

The Ageless Heart Manual

Advanced Strategies to Reverse
Heart Disease and Restore Your
Heart's Pumping Power



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America's #1 Anti-Aging Pioneer

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As the founder and director of Wellness Research Foundation, a non-profit research organization, Dr. Sears travels the globe to bring back to his patients the latest breakthroughs in natural therapies. Trips to Peru, Brazil, India, Jamaica, Uganda, South Africa, Ecuador and Bali have yielded important new discoveries in nutrition, traditional herbal treatments, anti-aging and alternative medicine.

Dr. Sears currently writes and publishes the monthly newsletter, ***Confidential Cures***, and daily email broadcast, ***Doctor's House Call***, and contributes to a host of other publications in the field. He has appeared on over 50 national radio programs, ABC News, CNN, and ESPN.

Dr. Sears has published 14 books and reports on health and wellness with a readership of millions spread over 163 countries. His bestselling titles include: ***The Doctor's Heart Cure***, ***The 12 Secrets to Virility***, ***Rediscover Your Native Fitness***, ***Your Best Health Under the Sun***, ***High-Speed Fat Loss in 7 Easy Steps***, ***P.A.C.E.: The 12-Minute Fitness Revolution***, and ***Reset Your Biological Clock***.

Dr. Sears is currently writing three additional books; ***The Health Secrets of Bali***, ***Cracking the Telomere Code***, and ***Healing Roots of Africa***.

Introduction

For decades, Americans have tried to avoid heart disease by following the advice of the American Heart Association. We have striven to eat less fat, do more cardiovascular exercise, and lower our cholesterol levels. We have spent millions of dollars on low-fat foods, gym memberships, and cholesterol-lowering medications.

Despite all this effort and expense, heart disease remains both the number one disease diagnosed and the number one cause of death in the United States. Every year, 720,000 Americans suffer a heart attack, according to the Centers for Disease Control and Prevention.¹ Cardiovascular disease kills more than 600,000 American each year, making it the leading cause of death for both men and women.

Given these numbers, it would be hard to find an American who hasn't had a loved one disabled or killed by heart disease. And it remains America's biggest killer for one simple reason – the health advice we try to follow is just plain wrong.

It's a story whose shameful origins go back almost a full century. The vast conspiracy it spawned eventually killed one of our greatest Americans, President Dwight David Eisenhower.

I'll talk more about this in a few minutes, but first let's take a close look at what we've been brainwashed into believing about heart disease today.

Most of us find it difficult to cram “cardio” exercises into our busy schedules, to swear off the foods we love, and to count calories and grams of fat and cholesterol. The truth is that these manipulations are unnatural and unnecessary burdens that distract you from the *real* solution to a healthy heart. To make matters worse, following this flawed advice actually creates additional health problems.

What would you say if you learned that you could completely reverse heart disease in a very short period – by following advice that's the direct opposite of standard recommendations? In as little as a few months, the men and women who come to my clinic as patients have used just a few easy-to-follow steps to cure their heart disease.

I'm going to show you the strategy for real heart health. It's time to discard the old assumptions that failed us and re-examine the facts.

A Fresh Look Leads to a Startling Conclusion

At a time when the World War II generation feasted on a breakfast of bacon and eggs, obesity was at a relatively low constant in America, hovering at about 10 percent. Diabetes was uncommon, with about one case of diet-related maturity onset diabetes for each case of genetics-related childhood diabetes. All of this was about to change.

In 1957, the American Heart Association linked dietary fat to heart disease and recommended that Americans cut the fat in their diets. We swapped cereals for the protein-based breakfasts of our grandparents' generation, and we started struggling with low-fat diets.

Over the next couple of decades, food producers developed a wide variety of low-fat and fat-free foods. And since low-fat and fat-free foods were more profitable than natural foods, food-producing corporations were eager to promote this concept. We gobbled down these “healthy” foods, expecting to lower our risk of heart disease as we lowered our weight. But we didn't lose weight. In fact, the number of overweight Americans skyrocketed. The rate of obesity tripled, and we plunged into a new epidemic of maturity onset diabetes.

Since following the American Heart Association's low-fat advice, the number of Americans who are either obese or overweight has exploded to two out of three – levels never seen anywhere in history. In 2003, the Centers for Disease Control announced that obesity would soon replace tobacco use as America's Number One lifestyle-related health problem. Also during this time, the rate of maturity onset diabetes soared. We now see nine times as many cases of diet-induced maturity onset diabetes as we did in previous generations. This type of diabetes has also become more severe and is occurring in much younger people.

The American Heart Association's recommendations ultimately led us further away from our natural protein-based diet. More importantly, the low-fat approach failed in its primary goal, and heart disease continues to kill more Americans than any other disease.

Discard Failed Beliefs and Embrace Strategies That Work

Why does the conventional approach to heart disease fail? It doesn't work because it is based on false beliefs. To halt heart disease, you must rethink everything you've heard about this condition. This book will help you gain new wisdom about how to restore your natural heart health and avoid heart disease.

Because the old, flawed ideas continue to dominate the medical establishment, this new information may surprise you. But when you replace these failed assumptions with this book's three primary principles, you will begin to build heart health and prevent or reverse heart disease.

The three key principles are:

- ▶ Dietary fat is not the culprit. Starches – not fat – fuel heart disease. Because low-fat diets are even higher in starches, these diets make cardiovascular disease worse.
- ▶ Long-duration cardiovascular exercise mimics prolonged stress and breaks down vital cardiopulmonary reserve. Interval and weight training are the keys to building heart health. “Cardio” workouts of more than about 15 minutes in duration are a waste of time and cause additional health problems.

- ▶ Cholesterol does not cause heart disease. You can monitor other factors that reveal much more about your heart health than blood cholesterol. Your cholesterol level doesn't have to stay below 200, and the drugs used to lower cholesterol are bad for your heart and your general health. Cholesterol-lowering drugs interfere with vital processes necessary for maintaining health, including energy production in your heart and your capacity to calm oxidative stress in your heart and arteries. In other words, the drugs doctors commonly prescribe to lower cholesterol do not address the true cause of heart disease – and they actually create additional problems.

The myths and misconceptions about heart disease are widespread and persistent, in part because food processing and drug corporations capitalize on our heart disease problem. This is not to suggest some sort of secret conspiracy to keep us unhealthy. It's simply a fact that heart disease has become big business. Food manufacturers can make more profit selling a box of processed cereal than an egg, and drug companies can make more money selling new drugs than promoting exercise programs. It's time to hold these groups accountable for their products and advice. Clearly, the current approach to cardiovascular disease isn't working. There must be a better way.

The effective way to beat heart disease is to root out the underlying cause. People of all ages have rebuilt youthful hearts and blood vessels. Instead of sacrifice, denial, and unwanted side effects, a natural heart health plan gives you more energy. For over 25 years, patients at the Center for Health and Wellness have been feeling better, aging better, performing better, and living longer. And they achieve these goals without worry or time-consuming daily regimens. You can share their improved health, and you can do so without eating foods you don't like or becoming a vegetarian. My program includes no confusing double-talk, no burdensome counting of calories or fat grams, and no toxic drugs.

Rethinking Heart Disease – a New Model for Heart Health

This book creates a new paradigm for healing heart disease and achieving heart health. It provides a detailed program that flies in the face of conventional guidelines. Extensive scientific research and experience with thousands of patients supports this approach. My patients have improved their cardiac health and overall physical condition by using these strategies, which have been proven to work.

In addition, this book's program is much easier to follow than the American Heart Association guidelines. We have an instinctive desire for foods that are naturally fatty, salty, or sweet. With a few adaptations to our modern world, these natural preferences can serve you well. The low-fat diet is unnatural, and the chronic denial of enjoyable food is unnecessary. The key to heart-healthy eating is to choose natural, unprocessed foods that you like.

Similarly, few people enjoy pounding away on a treadmill for 30 minutes to an hour at a time. Many people who try to stick to this time-consuming exercise routine find that their instincts cry out for them to stop. Those people who endure extended cardio workouts unwittingly produce unwanted changes in their bodies such as the loss of muscle, bone density, and internal organ weight. In

addition, they often wind up with overuse injuries. Patients don't complain when they discover that the core of this exercise program is workouts that last no more than 20 minutes and can be completed in as little as six minutes.

Lastly, the popular strategy of monitoring cholesterol is ineffective, and the prescribed medications are toxic. Most patients who use cholesterol-lowering drugs don't know that the medications are making them weak and tired and causing their muscles to ache if they try to exercise. My patients are delighted to enjoy increased energy and well-being when they switch to effective natural alternatives to these medications.

In addition, compelling evidence indicates that the best blood predictor of heart disease risk is not cholesterol but homocysteine. This turns out to be great news – it's much easier and less toxic to your body to lower homocysteine levels than to lower cholesterol levels

Communicate with Your Doctor

It's important to have a doctor you feel comfortable with to help you make effective decisions about your health. Use the information in this book to talk about your options to strengthen your heart. Advise your physician about any herbs, nutritional supplements, or other over-the-counter products you plan to take. Some of these natural remedies can interfere with test results or cause unwanted effects.

It's important to let your physician know about the steps you are taking to combat cardiovascular disease and improve your health. The best way to help your doctor help you is to work with him or her to develop a program that will best suit your individual needs.

Chapter 6: Pick Up the Pace with PACE™

It's time to re-condition your heart and lungs. First, you need to forget most of what you've heard about "cardio" exercise. Many experts falsely believe that to strengthen your heart you must spend hours in the gym each week, pounding out the miles on the treadmill or spinning your wheels on an exercise bike. This classic cardiovascular exercise prescription doesn't work to strengthen your heart, and it causes other problems.

You can transform your heart health following a different approach that takes as little as 10 minutes a day. The rationale behind this different approach to exercise was explained in Chapter 5, "Sidestep the Cardio Myth with PACE™." This chapter provides you with a step-by-step plan to put my exercise program into action.

Hundreds of patients at the Center for Health and Wellness have helped develop this uniquely effective fitness program while building their heart capacity and functional strength. If they can do it, you can, too. And in a few short weeks, you'll begin to see and feel the results.

PACE™ for Cardiovascular Fitness

Progressively Accelerating Cardiopulmonary Exertion – or PACE™ – will gradually challenge your heart, lungs, and blood vessels to build their strength. ("Cardio" means heart and "pulmonary" means lungs.) Accomplishing this entails short bursts of exercise with periods of rest in between. As you get used to these brief challenges you will gradually increase their intensity.

Progressively

Progressively means doing a little bit more this week than you did the week before. Pushing just a little bit harder with each exercise session causes your level of fitness to improve over time. You can add resistance or pick up the pace. Gradually increasing the magnitude of the challenge (rather than the length of the challenge) will coach your body into building greater heart and lung capacity to meet any unexpected challenges you may encounter.

Accelerating

Accelerating refers to training your body to respond to exercise faster. When you are out of condition, it takes several minutes to get your breathing and heart rates up. As your physical condition improves your body gears up for exercise more easily. As your body adapts better, you exploit your capacity to gear up faster by increasing the pace of the challenge.

You will train your body to respond more quickly by increasing the pace of exercise sooner in each progressive workout. Don't start at full throttle, but over time, train your body to respond to the exercise load more quickly. Your body adapts to the increasing quickness of the demands of your exercise by improving the quickness of your response.

Why do this? This is the natural state of exercise. Whether predator or prey, a creature in the wild must be able to accelerate to 100 percent capacity in a single heartbeat. Humans have lost this ability to accelerate somewhat recently. More to the point, this is also the very best way to be prepared for and avoid disaster from the sudden increases in cardiac demand that cause heart attacks.

Intensity

Intensity simply refers to how hard you exercise. Intensity is what you should be monitoring and changing as you become fit. Remember, for any exercise program to continue to work over time, you must change something. If you perform the same exercise in the same way for more than a couple of weeks, your body has already adapted to the increased demands. You will cease to make any progress unless you challenge yourself further.

In the belief that they are building a stronger heart, many people increase the duration of exercise as they become more capable of exercising longer. But think about it! Your heart already has the ultimate endurance challenge – it must beat all the time, even when you’re sleeping. Instead of working longer, strive to make your heart learn to pump more blood faster and harder for a short period of time.

You can use this principle safely as long as you increase the intensity in a controlled and gradual way. As your cardiac capacity increases, you can do more work without feeling any additional strain. If you walk or jog on a treadmill, about once a week you should pick up the pace a little or increase the slope by a little. If you’re on a bicycle, you need to pedal a little faster or add a little resistance.

Duration

You can also increase the challenge of your working by changing the *duration* of your exercise, but in the opposite direction of most exercisers. As your level of fitness improves, you need to decrease the duration of your workout. In other words, you cover the same distance in shorter and shorter times. You’ll find that by gradually shortening your intervals, it gets easier to increase each session’s intensity, and increasing intensity will continue to increase your capacity.

During your rest periods, don’t stop entirely but keep moving at a gentle pace as you recover. Light activity keeps your blood circulating to replenish your muscles’ depleted energy stores and removes accumulated lactic acid wastes. Studies show that your muscles recover faster with light activity than with complete immobility. For instance, if you sprint during your interval, you will keep moving at a walk or gentle trot for your rest period. You have a natural inclination to do this. If you listen to your body, you will want to keep moving after a sprint to “walk it off.”

As you begin your PACE™ Program, work out just 10 to 20 minutes every other day. If you are getting in 20 minutes of exercise, you will want to divide your 20-minute workout into two 10-minute intervals. As you get into better shape, cut your exercise sessions down to nine minutes – rest for

three minutes, then work out another nine minutes. Next, progress to three six-minute intervals with two minutes of rest in between each interval. Again, the principle is to cut the exercise length gradually as you gradually pick up the challenge. To get a feel for how progressively increasing the intensity as you decrease the duration plays out over time, look at the 8-Week Plan At-A-Glance table on page 63.

Use Your Heart Rate to Measure Intensity

You can use your pulse rate, or the number of heart beats per minute, as your heart's speedometer. It tells you how fast you're going, and whether you need to speed up or slow down to exercise in your optimal conditioning zone.



To live healthier longer, practice a progressive interval exercise program like PACE™.

Target Pulse Ranges

You can effectively challenge your heart by coaching it to beat at a pace that is 70 to 85 percent of its maximum safe rate. Your maximum heart rate is roughly equal to 220 minus your age.

Measure your heart rate any place on your body where you can feel your pulse. Two easy pulse points are the inside wrist and the carotid artery in the neck. Using a stopwatch, count your pulse for ten seconds, then multiply that number by six to get the number of beats per minute. Let's say you counted a pulse of 15 in 10 seconds. Multiply 15 times six and you'll calculate a heart rate of 90 beats per minute. You can also wear an exercise heart monitor

that does the math for you, available over the Internet and from most fitness shops. You can even find wrist watch heart rate monitors at the big discount department store chains.

| Age | Max Heart Rate | Target Range |
|-----|----------------|--------------|
| 25 | 195 | 137-166 |
| 30 | 190 | 133-162 |
| 35 | 185 | 130-157 |
| 40 | 180 | 126-153 |
| 45 | 175 | 122-149 |
| 50 | 170 | 119-145 |
| 55 | 165 | 115-140 |
| 60 | 160 | 112-136 |
| 65 | 155 | 109-132 |
| 70 | 150 | 105-128 |
| 75 | 145 | 102-123 |
| 80 | 140 | 98-115 |
| 85 | 135 | 91-110 |
| 90 | 130 | 91-110 |

During exercise, if your pulse is less than your target range, speed up or work harder. If your pulse is more than your target range, slow down. For example, let's suppose you're a 35-year-old running on the treadmill and your heart is beating 120 beats a minute. To get your heart beating within the target range of 130-157, pick up the pace or increase the resistance. Suppose later during the workout, your pulse rate is 180. To get your heart beating within the target range of 130-157, slow your pace or decrease the resistance.

Find Your PACE™

Build your exercise program around any activity that gives your heart and lungs a workout. Swimming, biking, stair-stepping, sprinting, and elliptical machines are all good exercises for the heart and lungs. What form of exercise you choose will depend on your preferences and your level of fitness. You want to alternate the various types of exercise to keep your routine fun and lower the chances of overuse injuries. You are most likely to stick with your program when you choose exercises you enjoy.

Here is a week-by-week outline of the PACE™ plan:

Weeks 1 and 2

Begin by developing an exercise routine based on activities you enjoy. Your goal is to perform this exercise for 20 minutes at a time at low intensity. If you can't exercise for 20 minutes without stopping, rest as needed.

As you're starting out, write down what you do. It is helpful to determine your current level of fitness to use as a baseline to track your progress.

In the second week, begin experimenting with the pace. Push yourself a little harder and then ease up a bit. Vary your pace as much as you feel comfortable.

As you play with the pace, begin to develop an internal scale of how intensely you exercise. Use a scale of one to 10, where one or two is a leisurely pace, all the way up to full throttle at nine or 10.

Exercise Caution

Check with your doctor before starting an exercise program if any of the following apply to you:

- ▶ You haven't had a medical checkup in more than two years.
- ▶ You're over 50.
- ▶ You're more than 25 pounds overweight.
- ▶ You have high blood pressure.
- ▶ You've had a heart attack, rapid heart palpitations, or chest pain after exercise.
- ▶ You're taking heart medication.
- ▶ Your doctor told you that you have angina, fibrillation, tachycardia, an abnormal EKG, a heart murmur, rheumatic heart disease, or other heart problems.
- ▶ You have a blood relative who died of a heart attack before age 60.
- ▶ You have asthma, emphysema, or any other lung condition.

▶ **Week 1**

- ◇ Exercise for 20 minutes comfortably at intensity Level 2 or 3.

▶ **Week 2**

- ◇ Exercise for 20 minutes at varying intensity levels recording your pace and how hard it feels.

Weeks 3 and 4

In Weeks 3 and 4, increase the amount of work you do in the same amount of time. If you exercise on a treadmill or cycling machine, push yourself to cover more distance in the same time. Your workout now consists of two intervals, with a rest period in between. During the periods of rest, you don't have to be completely inactive. You will do better to keep moving at low intensity while you recover.

▶ **Week 3**

- ◇ Exercise for nine minutes at intensity Level 3.
- ◇ Rest for two minutes.
- ◇ Exercise for nine minutes of exercise at intensity Level 4.

▶ **Week 4**

- ◇ Exercise for eight minutes at intensity Level 4.
- ◇ Rest for four minutes.
- ◇ Exercise for eight minutes of exercise at intensity Level 5.

Weeks 5 and 6

In Weeks 5 and 6, exercise more intensely during three somewhat shorter intervals.

▶ **Week 5**

- ◇ Exercise for six minutes of exercise at intensity Level 3.
- ◇ Rest for two minutes.
- ◇ Exercise for six minutes at intensity Level 5.
- ◇ Rest for two minutes.
- ◇ Exercise for six minutes at intensity Level 4.

▶ **Week 6**

Decrease each exercise period to five minutes, while you increase the intensity by one level. Since you are working a little harder, allow yourself three minutes of leisurely-paced rest to recover between intervals.

Weeks 7 and 8

It's time to put the accelerating component of your PACE™ program into play. Your goal is to take less and less time to reach the point of your greatest effort. The result is that you complete more intervals during the same time and you increase the level quicker. The shorter your intervals of greatest intensity, the faster you condition your body for maximal capacity.

▶ Week 7

- ◇ Exercise for four minutes at intensity Level 4.
- ◇ Rest for two minutes.
- ◇ Exercise for three minutes at intensity Level 6.
- ◇ Rest for two minutes.
- ◇ Exercise for two minutes at intensity Level 7.
- ◇ Rest for three minutes.
- ◇ Exercise for three minutes at intensity Level 5.

▶ Week 8

Now you will shorten your first interval a little and increase the intensity of your second interval a bit. You are “accelerating” your challenge with your highest effort occurring earlier.

- ◇ Exercise for three minutes at intensity Level 4.
- ◇ Rest for two minutes.
- ◇ Exercise for three minutes at intensity Level 7.
- ◇ Rest for two minutes.
- ◇ Exercise for three minutes at intensity Level 7.
- ◇ Rest for two minutes.
- ◇ Exercise for three minutes at intensity Level 5.

Progressively Accelerating Cardiopulmonary Exertion™
PACE™: 8-Week Plan At-A-Glance

| Activity | Week 1 | Week 2 | Week 3 | Week 4 |
|-----------------|-----------------|-----------------|----------------|----------------|
| Exercise | Exercise 20 min | Exercise 20 min | Exercise 9 min | Exercise 8 min |
| Intensity Level | Level 3 or 4 | Varying | Level 3 | Level 4 |
| Rest | | | 2 min | 4 min |
| Exercise | | | Exercise 9 min | Exercise 8 min |
| Intensity Level | | | Level 4 | Level 5 |
| Activity | Week 5 | Week 6 | Week 7 | Week 8 |
| Exercise | Exercise 6 min | Exercise 5 min | Exercise 4 min | Exercise 3 min |
| Intensity Level | Level 3 | Level 4 | Level 4 | Level 4 |
| Rest | Rest 2 min | Rest 2 min | Rest 2 min | Rest 2 min |
| Exercise | Exercise 6 min | Exercise 5min | Exercise 3 min | Exercise 3 min |
| Intensity Level | Level 5 | Level 6 | Level 6 | Level 7 |
| Rest | Rest 2 min | Rest 3 min | Rest 2 min | Rest 2 min |
| Exercise | Exercise 6 min | Exercise 5 min | Exercise 2 min | Exercise 3 min |
| Intensity Level | Level 4 | Level 5 | Level 7 | Level 7 |
| Rest | | | Rest 3 min | Rest 2 min |
| Exercise | | | Exercise 3 min | Exercise 3 min |
| Intensity Level | | | Level 5 | Level 5 |

Implement the Full Tilt Program

As you continue to pick up the PACE™, increase the intensity of your workout and the number of exercise intervals. At the same time, shorten the length of your exercise sessions. You may be doing three five-minute intervals with two three-minutes rests. As you progress, shorten the length of your exercise intervals to four, three, two, then one minute. Work a little harder during these shorter exercise sessions. When you get used to PACE™ and use it to your full advantage, your workout sessions usually last less than 14 minutes!

Here is a sample workout plan to advance your PACE™ when you have conditioned yourself to the challenge. It only takes 10 minutes.

Interval Training

| Interval 1 | |
|------------|--|
| | Exercise for one minute at intensity Level 5 |
| | Rest one minute at intensity Level 3 |
| Interval 2 | |
| | Exercise for one minute at intensity Level 6 |
| | Rest one minute at intensity Level 4 |
| Interval 3 | |
| | Exercise for one minute at intensity Level 7 |
| | Rest one minute at intensity Level 4 |
| Interval 4 | |
| | Exercise for one minute at intensity Level 8 |
| | Rest one minute at intensity Level 3 |
| Interval 5 | |
| | Exercise for one minute at intensity Level 9 |
| | Rest one minute at intensity Level 2 |

Don't Make It Difficult

The most common mistake beginners make is assuming that they must work at an uncomfortable level of exertion to get results. This is an understandable interpretation since you will be focusing your attention on your exercise intensity, but it is not necessary.

The point is to start with what is a comfortable level of exertion for you. As you improve your fitness, this same level of activity will become easier for you. Now you can make use of your added capacity by increasing the level of the exercise. This will coach your body into increasing your exercise capacity further. With this week-by-week gradual progression of your workout as your body responds, you do not feel an uncomfortable or painful perceived level of exertion.

Men and Cycling

There are studies that link long-distance cycling to impotency. The key phrase is *long distance*. Most of the research studied men who cycled for several hours every day. Fortunately, there is no evidence of any risk if you cycle for short duration.

What a man sits on a bicycle seat, his groin supports the entire weight of his body. This puts intense pressure in the area near the genitals, which contains the nerves and arteries that transmit feeling and blood to the genitals. Prolonged pressure can cause genital numbness and even temporary impotency.

You can build reserve capacity in your heart, lungs, and muscles in as little as 10 minutes a day. There is no need to sit on a bicycle seat for an extended amount of time. Limit your cycling to less than three hours a week.

If you like cycling and are still concerned, vary your activities. Cycle a few times a week and do other forms of exercise you like during the rest of the week. Also, look for bicycle companies that offer seats specifically designed to take pressure off the genitals.

Strengthen Your Frame

Let's get something clear that often gets confused. *Muscle size and strength are not the same thing.* Yes, of course, the two are related, but modern-day bodybuilders create so much muscular hypertrophy that they can hardly get out of their own way.

In contrast, you may need to increase the size of your muscles. Muscle wasting has its consequences in aging. In that case, resistance training may be your best course. It is a scientific way to apply overload to isolated muscles. Since you can easily manipulate the resistance by incrementally increasing the weight, you can perpetuate the stimulus for muscle growth.

You can use your body composition measurements from Chapter 7, "Measure Your Real Heart Health," to determine if you need to build or restore muscle mass. If your muscle mass is low, you will find a program for quick and efficient muscle building in Chapter 14, "Individualize Your Heart Care."

But in years of practical application, one glaring limitation of weight training remains: You're not really training anything. It's more "un-training" your muscles – it teaches them to tense. This tends to create unnatural patterns of movement, sets you up for injuries, and is not the best way to build practical strength that you can use.

Exercises that put your body through "functional" natural patterns of movement train your entire circuit from thought to action. This neuromuscular education is essential if you want that new muscle to be capable of doing anything. Whenever you call on your muscles in real life, they move against the resistance of your own bodyweight. Before weight training became the rule, we called these bodyweight exercises calisthenics. They are still the best way to build functional strength.

Your prehistoric ancestors had to run, jump, climb, and fight in their daily pursuit of food and security. You can develop the extraordinary functional strength of wild animals by using your own bodyweight.

Bodybuilders can develop massive muscles through intensive resistance training, but gymnasts, acrobats, swimmers, sprinters, and athletes in many disciplines develop better functional muscle capacity. They have greater practical strength in response to the demands of their bodies in motion.

Remember, your cardiovascular system has muscle, too. These optimal exercises for growing your muscular strength will also help to strengthen the muscles of your heart, the muscles lining your blood vessels, and the muscles expanding your lungs.

Common Sense Calisthenics

In daily life, your muscles work against the resistance of your bodyweight. Despite the fancy exercise equipment in gyms, calisthenics remain the best way to build strength that you can use. Calisthenics are also much more effective in ligaments and tendons.⁷⁵ To build strength that you can use, work against your own body's weight.

Strengthen Your Foundation: Exercise Your Legs & Lower Body

Let's start from the bottom up. Your lower body is more important for functional strength than your upper body. For both men and women, there appears to be little benefit to creating oversized muscles in the arms, chest, and shoulders, and having a muscular imbalance between the upper and lower body can harm joints (especially shoulders and neck) and posture later in life.⁷⁶

Your biggest muscles are the quadriceps on the front of your thighs, followed by the hamstrings on the back of your thighs, and the gluteus muscles in your buttocks – all three work to flex and extend your hip. If you want to maximize your exercise's effect on your total body strength, go to the muscles that nature designed to be the strongest and work them first.

- ▶ **Do alternating lunges:** Stand straight with your hands on your hips and your feet together. Take a long step forward with your left leg and bend your right knee down to the ground. Straighten up as you now step forward with your right foot, returning to a position with your feet together. Repeat and alternate legs as you “walk” down a hallway or across a room.
- ▶ **Squat:** With your feet shoulder-width apart and pointing slightly away from each other, move your buttocks down and backward as if you were about to sit on a low stool. Keep moving downward until your thighs are parallel to the floor. Although you want to keep your back straight for good posture, there is no need to keep your back upright, perpendicular to the floor. It is natural and necessary for good balance and more comfortable if you allow yourself to bend at the waist leaning your upper body forward as you push your buttocks back and down. Keep your heels flat on the floor.
- ▶ **Take squat leaps:** Stand straight with your hands on your hips and your feet shoulder-width apart. Squat down until your legs are almost at right angles. Now jump straight up as high as you can like a rocket launching.

Strengthen Your Core: Exercise Your Abdomen & Lower Back

Now let's concentrate on your abdomen. Strong abdominal muscles help prevent pain and injury in the lower back. Remember, these exercises alone won't eliminate that spare tire. You'll need to improve your diet to go along with your new exercise program. Building powerful core muscle groups supports functional strength. These muscles improve your breath, posture, and the mechanics of motion.

Your Action Plan

- ▶ Exercise your heart, lung, and blood vessel capacity by following the PACE™ program,
- ▶ Build functional strength with bodyweight exercises.

- ▶ **Crunch your midsection:** Lie on your back. Place your palms on the floor and move your hands underneath your buttocks and press the small of your back firmly on the floor. Slowly raise your head and feet slightly off the ground. Hold for one second and slowly lower them Repeat. You can vary the muscles you use by lifting your legs higher, by crossing one leg over the other at the knee, or by raising only your head.
- ▶ **Leg Levers:** Lying on your back, start with your legs six inches above the ground, lift your legs about another foot higher and bring them back down to the starting position Repeat.
- ▶ **Back Flutter Kicks:** Lie on your back and alternate raising each leg two or three feet off the ground. Repeat.
- ▶ **Scissors:** Lie on your back and raise your legs a few inches off the ground. Now spread your legs apart and bring them back together. Repeat. Your legs look like scissors opening and closing.

Strengthen Your Upper Body

Use your own bodyweight to challenge your upper body as well. Engaging in full-range of motion activities will build your practical strength. Your muscles will become useful to you and power your ability to do everyday activities like lifting a heavy package or moving a couch.

When you work your upper body, focus on your back more than your chest and arms. This does more to prevent injury than spending time on your extremities.

- ▶ **Pushups:** Pushups work your entire upper body, strengthening the pectorals of the chest, the deltoids of the shoulders, the triceps of the arms, and the muscles of the upper, middle, and lower back. Lie face down on the ground. Place your hands a bit wider than shoulder-width apart. Place your feet together, and straighten your back. Lower yourself until you're almost touching the ground. If you have trouble at first, try doing them with your knees on the ground and your feet in the air. When you master the traditional version, play with clapping your hands between each pushup.
- ▶ **Arm Haulers:** Lie on your stomach and stretch your arms in front of you. Raise your arms and legs off the floor Then sweep your arms all the way back to your thighs as if you're doing the breaststroke. Finish by returning your arms back to the starting position.
- ▶ **Pull-ups:** With the traditional pull-ups, you raise and lower your weight on a bar. You can vary the width of your grip on the bar – a wide grip widens your back for more of a V-taper muscle formation. Have your palms facing out for a traditional pull-up to strengthen the muscles of the middle back. If you grip the bar with your palms facing you, you are doing a chin-up. Chin-ups also use the back, but they recruit your biceps as well.
- ▶ **Dips:** You can do these between two chairs or two desks, or a set of parallel bars. While putting one hand on each object, lift your feet off the ground, and then slowly lower yourself until your elbows are at a 90-degree angle. Pause, and then slowly raise yourself. This exercise is great for the chest, middle back, and triceps.

A Favorite Workout Plan

| | |
|--------------|-----------------------|
| Day 1 | PACE™ |
| Day 2 | Legs and Abs |
| Day 3 | PACE™ |
| Day 4 | Rest |
| Day 5 | PACE™ |
| Day 6 | Back, Chest, and Arms |
| Day 7 | PACE™ |

Design a Workout Plan

You can combine these exercises in many different ways. For example, you can split up your exercise by major muscle groups, work a different muscle group each day and do three sets of 10 repetitions for each exercise you choose for the day.

You can find more on the Internet or at the library. Decide on some favorites and then create your program. Also remember to include your PACE™ program in your regimen.

Plan to Succeed

It is helpful to keep a log of your health plan. There is no better predictor of who will succeed at reaching their goals than whether or not they are willing to keep a log. If you want to reach your fitness goals, write down what you plan to do – then write down what you actually do. A written record of your workouts helps you measure your progress.

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