Do you go home after a day at work and have plenty of vim and vigor left over? Can you go for a 10 mile hike and not come home completely zonked? There are actually very few people who fall into the category of the truly fit. Even people who work out regularly are often not truly fit if their workout is neither balanced nor tailored to their body’s needs. This would include people who regularly lift weights, but cannot run ½ mile. And it would include people who run every day or play a sport, but cannot do 20 sit-ups, touch their toes, and jump rope for 5 minutes without stopping.

Fitness improves almost any pre-existing medical problem if done correctly and appropriately for your condition. It is essential in the prevention and treatment of Repetitive Strain Injuries (RSI). If you don’t take time for fitness now, you should schedule time for pain and illness later.

**Why Exercise?**
For those who aren’t in the habit of exercising, fitting it into our day and making it a habit seems nearly impossible, especially when we feel drained of energy from our regular daily lives. For many, it takes some sort of health catastrophe to move exercise into an essential daily activity. Exercise is, quite simply, one of the single most important things you can do to maintain and improve your health.¹

- Help control weight.
- Reduces the risk of cardiovascular disease, lowers your blood pressure and, if you have suffered a prior heart attack, it reduces the chances that you’ll die of a heart attack.²,³
- Improves quality of life, mental health, and mood including reducing risk of depression and improving sleep.¹,²,³
- Reduces you risk of Type 2 diabetes and metabolic syndrome.¹
- Reduces your risk of some types of cancer including colon cancer, breast cancer, endometrial cancer, and lung cancer.¹
- Strengthens muscles and bones reducing reducing hip fractures, decreasing pain from arthritis, and maintaining healthy muscle mass and strength.⁴,⁵,⁶
- Improves your ability to do daily activities and, if you are older, prevent falls.¹
- Increases your chances of living a longer, healthier life. People who exercise for about 7 hours/week are 40% less likely to die young than those who exercise less than 30 minutes/week.¹
- If you exercise with others, it can improve your social life.²
- Increases sex drive and performance for both men and women through physiological and psychological factors.⁴,⁵,⁶

Almost everyone can find something to do to exercise. For those who have physical challenges, it takes more effort and imagination, but there are resources and trainers who can help. This is discussed further in the section on Medical and Orthopedic considerations coming up.
Fitness is a recommended precursor to most sports. In order to perform at peak in a sport, you must first prepare your body through fitness. If you suddenly decide to play softball or go skiing and your body is not conditioned, you will most likely end up with an injury, or at least some sore muscles...and you probably won’t perform very well. When you follow a fitness program, you prepare your body to perform at whatever sport you decide to engage in. In addition, if you have a favorite sport that you normally enjoy, increasing your fitness level specifically for that sport will improve your performance.

Before we plunge into the specific aspects of designing your fitness program, we would like to point out two things:

1. **Doing something is better than doing nothing.** Walking is good if you have not exercised in a long time and you are just beginning to get back into an exercise program. It is also excellent for managing stress and stimulating circulation, critical aspects of injury prevention. It is difficult to lose weight by walking alone. Walking burns about 150 calories in 30 minutes. To lose 1 pound/week, you need to reduce your calories by about 500 calories per day. So, if you walk for ½ hour per day you will not have to cut your calorie intake by quite as much, but it does still require significant calorie reduction. Unless you walk very fast for much longer than ½ hour, you will not see much change in your weight.

2. **Does breaking up your exercise session count?** Carrying your groceries to the car, taking the stairs rather than the elevator and walking from your office to the parking lot cannot really be counted as part of a fitness program, but they are definitely ways to increase the number of calories you burn and to improve your soft tissue health. The Center for Disease Control and the U.S. Department of Health and Human Services both recommend moderate to vigorous exercise for a minimum of 10 minutes at a time as long as it adds up to 150 minutes per week and 2 days a week of muscle strengthening activities that work all major muscle groups (legs, hips, back abdomen, chest, shoulders, and arms). For more health benefits, people should have a goal of more exercise of greater intensity and increased muscle strengthening activities.

**Components of a good fitness program**

There is widespread agreement that there are **three basic components to fitness**. Your fitness program should include something from each of these four basic fitness components to gain proper benefits from the session, to avoid injury, and to avoid possible heart problems due to shock to the system. In addition, a conditioned body has much lower risk of experiencing RSI.

- **Cardiorespiratory Endurance** is the body’s ability to deliver oxygen and nutrients to tissues and to remove wastes over sustained periods of time. To develop cardiorespiratory endurance, health professionals recommend at least three 20-minute sessions of continuous aerobic exercise each week. An aerobic activity supplies your body with enough oxygen to perform for an extended period of time. Examples of this would be jogging, swimming, cycling, rope-jumping, rowing, cross-country skiing, jazzercise or zumba, and some continuous action games like racquetball and handball.

- **Muscular Strength** is the muscle’s ability to exert force for a brief period of time. An optimal fitness program includes a minimum of two 20-minute sessions per week that exercises all the major muscle groups. Lifting weights is the most effective way to increase strength, and it facilitates fat loss.

- **Muscular Endurance** is the muscle’s ability to sustain repeated contractions or to continue applying force against a fixed object. At least three 30-minute sessions each week that include exercises such as calisthenics, pushups, situps, pullups, and weight training for all the major muscle groups are recommended.
In addition to the three components of exercise, it is recommended that you consider four “ingredients” when selecting the right exercises for the workload portion of your sessions. If you aren’t doing these things, you are not improving your body’s fitness level.

- Exercise needs to be SPECIFIC – pick the right kind of activities to affect each of the four components. Train for the specific activity you’re interested in and choose activities that are most beneficial for your body type. We discuss this below.
- Exercise needs to OVERLOAD – work hard enough, at levels that are vigorous and long enough to overload your body above its resting level, to bring about improvement.
- Exercise needs to be REGULAR – exercise enough times a week to achieve or to maintain your desired level of fitness.
- Exercise needs to be PROGRESSIVE – increase the intensity, frequency and/or duration of activity over periods of time in order to improve.

The emphasis you place on each of these four ingredients depends upon your goals. For someone who wants to lose weight, the formula would be Regularity, Specificity, Progression, and Overload. If you want to improve muscle tone, overload is more important than regularity. If you exercise six days a week, three days should be devoted to firming and toning and the other three should be devoted to aerobic (see Cardiorespiratory Endurance above) and anaerobic activities. An anaerobic activity requires greater levels of exertion to the point where you cannot take in enough oxygen for muscle function, so you can only perform them for short bursts of time. Examples of this are running down the court in basketball, running wind-sprints, or jumping rope at “hot pepper” speed.

Fitness for general conditioning is different from training for a specific sport. A good online resource is Reference 10. This website gives recommendations on general training for strength, endurance, and flexibility as well as sports-specific training for athletes. Their goal is to maximize the results you get for the time spent, so you can quickly feel better.

Deciding on the Right Exercises for YOU
Your physical limitations are the most important consideration to make when considering your exercise options. Other factors to consider are your current and desired level of fitness, your lifestyle, and your body type. We’ll discuss each of these in turn.

Medical and Orthopedic Background
If you have medical problems, these must be addressed when you are designing your fitness program. The following are some exercises and activities and the body parts they impact the most. Avoid or alter the activities that will cause further injury. Take a list of your desired exercises to your doctor or chiropractor and discuss your fitness program with him/her. Your health practitioner will help you choose activities that are safe for your body and help you monitor your progress. Do not rely entirely on the advice of a fitness trainer. Trainers can be excellent resources, but if you have specific preexisting medical or physical issues, you need to include your health practitioner into the team when designing an exercise program.

If you have health conditions such as high blood pressure or diabetes, you must take these into account when you design your fitness program. If you are a smoker, heavy drinker, or you are obese, you need to see a doctor before beginning a fitness program.

If you have disabilities, check The President’s Challenge website for resources and information. The tab titled “Who Can Participate” has options for people with all types of disabilities.
Present and Desired Level of Fitness

Be honest with yourself about how fit you are and how fit you want to be. Once you have achieved a level where you are fairly fit, increasing the intensity of your workout will allow further improvement without adding time. Since most people are not striving to become world-class athletes, there is no need to work out more than one hour a day. In fact, your overall fitness level depends on a lot more than simply the amount of time and effort you put into exercising. The questionnaire provided by the American Board of Integrative Holistic Medicine is excellent.\textsuperscript{11} It doesn’t simply send you to a physician for a bunch of tests. It takes a wide variety of physical, mental, social, and spiritual factors into account that all contribute to your health.

Heart rate is the best measure of your current fitness level, as well as measuring intensity of the workout. Working out within a safe level will improve your fitness level without endangering your health. The correct number of heart beats per minute for you is called your “target heart rate zone.” Younger people can safely put a higher load on their heart. Before engaging in any sport or fitness program for the first time, it is a good idea to have a stress test (EKG, ECG) if you are over 35 years old, just to make sure your heart is in good working order. Resting heart rate and heart rate recovery speed are good measures of your fitness level. To measure your Recovery Heart Rate, run on a treadmill or do some other strenuous exercise for one full minute.\textsuperscript{12} Take your pulse as soon as you stop exercising at the end of one minute and write it down. Then take your pulse again after one minute. Subtract the second number from the first number. The difference should be greater than 12-18 beats/minute.\textsuperscript{12} People with good fitness levels can be a difference of 50 beats/minute or greater.\textsuperscript{12}

To take your heart rate, stop exercising and immediately, within 5 seconds, count the pulse at your neck, wrist, temple, or chest for ten seconds. Do not use your thumb to take your pulse since its beat will confuse your count. Multiply your 10-second count by 6 and you’ll have the number of heartbeats per minute. The maximal heart rate is the number you should \textbf{never} exceed during any physical activity.\textsuperscript{12}

\textbf{Maximal heart rate:} $220 – \text{your age}$ (EXAMPLE: If you’re 45: $220-45=175$)

The low end of your target heart rate zone is 50% of the maximal heart rate.\textsuperscript{13} The high end of your target heart rate zone is 85% of your maximal heart rate. You \textbf{must} exercise within your target heart rate if you want to improve fitness. There are different ways to calculate your target heart rate, but the Karvonen Method is good because it takes into account your resting heart rate, which as mentioned is a good indicator of your current fitness level.\textsuperscript{13} Take your resting heart rate when you first wake up in the morning while you are still in bed. Take your resting heart rate 3 mornings in a row and then use the average to calculate your target heart rate.

$Target\; heart\; rate,\; low\; end\; of\; zone: \left(\left[\text{Maximal heart rate} – \text{Resting heart rate}\right] \times 0.50\right) + \text{Resting heart rate}$

\textbf{EXAMPLE:} \left(\left[175 – 75\right] \times 0.50\right) + 75 = 125 \text{ beats/min.}

$Target\; heart\; rate,\; high\; end\; of\; zone: \left(\left[\text{Maximal heart rate} – \text{Resting heart rate}\right] \times 0.85\right) + \text{Resting heart rate}$

\textbf{EXAMPLE:} \left(\left[175 – 75\right] \times 0.85\right) + 75 = 160 \text{ beats/min}

When you are beginning an exercise program, exercise so that your heart rate is at the low end of your target zone. It’s more important to increase your time in low-intensity exercises rather than increasing intensity right away and getting too tired. As you become more conditioned, you can increase intensity. If you find that your \textbf{resting heart rate} suddenly goes up 5 beats/minute or more and you are training a lot, it can mean that you are overtraining.\textsuperscript{12}

Lifestyle

Your lifestyle dictates where, when, and how you should exercise. Fitness centers can be excellent places to exercise if you can schedule time into your workday. If this is not your style, find a location that will
work for you, such as home, trails, the beach, etc. If you travel often, do not plan a fitness routine that relies on exercise machines or fancy equipment that you will not have readily available on your trips. The best time to exercise is when you can devote at least 30 minutes to your program. Make exercise convenient and make it an enjoyable part of your day…or you will probably not stick with it.

**Psyche Yourself Up**

It’s important to know how to deal with our individual tendencies when participating in sports and a fitness program. Laziness or over zealously, competitiveness or lack of motivation are all attitudes that can be detrimental and hazardous to our health because they can either predispose us to injury or they can undermine our fitness programs. In addition, achieving a balance between consistency and a need for variety reduces our chance of injury, and helps us avoid boredom. Fitness programs and exercise are largely a matter of habit and lifestyle. Making exercise a habit and a part of your life may be a challenge in the beginning if you are a long-time couch potato, but you will be much happier if you get up and start making your body your friend!

**Patience is a virtue**

OK, you’ve decided to whip that body into shape! No excuses! That’s great, but beware that starting out too ambitiously can result in immediate injuries by tearing or twisting tissues. Starting off beyond your limits of endurance also leads to muscle soreness, which is a very common reason for abandoning your planned exercise schedule. Even if you start off fairly slowly, progressing your program too quickly can lead to injury.

Patience is essential. If you know you have a tendency to be impatient, be aware that you might push yourself too hard. You will also need to be especially alert to twinges of pain and signs that you are injuring yourself. People who are impatient will be more likely to continue exercising despite injury, causing soft tissue damage. This is very dangerous. Soft tissues are muscles, ligaments, and tendons, as opposed to bone. Injury to soft tissue takes much longer to heal.

How do you determine your limits? Guidelines should be developed based on your recent pattern of exercise (or lack of it), your medical history, your age, and your heart rate during exercise. Vigorous exercise involves minimal health risks for people in good health or those following a doctor’s advice. There are far greater risks associated with habitual inactivity and obesity than with exercising. However, if you are over 35 and have been inactive for several years, or if you know you have health risks, you should consult a physician or other health practitioner prior to engaging in a sports or exercise program.

Research and experience has shown that it is the long-term effects of exercise that are what makes the biggest difference in health. You need to commit for the long term, not to just lose 10 pounds in a month, to bench press 300 pounds, or to win the next race. You need to set your goals to be to regain health and maintain it for the rest of your life, to never miss a workout, and to be more fit this year than last year. Research has also shown that, while in the short term, people may reduce everyday activity some when they work out vigorously because they are tired, over the long term this is not the case. Somewhere between weeks 7 and 14 the body appears to adapt to the exercise routine and the body adjusts to this as a new lifestyle. At this point, overall activity level outside of the exercise activities either is the same level as before the exercise program started or an increase is observed.

**Excuses and Commitment**
Excuses are thinly disguised “reasons” why we cannot exercise. Everyone is capable of coming up with excuses, but there are opportunities for exercise whether you are young or old, busy or not. The next time you think “Who has time?” ask yourself “Who doesn’t want to feel better?” Be honest with yourself and do what you need to do to get motivated. Don’t fall prey to your own excuses! Make exercise a priority over all the distractions that seem so important.

60% of Americans, that is 2 out of 3 people, do not get even the minimum recommended amount of exercise. Top reasons, besides not feeling like you have time are inconvenience, lack of motivation, lack of enjoyment in exercise, find it boring, lack of confidence in your abilities to be active, fear of being injured, lack of goal-setting abilities, lack of social/family support, and no convenient place to exercise. The CDC website has some great suggestions on how to overcome these obstacles.

We all know there is no magic pill to take to obtain and maintain fitness. Regular exercise sessions that are scheduled during a time that will always work for you and your family are most effective for your health and fitness. This doesn’t have to be the same time every day. If you have a class on Tuesdays and Thursdays at the time you normally exercise, clearly, you need to find a time that will allow you to fit that ½ hour of exercise some other time of day. Having a variety of activities in your repertoire will allow you to work out regardless of the weather or number of daylight hours.

Fitting exercise into your schedule is probably the hardest part about fitness, sometimes even when it becomes a habit. It is important to make the commitment to make exercise a part of your life always and for the long term. If you wonder when you’ll find time to fit in workouts, you will never get into a routine. You have to schedule it and plan the rest of your life around it. That way you don’t have to think about when you’ll fit in exercise or training.

Many of the world’s busiest people find time to make exercise a commitment, even the President, so there is really no excuse that flies for the rest of us.

Get Motivated
Motivation is the key to consistent exercise. If you aren’t motivated, you won’t get up off the couch. If you don’t stay motivated, you will slack off. The best motivators are positive, but sometimes a bit of fear is helpful, too. Here are some ways to stimulate yourself into action.

1. Read. There is tons of information on the internet and lots of sports and fitness magazines that can get you excited and keep you learning. If you’re over 50, you can find informative and motivational articles in websites and magazines such as AARP.

2. Create your personal “reasons list”. Keep a piece of paper handy for a couple of days and jot down every reason you can think of to exercise.

3. Take a picture “before”. Hang it up where you can see it every day. After 4 weeks take another picture and hang it up next to the first picture. Often it takes a while for visible signs of progress, but over a period of weeks or months, it will gradually become noticeable. You’ll be able to see the difference and you will start to get compliments!

4. Exercise with a friend or a dog. People who exercise with a friend are more successful at exercising consistently because they keep each other accountable and enjoying each other’s company. From personal experience, we can vouch for dogs….once they are in the habit of exercise, they will not let you off the hook easily! Many people find that joining a club, exercise class, or gym helps to keep motivated and makes it easy to get into a routine. Local community colleges and recreation centers often have excellent classes offered at very low cost.

5. Find a time that works for you. Although from a physiological standpoint, exercising in the morning appears to boost your metabolism and keep it revved up during the day resulting in more weight loss, your body is not warmed up at that time of day, so injuries are somewhat more likely. In addition,
some people’s circadian rhythms are not at their peak in the morning. You need to find a time that feels best for your body, that works for your schedule, and that allows you to participate in the activities you enjoy. Obviously, some classes are only offered at certain times of day, friends you want to play tennis with and court times may limit your options, etc., but it’s important to not let extraneous scheduling problems prohibit you from exercising at all.

6. Start participating in competitive events, if that motivates you….run/walk events, tennis competitions, etc.

7. Reward yourself especially with non-food rewards. Example: donate to a piggy bank every time you exercise to save for something you want like some new workout clothes or shoes, or a massage.

8. Keep records. Write down your exercise time each day, keep a running total for the month and year. Write down every day what you did. You’ll be able to see the progress you’re making. Reference YourWay has printable journal pages for activity and for strengthening you do every day. Save them in a notebook and look back to see your progress. Even before you can see a difference in your body, you will be able to note your progress in your records.

9. Do exercise you like and make your exercise as enjoyable as possible. Listen to music if you walk, watch TV if you exercise inside. Or just enjoy the peace, quiet, and beauty of the outdoors. If you love playing with your kids, you can get a great workout playing tag. Go running with your dog. Their enthusiasm for running is contagious.

10. Set goals. Anything that gives you a reason to exercise is good, so set goals for yourself. You can set many goals and subgoals like lose 1 pound, exercise 20 minutes today, run in the next race in town, etc. Always having something to work toward is a good way to keep yourself going.

11. Wear good shoes and replace them before they are worn. No matter what activity you choose (OK…except swimming), cheap or worn-out shoes will make you much more prone to injuries, which seriously affect your motivation to exercise.

12. Scare yourself. Even a trip to the grocery store or an all-you-can-eat buffet can be enough to motivate you to get moving. 2/3 of Americans are overweight and 1/3 are obese. Poor health, disease, and the thought of an early grave can be motivational in getting people to take better care of themselves.

Competitiveness

If you are a competitive person by nature, you may run the risk of injury if you don’t tame this spirit during your sports and fitness activities. Comparing your performance to other people’s performance can be very damaging. It’s important to set goals for yourself and compete with your own abilities as long as you are paying attention to your level of fatigue. If you are having difficulty sleeping, or have aches and pains that are beyond the expected muscle soreness, you may be heading for an overuse injury that will set you back weeks or months. Setting unreasonable goals or expecting a 50-year-old body, after years of lethargy, to suddenly perform at the level it did at age 20 is equally dangerous. A competitive and/or macho attitude will cause you to bulldoze through warning signs of fatigue and even pain. You are working to maximize health, tone your body, and increase strength, not injure yourself through overuse.

In competition, it is helpful to keep in mind the 4 C’s suggested by Brian Mackenzie, UK Senior Performance Coach. These are concentration, confidence, control, and commitment. Notice there is no mention of comparison of yourself to other people or killing yourself trying to succeed. Forget about your ego while you train and you will do your body a favor.

Variety is the spice

Some people stick with an exercise program because it has become a regimented routine in daily life. It might not be much fun, but joy was never the reason for exercise with these folks. They are generally healthy, usually not overly fit. They do miss out on the rewarding experience of actually enjoying being active.
Many of us were never taught to make exercise fun. Sports in school can be a negative experience for kids who aren’t athletically inclined or who have overbearing coaches, teachers, or parents. The choices as an adult often appear limited to taking a class or joining a gym. And that is why many people do not exercise regularly. We are not interested in spending 1 or 2 hours per day doing something we do not believe is a fun or an enjoyable experience of living. Even those of us who love to exercise tend to limit our choices to a few old favorites rather than taking on new challenges and learning a new sport.

Rather than thinking about “exercise”, think about “activity”. Make a list of 5 or 6 activities that you enjoy, or think you might enjoy. Then schedule at least three of them on your schedule for next week. Even changing your route for running or finding a new trail to hike will completely change the experience of your exercise routine. Three easy ways to add variety are to vary the activity, vary the place, and/or vary the time (either the length of time or the time of day). Think beyond the usual activities. Take a sailing or scuba diving class, go for a night hike to look at the stars. Make sure you say “yes” when friends ask you to participate in a sporting engagement. Even in the gym, there are endless opportunities to vary your workout. Try a different machine, and vary your routine. It’s very easy to get locked into your favorite routines, but this doesn’t allow you to learn, expand your knowledge, or improve different muscle groups.

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