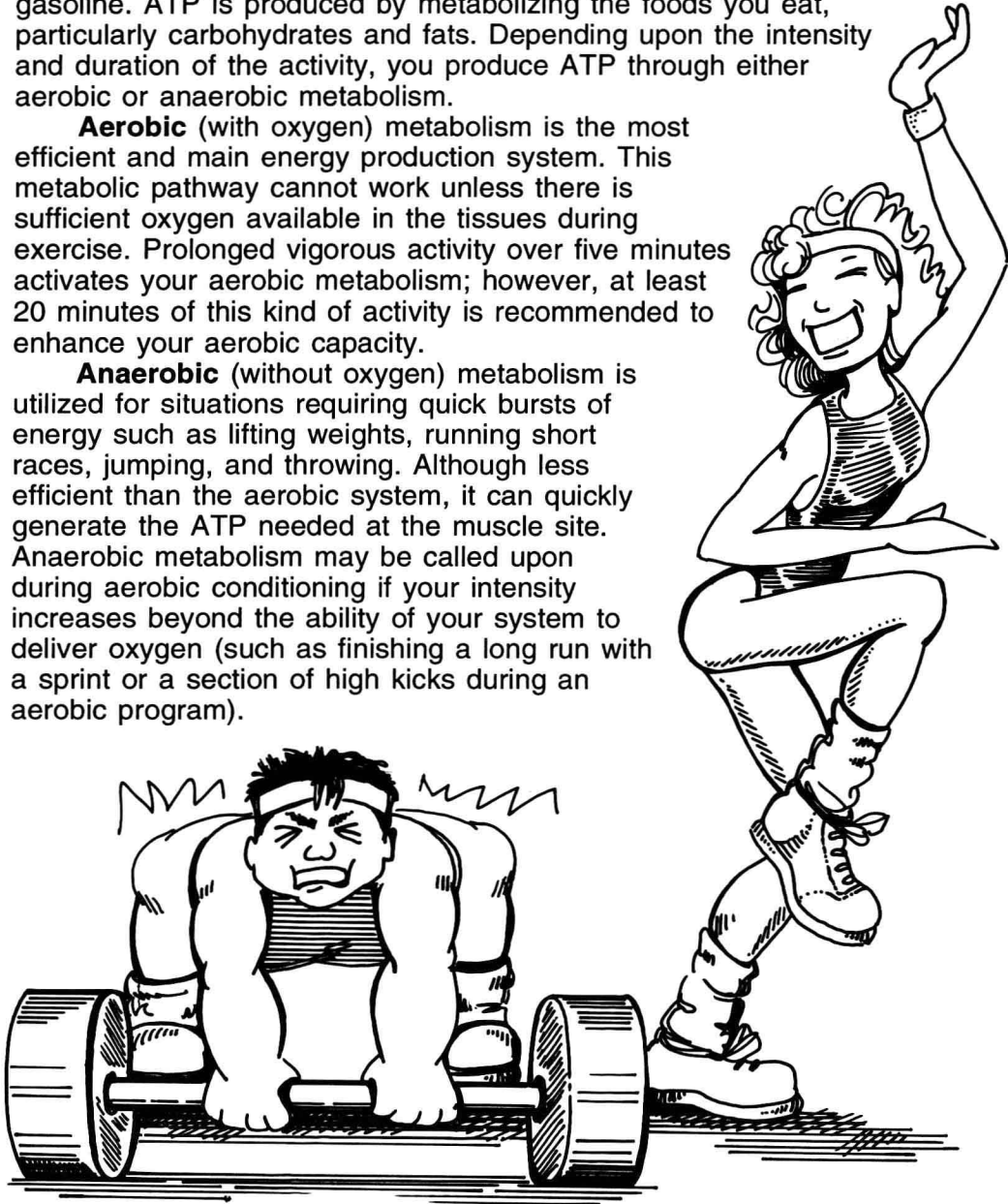


ENERGY FOR EXERCISE

To exercise and do work for daily activities your body uses a chemical called ATP (adenosine triphosphate) like a car uses gasoline. ATP is produced by metabolizing the foods you eat, particularly carbohydrates and fats. Depending upon the intensity and duration of the activity, you produce ATP through either aerobic or anaerobic metabolism.

Aerobic (with oxygen) metabolism is the most efficient and main energy production system. This metabolic pathway cannot work unless there is sufficient oxygen available in the tissues during exercise. Prolonged vigorous activity over five minutes activates your aerobic metabolism; however, at least 20 minutes of this kind of activity is recommended to enhance your aerobic capacity.

Anaerobic (without oxygen) metabolism is utilized for situations requiring quick bursts of energy such as lifting weights, running short races, jumping, and throwing. Although less efficient than the aerobic system, it can quickly generate the ATP needed at the muscle site. Anaerobic metabolism may be called upon during aerobic conditioning if your intensity increases beyond the ability of your system to deliver oxygen (such as finishing a long run with a sprint or a section of high kicks during an aerobic program).



ON YOUR MARK, GET SET . . . WAIT!

It is always a good idea to undergo a medical examination before embarking on a strenuous program of exercise.

1. With your physician, write up a personal medical profile including a history of high blood pressure, chest pain, heart arrhythmia, or shortness of breath. Determine your coronary heart disease risk. Here's a list of heart disease risk factors and what you can do about them.



RISK FACTOR

- A) Age
- B) Sex
- C) Family history of heart disease
- D) High blood pressure
- E) Abnormal cholesterol levels
- F) Smoking
- G) Obesity
- H) Physical inactivity
- I) High blood sugar (or diabetes)
- J) High emotional stress and tension

IMPROVED BY

(Not controllable)
(Not controllable)

Although you are not able to alter your genetic make-up, new research suggests that physical activity can reduce this risk

Physical activity, weight control, cessation of smoking, stress management, improved diet (less salt, fat, and red meat)
Stop smoking, alternative gratifying activities
Physical activity, weight control, improved diet (less animal fat, more unrefined carbohydrates), alternative gratifying activities
Physical activity

Physical activity, weight control, improved diet

Physical activity, no smoking, relaxation techniques

2. Get a complete physical exam.

3. Upon completion of the exam, your physician will be able to recommend whether a stress test is warranted. This is an electrocardiographic record of your heart's rhythm and adaptability to stress, tested through graded exercise on a treadmill or stationary bicycle.

HOW FIT ARE YOU?

Here are some simple self-assessment tests to help determine or monitor your level of fitness. Periodically retest yourself to monitor your progress. Stop if you feel any nausea, discomfort, dizziness, or breathlessness. Perform the test on another day.

AEROBIC EFFICIENCY

STEP TEST

1. Select a bench, stool, or chair that is 12 inches high.
2. You will step up and down in an up, up, down, down brisk cadence.
3. Find a song that has a moderate tempo of about 96 beats per minute (16 beats in 10 seconds) to guide your cadence.
4. Rehearse the stepping with the music to get familiar with the pattern.
5. Practice finding your pulse on your wrist (on the inner edge of the wrist below the base of the thumb) or at your neck (below the ear along the jaw).
6. Now, perform the stepping for three continuous minutes. Upon completion of the time, immediately count your pulse for 10 seconds.



RESULTS OF THE STEP TEST

(Counting pulse for 10 seconds)

LEVEL	WOMEN	MEN	
EXCELLENT	16 or less	17 or less	Congratulations Keep it up! Begin or progress in an aerobic program. Start with a moderate to easy aerobic program.
GOOD	17-18	18-20	
FAIR	19-22	21-23	
POOR	23 or more	24 or more	

(Test based on the Harvard Step Test)

1.5 MILE RUN

1. Establish a distance of 1.5 miles. This is six laps around most school tracks (which are usually 1/4 mile).
2. Use a stopwatch to time yourself.
3. Warm up with some easy jogging and gentle stretching before you start.
4. Cover the distance as fast as you can (running/walking). Cool down gradually at the conclusion with brisk walking for several minutes.



RESULTS OF THE 1.5 MILE RUN

Time (Minutes)

Fitness Category	Age (years)					
	13-19	20-29	30-39	40-49	50-59	60+
I. Very poor (men)	> 15:31*	> 16:01	> 16:31	> 17:31	> 19:01	> 20:01
(women)	> 18:31	> 19:01	> 19:31	> 20:01	> 20:31	> 21:01
II. Poor (men)	12:11-15:30	14:01-16:00	14:44-16:30	15:36-17:30	17:01-19:00	19:01-20:00
(women)	16:55-18:30	18:31-19:00	19:01-19:30	19:31-20:00	20:01-20:30	21:00-21:31
III. Fair (men)	10:49-12:10	12:01-14:00	12:31-14:45	13:01-15:35	14:31-17:00	16:16-19:00
(women)	14:31-16:54	15:55-18:30	16:31-19:00	17:31-19:30	19:01-20:00	19:31-20:30
IV. Good (men)	9:41-10:48	10:46-12:00	11:01-12:30	11:31-13:00	12:31-14:30	14:00-16:15
(women)	12:30-14:30	13:31-15:54	14:31-16:30	15:56-17:30	16:31-19:00	17:31-19:30
V. Excellent (men)	8:37-9:40	9:45-10:45	10:00-11:00	10:30-11:30	11:00-12:30	11:15-13:59
(women)	11:50-12:29	12:30-13:30	13:00-14:30	13:45-15:55	14:30-16:30	16:30-17:30
VI. Superior (men)	< 8:37	< 9:45	< 10:00	< 10:30	< 11:00	< 11:15
(women)	< 11:50	< 12:30	< 13:00	< 13:45	< 14:30	< 16:30

< Means "less than"; > means "more than."

"1.5 mile run tests," from *The Aerobics Program for Total Well Being* by Kenneth H. Cooper M.D., M.P.H., Copyright © 1982 by Kenneth H. Cooper. Used by permission of Bantam Books, a division of Bantam Doubleday Dell Publishing Group, Inc.