

LIVING STRONG FITNESS FACTS

from the article at www.livingstrong.org

"Fitness" is a state of well-being, evidenced by vitality, maximized physical potential, health, strength, and a robust shapely body.

Our modern culture has eroded the definition of what true fitness actually is. We have downgraded our expectations for "health" and "fitness" to now mean merely the "absence of debilitating illness". **If we are not sick, we consider ourselves to be "fit"**.



Over the past few generations, our society has transformed from the active, exercise-intense lifestyle that our forefathers knew, into the sedentary, out of shape lifestyle that we now accept as normal. Doctor-dependent, flabby, and out of breath, **we now consider it acceptable to have a minimally functional, weak body**. We seem content to maintain ourselves just barely above the threshold of illness. We even have a new word for this state of being. We call it "**Wellness**". It is incredible that we actually now aspire just to be well. We have lowered our physical expectations, and focused our attention on achieving and maintaining this minimal goal of "wellness". Our society now is struggling just to not be sick.

What is your current level of health and fitness?



- ILLNESS would most accurately describe your condition if you are sick, feel terrible, are in bad shape, poor health and are inactive.
- WELLNESS would most accurately describe your condition if you are not sick, feel OK but are out of shape, consider yourself of average health, and are weaker than you should be.
- FITNESS would most accurately describe your current condition if you are thriving, in great shape, have optimal health, and are firm and strong.

If you are ill, you will need the knowledge and help of a doctor to get well. A doctor generally deals in the corrective. We don't visit the doctor when we are well, but when we are sick or injured, and they help us get back to a level of wellness.

If you are well, and want to get fit, you will need the knowledge and help of a fitness trainer and nutritionist. **A certified personal trainer specializes in helping you move from**

wellness to fitness. Remember, fitness is evidenced by strength, health, vitality, maximized physical potential, and a robust shapely body.

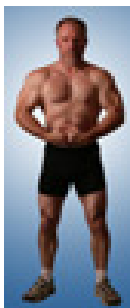


We each have an achievable optimum level of fitness that is our genetic potential. **You cannot escape the consequences of ignoring your fitness.** The responsibility for your fitness lies with you and you alone. You cannot delegate your fitness to someone else. You cannot hire another to be fit for you.

Although each of us has a unique level of strengths and limitations dictated by our situation and our genetics, we each have the potential to better our physical condition. **We are either watching our life and health slip away, or we are actively involved in the pursuit of our best health and shape, our genetic potential for greatest health, strength and fitness.** Sometimes a doctor or therapist may be needed to help you to the point of wellness, and a **fitness professional will help you maximize your health and physical condition and get you into your best shape.**

ADVANTAGES OF BEING FIT AND STRONG:

In today's world, anyone who is healthy and in great shape stands out from the crowd. They are admired for beating the curve, for taking control of their body, for breaking free from the "wellness" mindset and achieving a high performance body and healthy lifestyle. They not only maximize their shape and develop a leaner, well-muscled physique, but they also **feel better, perform better, have more energy, and are less prone to illness and injury.**



Those who live a lifestyle of fitness have far fewer medical and psychological problems, avoid illness and disease, and enhance their years with a healthier and higher quality life. They are a sharp contrast to the flabby out-of-shape masses who continue to spend ever increasing billions of dollars each year on medical expenses, prescriptions, diet pills, and yet continue to be plagued with an ever increasing rate of poor health as a result of their not being fit.

The Center for Disease Control, the surgeon general, the medical and health care communities all recognize the benefits of being fit.

- Helps you control weight
- Helps you build and maintain healthy bones, muscles, and joints
- Helps you look and feel great
- Reduces the risk of heart disease
- Reduces the risk of developing diabetes
- Reduces the risk of developing high blood pressure
- Helps reduce blood pressure in people who already have high blood pressure
- Reduces the risk of dying prematurely
- Reduces the risk of stroke
- Reduces the risk of Osteoarthritis
- Reduces the risk of Obstructive sleep apnea and respiratory problems

- Reduces the risk of cancer (such as endometrial, breast, prostate, and colon)
- Reduces the risk of Gallstones
- Reduces feelings of depression and anxiety
- Promotes psychological well-being
- Reduces the risk of Complications of pregnancy
- Helps control reproductive health (such as menstrual irregularities, infertility, irregular ovulation)
- Helps older adults become stronger and better able to move about without falling.

BECOMING FIT :

You have built the body that you currently have by programing it to adapt to your habits and lifestyle. If you are flabby and out of shape, you have programed your body to be that way.

To get back into shape, what is needed is to reestablish a proper balance of calorie intake and restore healthy lifestyle activities that will encourage the body to adapt in a positive way.

The body functions best when it is muscularly active regularly, and receives the proper nutrients needed to support this function. All of the systems that make up our body can support each other and function in harmony when our body is adapting to maximize it's potential. (*Use it or lose it*).



You don't have to spend the rest of your life trapped in an unfit body!

Living Strong Fitness Training can reprogram your body to live in fitness and health. Many have done it, and you can do it too. The pages of the Living Strong website are filled with the info that you need.

Visit our other pages to learn how you can become more fit, strong, shapely, and healthy. You will learn the relevance and applications of Four Fundamentals of Fitness:

1. **Appropriate Exercise**
2. **Appropriate Nutrition**
3. **Appropriate Hydration**
4. **Appropriate Rest and Recovery**

Now let's get going. Visit www.livingstrong.org [FAT FACTS](#), to learn more about our bodies "energy deposits". Then be sure to continue on to [EXERCISE FACTS](#), [NUTRITION FACTS](#), [STRENGTH FACTS](#), [HOW TO GET FIT](#), and all of our other great resources at [GREAT ARTICLES](#).

THE UGLY TRUTH ABOUT EXCESS BODY FAT.....

from the article at www.livingstrong.org

UNDERSTANDING HOW WE GOT OUT OF SHAPE:

The human body is genetically wired to adapt for survival. **Whatever regular stimulus we subject our body to will determine how it adapts.** The body is an incredible marvel of efficiency. It will build needed tissue, replace damaged tissue, and make itself better able to meet the requirements we put on it.



Adaptation is why athletes train, to make the body adapt in a desired way. **Adaptation** is why physical therapy can help recovery from a bone or muscle injury. The principal of **adaptation** is why a well designed fitness program will help your body adapt in a positive way to become fit and strong.

You have built the body that you currently have by programming it to adapt to your habits and lifestyle.

One common symptom of unhealthy adaptation is extra body fat and being overweight. **If you are carrying extra fat, it is because you have programmed your body to store it.** Fat is made up of unused calories, or energy. When you consume calories that you do not burn for energy, your body adapts and stores the extra as fat. As we repeat the process, our metabolism slows down, and our body adapts into an efficient fat storage container.

This process of overeating and not burning the calories sets off a whole chain of negative health events in our body. Not only are we now mainlining large quantities of unburned fuel to our fat storage reserves, but we begin to **feel weak, have reduced energy, and find it uncomfortable to do even the simplest exercise.** Our physical recovery and defense mechanisms are not able to function as they should, our blood pressure climbs, our insulin response begins to fail, our joints begin to fail from carrying more weight than they were designed to, **we look terrible, feel terrible, and our health spirals out of control toward debilitation and illness.**

But our modern culture is finding that the cost of our physical complacency is high, very high indeed. As we have grown fatter and less fit, an epidemic of illness and diseases including diabetes, heart disease, osteoporosis, arthritis, obesity, depression, back and joint failure, has paralleled our excursion into the sedentary life. The Center for Disease Control and the medical community recognize the dangers of our inactive lives, and have been issuing urgent warnings for modern society to get back into shape.

It is inspiring to have observed many people exchange their flabby, unhealthy lifestyle for one of strength, health and fitness. These have transformed their overweight sedentary "barely able to get by" body into active, shapely, energized people that seem years younger than their actual age.



By contrast, it is alarming to observe the general population's health and fitness

continue to decline. As we wallow in the wake of our inactivity, we grow fatter, and the life-threatening result of our complacency steals our life and vitality. As a society we are in desperately poor health, and we know it.

And yet, paradoxically at the same time, our culture is obsessed with preoccupation about our bodies and fat. We spend more than ever on health care, while our health slips away, being traded for convenience and pleasure. You can't turn on the TV or read a magazine without being bombarded with ads for medicine, diets, exercise machines, pills for this, pills for that.

What is needed is to re-establish a proper balance of caloric intake and restore healthy lifestyle activities that will encourage the body to adapt in a positive way.

This is exactly what fitness training can do for you. A well designed fitness training plan will include the nutrition, exercise, and lifestyle habits that will absolutely reverse the negative adaptation, get rid of the excess fat, add shapely firm muscle, restore your body's defense and recovery potential, and encourage your body to continually adapt in a fit and healthy direction.

Let's repeat that for emphasis. What is needed is to re-establish a proper balance of caloric intake and restore healthy lifestyle activities that will encourage the body to adapt in a positive way. This is exactly what fitness training can do for you. A well designed fitness training plan will include the nutrition, exercise, and lifestyle habits that will absolutely reverse the negative adaptation, get rid of the excess fat, add shapely firm muscle, restore your body's defense and recovery potential, and encourage your body to continually adapt in a fit and healthy direction.

How much is too much body fat ?

It is generally accepted that men should have less than 18% total body fat and women 23% or less, However, experts suggest that an excess is not particularly hazardous to health until an individual accumulates 35% and 40% total body fat respectively. Such levels definitely constitute obesity and potentially, if not most probably, have a detrimental effect on one's health. Body fat percentage can be determined using a pair of calipers.

So what is percent body fat?

Percent body fat is the percentage of the total body that is fat. Thus someone who weighs 150 pounds and is 10% fat has 15 pounds of fatty tissue and 135 pounds of other, so called lean tissue.

Where does body fat come from?

Fat is produced by the body when an excess intake of calories in the form of food or drink occurs. When the diet provides the body with more calories than it needs for general maintenance and its current level of physical activity, this excess energy is stored in the form of body fat.

How do I lose excess fat?

Put simply, the removal of excess fat is by a reversal of the bodily processes which store excess energy, if an individual burns more energy than he or she is consuming, the extra energy stored in the body will be removed to be broken down for physical activity.

How does exercise affect body fat?

An increase in regular exercise will help to increase your calorie expenditure. The more physical activity you do, the more calories you will burn. Accordingly, if you increase your physical activity, and do not increase your intake of food, you will draw the extra energy needed from your stored body fat.

Why do gains in weight always seem to go on the same place?

One's body tends to deposit fat according to your individual genetic code. In other words, hereditary characteristics dictate areas in your body which accumulate fat. If you are a typical female you will accumulate fat around your thighs and hips. Typically males accumulate fat around the midriff and lose it there last

Can I get fat off from a specific part of the body ?

Unfortunately not, there is no such thing as "spot reduction". If you exercise a particular part of the body, muscle tissue under the fat will become firm and make the overall appearance of that region look better. However, such specific exercise will not reduce the quantity of fat within the area. Thus simply by jogging one will not just reduce the fat around the legs and hips, the fat providing energy for this activity may be coming from the stomach, chin, back etc.

How many calories will it take to lose one pound of fat?

A calorie is a unit of energy, the deficit needed to lose one pound of fat being approximately 4000 calories. This "rule of thumb" may vary considerably depending on the nature of the fat lost, however, for long term weight loss this figure is probably accurate.

Can I sweat off excess weight in a steam room or sauna?

Remember you are not trying to lose weight but fat. There is a real difference between the two. Weight could be fat, water or even muscle tissue, whereas fat is fat. The loss of weight through excess sweating as experienced in the sauna/steam room is not fat but water. Such weight returns immediately you consume fluid. Consequently if you lose say two and a half pounds in a session in the steam bath you will replace it with approximately the next two pints of water drunk (one pint of water weighs a pound and a quarter). However and obviously more worrying is that if the fluid loss is replaced by a high calorie drink you may end up gaining fats as a result of your weight loss attempt.

What are Essential Fat & Storage Fat?

The essential fat, required for normal physiological functioning, consists of fat stored in the marrow of bones, heart, lungs, liver, spleen, kidneys, intestines, muscles and lipid rich tissues of the central nervous system. In females the extra 9% of sex specific fat is required for childbearing and other hormonal related functions.

In addition to essential fat deposits, storage fat consists of fat accumulation in adipose tissue. Men and women have similar quantities of storage fat - on average 12% for men and 15% for women.

Overweight and Obesity Health Consequences

Overweight and obese individuals (BMI of 25 and above) are at increased risk for physical ailments such as:

- High blood pressure, hypertension

- High blood cholesterol, dyslipidemia
- Type 2 (non-insulin dependent) diabetes
- Insulin resistance, glucose intolerance
- Hyperinsulinemia
- Coronary heart disease
- Angina pectoris
- Congestive heart failure
- Stroke
- Gallstones
- Cholecystitis and cholelithiasis
- Gout
- Osteoarthritis
- Obstructive sleep apnea and respiratory problems
- Some types of cancer (such as endometrial, breast, prostate, and colon)
- Complications of pregnancy
- Poor female reproductive health (such as menstrual irregularities, infertility, irregular ovulation)
- Bladder control problems (such as stress incontinence)
- Uric acid nephrolithiasis
- Psychological disorders (such as depression, eating disorders, distorted body image, and low self esteem).

Reference

Stunkard AJ, Wadden TA. (Editors) Obesity: theory and therapy, Second Edition. New York: Raven Press, 1993. National Institutes of Health. Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults. Bethesda, Maryland: Department of Health and Human Services, National Institutes of Health, National Heart, Lung, and Blood Institute, 1998.

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LIVING STRONG NUTRITION FACTS

from the article at www.livingstrong.org

A visit to the food, nutrition and diet section of your local bookstore is a confusing experience. There are books extolling the virtues of low carbs, high carbs, low protein, high protein, vegetarian, all meat, you name it and some doctor-specialist-nutritionist-dietician has a best selling book about it. With so much contradictory information out there, **how can we find what nutritional information is correct, and what will work for us?**



The nutrition information that applies to you is determined by your fitness goals, and your daily activities. Your nutritional needs will change as your body becomes more fit, and you incorporate different exercise activities into your fitness plan.



The best way to get the nutritional component of your fitness program up and running, is to follow the advice of your certified personal trainer and nutritionist. **Living Strong will help you create a custom nutrition plan as part of your fitness training services.** If you are a self-motivated learner with an interest in studying diet and nutrition, you could educate yourself through research, trial and error, and experimenting on your own.

Points to Ponder:

Nutrition alone cannot make you healthy.

There are four essential components to living a fit and healthy life.

1. Appropriate Exercise
2. Appropriate Nutrition
3. Appropriate Hydration
4. Appropriate Rest and Recovery

Nutrition is the fuel for our body to burn. It provides the calories, or energy that our body needs to perform it's activities. **What fuel we make available to our body, and how we burn that fuel are primary determining factors of our health and fitness.**

GOOD nutrition for one person, may be POOR nutrition for another.

Each person's activities determine what nutrients are needed by their body. A sedentary fat person whose only exercise is walking to and from the car, has different nutrient requirements than a mailman who walks for eight hours a day. Athletes especially have varied nutrient requirements. A marathon runner must eat a different diet than a bodybuilder. Their activities require different levels of protein, carbohydrates, and fats. Your personal nutritional requirements will change as you become more active and more fit.



There are no EMPTY calories.

Without the proper nutrients, our body cannot function as it should. The foods that we eat are either building our health, or destroying our health. There are no "empty calories". **Each calorie we ingest has potential for FUELING the body, or FOULING the body.**

The amount of food your body needs will vary.

You will lose weight if you have a caloric deficit, or take in fewer calories than you burn. The trick is to maintain correct exercise and lifestyle habits to insure that you are losing FAT instead of lean body mass like muscle or bone.

You will gain weight if you have a caloric surplus. Whether you gain fat or lean body mass, again is determined by correct exercise and lifestyle habits.

You want to establish a healthy BODY MASS RATIO, which means that you have a low percentage of fat, and a high percentage of lean tissue. Strength training exercise is the key to reducing the FAT, and adding MUSCLE. The amount and proportions of your nutrients will vary depending on your fitness goals.



What we eat, and the amount we eat determine what resources are available for our body to function with. Remember from our [FAT FACTS](#), that excess body fat is just unburnt calories. Any nutrients that we eat above the amount required by our activities is stored for future use.



Here is a summary of some good general guidelines for healthier eating.

Just because you may exercise regularly doesn't mean you can eat whatever you want. By following these basic guidelines, you'll not only get great muscle-building and fat-burning results from your training, but you'll enjoy a higher level of energy throughout the day.

- Eat six meals a day. If you've been following the typical nutritional advice of cutting back on calories and consuming no more than "three square meals" a day in the hope of shifting your fat-burning efforts into high gear, you may actually be throwing the whole process into reverse. According to scientists at Georgia State University, active folks who skimp on calories and eat infrequently (only three times a day) may be training their bodies to get by on less energy and therefore more readily storing unburned calories as bodyfat. Instead, these researchers and many others advise active people to eat frequently (about every three hours) to accelerate metabolism and maintain steady energy levels throughout the day.
- Combine carbohydrates and protein at every meal. The simple fact is, our bodies work better with a balance of carbohydrates and protein. Not only is protein essential for building healthy muscle and maintaining a strong immune system, it stabilizes insulin levels, which leads to steady energy throughout the day. One more benefit: eating protein has been shown to reduce your appetite. So, avoid extreme-carbohydrate nutrition plans and instead balance your protein and carbohydrate intake.
- Choose "appropriate" portion sizes. USDA statistics show that because of increased portion sizes, the average total daily calorie intake has risen from 1,854 calories to 2,002 calories over the last 20 years. That increase-148 calories per day-theoretically works out to an extra 15 lbs. every year. Portion size is important to weight management. Employ a common sense approach, such as using the palm of your hand or your clenched fist for gauging the portion sizes of food.

- Plan meals ahead of time. You may even want to try different recipes and decide what works for you before you begin your training program. Experiment with different seasonings, try a variety of vegetables, and find which microwave settings work best for preheating food. By the time you're ready to start, you'll have the supplies you need and the confidence that you know what you're doing. Then, fix your meals in advance and freeze them. It's important to shop at least once a week. If you forget, you'll run out of good food and be tempted to cheat on your diet.
- Get containers to store your food. Purchase plastic storage containers, sports bottles, a water jug and a cooler to store and carry your food. Having nutritious meals within reach during a hectic day can keep you on track.
- Drink 10 glasses (one gallon) of water every day. It's especially important to stay well hydrated when following a comprehensive training, nutrition, and supplementation program. If you have an occasional soda, coffee or tea, you'll need to drink an additional glass to compensate for the diuretic effect of these beverages.
- Use high-quality supplements. Supplements can help make up for any nutritional deficiencies and enhance performance. When purchasing supplements, look for companies that invest heavily in research to maximize the effectiveness of their products.
- Find your "emotional reason" for staying on track. Researchers at George Washington University discovered that people who successfully transform their bodies are set in action by some sort of "emotional trigger" that helps to clarify their reasons for deciding to make change. In the study, researchers found that any event which elicited strong emotions such as alarm, embarrassment, shame and/or fear actually inspired people to transform their bodies for the better. Take a moment to consider your "emotional trigger" and use it to stay committed to your nutrition program.
- Strive for consistency, not perfection. You can be sure there will be the occasional meal or snack that's not on the recommended food list. When you get off track in this way, don't allow it to slow you down. Enjoy the divergence, recommit to your goal, and get back on track with your next meal.

<p>Include these Proteins:</p> <ul style="list-style-type: none"> chicken breast turkey breast lean ground turkey swordfish orange roughy haddock salmon tuna trout top round steak top sirloin steak lean ground beef buffalo lean ham egg whites or farm eggs milk trout low-fat cottage cheese wild-game meat <p>Include these Vegetables:</p> <ul style="list-style-type: none"> broccoli asparagus lettuce carrots 	<p>Include these Carbohydrates:</p> <ul style="list-style-type: none"> baked potato sweet potato yams squash pumpkin steamed brown rice steamed wild rice pasta oatmeal barley beans kidney beans corn strawberries melon apple orange fat-free yogurt whole-wheat bread high-fiber cereal rice cake popcorn tortilla whole grains
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<ul style="list-style-type: none"> cauliflower green beans green peppers mushrooms spinach tomato peas brussels sprouts artichoke cabbage celery zucchini cucumber onion <p>Include these Vegetarian Proteins:</p> <ul style="list-style-type: none"> tempeh seitan tofu texturized vegetable protein soy foods veggie burgers 	<p>Include these Fats:</p> <ul style="list-style-type: none"> avocado sunflower seeds pumpkin seeds cold-water fish natural peanut butter butter low-fat cheese low-fat salad dressing low-sodium nuts olives and olive oil safflower oil canola oil sunflower oil flax seed oil <p>Avoid:</p> <ul style="list-style-type: none"> sodas and sugared foods and drinks margarine fried foods mayonnaise sweets trans fats whole-fat dairy products
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portions of this information from Body For Life

Need more information? the CDC website is full of great stuff! Check it out here [Nutrition and Physical Activity Site Map](#) .

Want some recipes? [CLICK HERE!](#)

[Living Strong Fitness Training](#) can help you design a safe and effective fitness program custom tailored to your body, lifestyle, and fitness goals. The pages of the Living Strong website are filled with great info that will help you in your quest for fitness.

Visit our other pages to learn how you can become more fit, strong, shapely, and healthy. Visit [FITNESS FACTS](#), [FAT FACTS](#), [EXERCISE FACTS](#), [NUTRITION FACTS](#), [STRENGTH FACTS](#), and all of our other great resources including [GREAT ARTICLES](#).

STRENGTH FACTS: why Strength Training?

from the article at www.livingstrong.org



Research has shown that strengthening exercises are both safe and effective for women and men of all ages, including those who are not in perfect health. In fact, people with health concerns, including heart disease or arthritis, often **benefit the most from an exercise program that includes lifting weights a few times each week.**

Strength training, particularly in conjunction with regular aerobic exercise, can also have a profound impact on a person's mental and emotional health.

Benefits of Strength Training

There are numerous benefits to strength training regularly, particularly as you grow older. It can be very powerful in reducing the signs and symptoms of numerous diseases and chronic conditions, among them:

- arthritis
- diabetes
- osteoporosis
- obesity
- back pain
- depression



Arthritis Relief

Tufts University recently completed a strength-training program with older men and women with moderate to severe knee osteoarthritis. The results of this sixteen-week program showed that strength training decreased pain by 43%, increased muscle strength and general physical performance, improved the clinical signs and symptoms of the disease, and decreased disability.

The effectiveness of strength training to ease the pain of osteoarthritis was just as potent, if not more potent, as medications. Similar effects of strength training have been seen in patients with rheumatoid arthritis.



Restoration of Balance and Reduction of Falls

As people age, poor balance and flexibility contribute to falls and broken bones. These fractures can result in significant disability and, in some cases, fatal complications. Strengthening exercises, when done properly

and through the full range of motion, increase a person's flexibility and balance, which decrease the likelihood and severity of falls. One study in New Zealand in women 80 years of age and older showed a 40% reduction in falls with simple strength and balance training.

Strengthening of Bone



Post-menopausal women can lose 1-2% of their bone mass annually. Results from a study conducted at Tufts University, which were published in the *Journal of the American Medical Association* in 1994, showed that **strength training increases bone density** and reduces the risk for fractures among women aged 50-70.

Proper Weight Maintenance

Strength training is crucial to weight control, because individuals who have more muscle mass have a higher metabolic rate. Muscle is active tissue that consumes calories while stored fat uses very little energy. **Strength training can provide up to a 15% increase in metabolic rate, which is enormously helpful for weight loss and long-term weight control.**

Improved Glucose Control

More than 14 million Americans have type II diabetes—a staggering three-hundred percent increase over the past forty years—and the numbers are steadily climbing. In addition to being at greater risk for heart and renal disease, diabetes is also the leading cause of blindness in older adults. Fortunately, studies now show that lifestyle changes such as strength training have a profound impact on helping older adults manage their diabetes. In a recent study of Hispanic men and women, 16 weeks of **strength training produced dramatic improvements in glucose control** that are comparable to taking diabetes medication. Additionally, the study volunteers were stronger, gained muscle, lost body fat, had less depression, and felt much more self-confident.

Healthy State of Mind

When older adults participate in strength training programs, their self-confidence and self-esteem improve, which has a strong impact on their overall quality of life.



Strength training provides similar improvements in depression as anti-depressant medications. Currently, it is not known if this is because people feel better when they are stronger or if strength training produces a helpful

biochemical change in the brain. It is most likely a combination of the two.

Sleep Improvement

People who exercise regularly enjoy improved sleep quality. They fall asleep more quickly, sleep more deeply, awaken less often, and sleep longer. As with depression, the sleep benefits obtained as a result of strength training are comparable to treatment with medication but without the side effects or the expense.

Healthy Heart Tissue

Strength training is important for cardiac health because heart disease risk is lower when the body is leaner. One study found that **cardiac patients gained not only strength and flexibility but also aerobic capacity** when they did strength training three times a week as part of their rehabilitation program.



This and other studies have prompted the **American Heart Association to recommend strength training** as a way to reduce risk of heart disease and as a therapy for patients in cardiac rehabilitation programs.

Research and Background About Strength Training

Scientific research has shown that exercise can slow the physiological aging clock. **While aerobic exercise, such as walking, jogging, or swimming, has many excellent health benefits—it maintains the heart and lungs and increases cardiovascular fitness and endurance—it does not make your muscles strong.** Strength training does. Studies have shown that lifting weights two or three times a week increases strength by building muscle mass and bone density.

One 12-month study conducted on postmenopausal women at Tufts University demonstrated 1% gains in hip and spine bone density, 75% increases in strength and 13% increases in dynamic balance with just two days per week of progressive strength training. The control group had losses in bone, strength, and balance. Strength training programs can also have a profound effect on reducing risk for falls, which translates to fewer fractures.

However you slice it, strength training is the most productive and effective exercise that you can do. Living Strong Fitness Training has years of experience working with weight training, and can help you design a safe and effective program to meet your fitness goals.

LIVING STRONG EXERCISE FACTS

from the article at www.livingstrong.org

With all of the health and fitness information out there, and all of the money we spend on doctors, health clubs, vitamins, and diets, why is our culture in such terrible shape? Self-inflicted illness from the neglect and abuse of our bodies is an epidemic in America today. **The Center For Disease Control, Surgeon General, and virtually all of the medical and health authorities are waking up to the cold hard truth that our sedentary lifestyle is not only killing us, but has ushered in a host of health problems.** The research and authorities agree that the lowest common denominator in living a healthy life is exercise and nutrition. Without these two complimentary components, there is no chance of building sustainable health and fitness.



Research and health authorities agree that the lowest common denominator in living a healthy life is exercise and nutrition



Those that ignore their exercise and nutrition are actually creating the sickly, flabby, uncomfortable body that they end up being trapped in while they helplessly watch as their health and vitality slip away.

Those who understand and take charge of their exercise and nutrition are building a healthy body, creating health and strength, cooperating with nature to achieve their best genetic potential, and live with the enjoyment of feeling and looking their best.

Whatever your current condition, you can choose to be building fitness, or letting it slip away. Which will you choose? Its up to you alone to decide how you will live.



WHY IS EXERCISE IMPORTANT?

The human body functions best when it is muscularly active regularly, and receives the proper nutrients needed to support this muscular activity. The human body functions poorly when it is sedentary, and receives the wrong amounts and type of nutrients. **All of the systems that make up our body can support each other and function in harmony when our body is fueling and using its resources efficiently, and adapting to maximize it's potential.** (*Use it or lose it*).

(I have yet to hear of a health care professional telling their patient "*You need to eat more junk food, and get less exercise.*")



EXERCISE THEN AND NOW.....

In past generations, people were muscularly active as a matter of necessity.

Before machines made life "easy" for us, our forefathers lived by their physical activity, chased wild game, dragged it home, plowed, planted, built homes, chopped wood to heat and cook, walked, ran, lifted heavy things, performed manual labor, washed clothes by hand. Their food was scarce, whole, unprocessed. Sugar was a rarity.

Today we don't even get out of our chair to change the TV channel. We need our Garage door opener, can opener, indoor plumbing, central heat and air (instead of chopped wood), automobiles, and of course absolutely must have internet shopping. We'll even drive up and down the mall parking lot for ten minutes to get the best parking spot to avoid walking an extra 20 feet.

Modern life has made our food plentiful, highly processed, loaded with unnecessary sugar, served in huge quantities, and consumed for it's flavor value instead of it's fuel and nutrition value.

The term "*exercise*" had little meaning in years past, because exercise was an unspoken requirement in everyday life. **Our forefathers would never have imagined that one day people would actually buy special equipment for the sole purpose of exercise**, and actually run or lift heavy objects just for the exercise value of the activity. What a strange concept to someone that had to exercise all day everyday just to survive.



It is a fact that our body needs regular, intense exercise to function properly.

Most of us do not work at physically demanding manual labor jobs, and therefore do not get the proper exercise from our daily activities. So we must find the most effective and efficient way to provide our body the exercise it needs. Check out our article on [strength training](#) and our [great articles](#) link pages for more information on the best exercises.

Living Strong Fitness Training can help you design an effective set of exercises specifically for your physical condition. A carefully tailored exercise program is the best way to guarantee that you will get safe and lifelong benefit from your exercise.

SOME BENEFITS OF EXERCISE.....

Stronger heart	Increased heart stroke volume	Decreased resting heart rate
Lower blood pressure	Increased cardiac output	Increased caloric expenditure
Injury reduction	Increased cholesterol ratio	Increased metabolism
Increased motor performance	Decreased stress and depression	Increased ability to metabolize fat
Improved sleep	Stronger bones	Improved immune function
Decreased body fat	Improved glucose tolerance	Improved quality of life
Increased ability to perform work with less fatigue (increased functional ability)	Increased endurance, stamina, energy	Increased strength of connective tissue (muscles, tendons, ligaments)

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HOW TO GET FIT

from the article at www.livingstrong.org

WHAT IS THE BEST WAY TO START AN EXERCISE PROGRAM?

(Visit the numbered links at www.livingstrong.org to provide the context needed to get the most out of this page.)

Getting fit is really pretty simple to understand. **You have built the body that you currently have by programming it to adapt to your habits and lifestyle.** If you are flabby and out of shape, you have programmed your body to be that way.

Don't spend the rest of your life trapped in an unfit body!

What is needed is to **reestablish a proper balance of caloric intake and restore healthy lifestyle activities that will encourage the body to adapt in a positive way.**

This is precisely what fitness training does for you. A well designed fitness training plan will include the nutrition, exercise, and lifestyle habits that will absolutely reverse the negative adaptation of your body, get rid of the excess fat, add shapely firm muscle, restore your body's defense and recovery potential, and encourage your body to continually adapt in a fit and healthy direction.

The body functions best when it is muscularly active regularly, and receives the proper nutrients needed to support this function. All of the systems that make up our body will support each other and function in harmony when our body is busy adapting to maximize it's potential. (Use it or lose it).



The four elements of living a fit and healthy life are:

1. **Appropriate Exercise**
2. **Appropriate Nutrition**
3. **Appropriate Hydration**
4. **Appropriate Rest and Recovery**

These are not negotiable. You cannot be healthy or fit if you neglect any of these four. Addressing these four fitness essentials in detail, and then applying them to your situation is the goal of a well designed fitness program. **Finding balance in these four areas is the epicenter of establishing health and fitness.**

Appropriate nutrition, hydration, and rest are essential, but their role is one of support for the exercise. **The best food in the world cannot by itself make you healthy,** because nutrition is only the source of fuel that our body burns, and is just one component of your fitness. **The way your body uses the fuel (nutrients) will determine what benefit you get from your nutrition.** How you *burn* the fuel is absolutely the most important consideration in the equation. You need appropriate nutrition, rest and hydration, because they support your activities. **Appropriate exercise, muscularly active exercise (like strength training) is the catalyst that animates the whole process and makes the nutrition, hydration and rest provide the synergy for your body to function well.**

Here is a quick summary of the main ingredients needed to succeed in shaping up, trimming down, and getting fit:

- **Proper Strength training 3 times per week, 30 minutes on alternate days.**
- **Light aerobic exercise 3 times per week, 30 minutes on alternate days.**
- **Eat slightly fewer calories than you are burning.**
- **Cut fried, sugared, processed fats, and processed foods. Increase protein intake.**
- **Drink about one gallon of water per day.**
- **Sleep at least eight hours per night.**

Apply these six things consistently and correctly, you will be on your road to a great body and optimum health. When you learn to *fine-tune* each of these, and synchronize your body with just the right combination of these, you will get incredible results.

Remember, *Living Strong* can help you design the most efficient exercise and nutrition plan specifically for your current physical condition, and show you how to get optimum fitness results in minimum time.

Appropriate exercise is the most difficult component of a working fitness program to understand and apply, because everybody has a unique set of circumstances, and unique genetics. General principles of exercise do apply to all, but your individual success depends on your individual application of those principles. **You have to know what exercise to do, and then do it correctly and safely to get results.**

The balance of this article will provide an overview of the factors involved in starting an exercise program. **Remember that in order for the exercise to be a benefit, your nutrition, hydration, and recovery must be synchronized with your exercise.**

MAKING A COMMITMENT

You have taken the important first step on the path to physical fitness by seeking information. The next step is to decide that you are going to be physically fit. This article is designed to help you reach that decision and your goal.

The decision to carry out a physical fitness program cannot be taken lightly. It requires a lifelong commitment of time and effort. **Exercise must become one of those things that you do without question, like bathing and brushing your teeth.** Unless you are convinced of the benefits of fitness and the risks of unfitness, you will not succeed.

Patience is essential. Don't try to do too much too soon and don't quit before you have a chance to experience the rewards of improved fitness. You can't regain in a few days or weeks what you have lost in years of sedentary living, but you can get it back if your persevere. And the prize is worth the price.

This guide is intended for the average healthy adult. It tells you what your goals should be and how often, how long and how hard you must exercise to achieve them. It also includes information that will make your workouts easier, safer and more satisfying. The rest is up to you.

In the Living Strong website pages you will find basic information about beginning and

maintaining a personal physical fitness program. **Living Strong can help put this information to work for you with [professional guidance](#) and a safe personal training plan custom tailored to your fitness level and goals.**

CHECKING YOUR HEALTH

If you're under 35 and in good health, you may not need to see a doctor before beginning an exercise program. But if you are over 35 and have been inactive for several years, you should consult your physician, who may or may not recommend a graded exercise test. Other conditions that indicate a need for medical clearance are:

- High blood pressure.
- Heart trouble.
- Family history of early stroke or heart attack deaths.
- Frequent dizzy spells.
- Extreme breathlessness after mild exertion.
- Arthritis or other bone problems.
- Severe muscular, ligament or tendon problems.
- Other known or suspected disease.



Vigorous exercise involves minimal health risks for persons in good health or those following a doctor's advice. Far greater risks are presented by habitual inactivity and obesity.

(Living Strong Fitness Training will do a complete physical assessment and medical history profile with all new clients, to help establish the safest and most effective exercises for each individual.)

DEFINING FITNESS

Physical fitness is to the human body what fine tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us look, feel and do our best. More specifically, it is:

"The ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure- time activities and meeting emergency demands. It is the ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for good health and well-being."

Physical fitness involves the performance of the heart and lungs, and the muscles of the body. And, since what we do with our bodies also affects what we can do with our minds, fitness influences to some degree qualities such as mental alertness and emotional stability.

As you undertake your fitness program, it's important to remember that fitness is an individual quality that varies from person to person. It is influenced by age, sex, heredity, personal habits, exercise and eating practices. You can't do anything about the first three factors. However, it is within your power to change and improve the others where needed.

KNOWING THE BASICS

Physical fitness is most easily understood by examining its components, or "parts." There is widespread agreement that these four components are basic:

Cardiorespiratory Endurance - the ability to deliver oxygen and nutrients to tissues, and to remove wastes, over sustained periods of time. Long runs and swims are among the methods employed in measuring this component.

Muscular Strength - the ability of a muscle to exert force for a brief period of time. Upper-body strength, for example, can be measured by various weightlifting exercises.

Muscular Endurance - the ability of a muscle, or a group of muscles, to sustain repeated contractions or to continue applying force against a fixed object. Pushups are often used to test endurance of arm and shoulder muscles.

Flexibility - the ability to move joints and use muscles through their full range of motion. The sit-and-reach test is a good measure of flexibility of the lower back and backs of the upper legs.

BODY COMPOSITION is often considered a component of fitness. It refers to the makeup of the body in terms of lean mass (muscle, bone, vital tissue and organs) and fat mass. An optimal ratio of fat to lean mass is an indication of fitness, and the right types of exercises will help you decrease body fat and increase or maintain muscle mass.

A WORKOUT SCHEDULE

How often, how long and how hard you exercise, and what kinds of exercises you do should be determined by what you are trying to accomplish. Your goals, your present fitness level, age, health, skills, interest and convenience are among the factors you should consider. For example, an athlete training for high-level competition would follow a different program than a person whose goals are good health and the ability to meet work and recreational needs.

Your exercise program should include something from each of the four basic fitness components described previously. Each workout should begin with a warmup and end with a cooldown. As a general rule, space your workouts throughout the week and avoid consecutive days of hard exercise.



Here are the amounts of activity necessary for the average healthy person to maintain a minimum level of overall fitness. Included are some of the popular exercises for each category.

WARMUP - 5-10 minutes of exercise such as walking, slow jogging, knee lifts, arm circles or trunk rotations. Low intensity movements that simulate movements to be used in the activity can also be included in the warmup.

MUSCULAR STRENGTH - a minimum of two 20-minute sessions per week that include exercises for all the major muscle groups. **Lifting weights is the most effective way to increase strength, and a most productive and beneficial form of exercise.**

MUSCULAR ENDURANCE - 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.

CARDIORESPIRATORY ENDURANCE - at least three 20-minute bouts of continuous aerobic (activity requiring oxygen) rhythmic exercise each week. Popular aerobic conditioning activities include brisk walking, jogging, swimming, cycling, rope-jumping,

rowing, cross-country skiing, and some continuous action games like racquetball and handball.

FLEXIBILITY - 10-12 minutes of daily stretching exercises performed slowly, without a bouncing motion. This can be included after a warmup or during a cooldown.

COOL DOWN - a minimum of 5-10 minutes of slow walking, low-level exercise, combined with stretching.

A MATTER OF PRINCIPLE

The keys to selecting the right kinds of exercises for developing and maintaining each of the basic components of fitness are found in these principles:

SPECIFICITY - pick the right kind of activities to affect each component. Strength training results in specific strength changes. Also, train for the specific activity you're interested in. For example, optimal swimming performance is best achieved when the muscles involved in swimming are trained for the movements required. It does not necessarily follow that a good runner is a good swimmer.

OVERLOAD - work hard enough, at levels that are vigorous and long enough to overload your body above its resting level, to bring about improvement.

REGULARITY - you can't hoard physical fitness. At least three balanced workouts a week are necessary to maintain a desirable level of fitness.

PROGRESSION - increase the intensity, frequency and/or duration of activity over periods of time in order to improve.

Some activities can be used to fulfill more than one of your basic exercise requirements. For example, in addition to increasing cardiorespiratory endurance, running builds muscular endurance in the legs, and swimming develops the arm, shoulder and chest muscles. If you select the proper activities, it is possible to fit parts of your muscular endurance workout into your cardiorespiratory workout and save time.

MEASURING YOUR HEART RATE



Heart rate is widely accepted as a good method for measuring intensity during running, swimming, cycling, and other aerobic activities. Exercise that does not raise your heart rate to a certain level and keep it there for 20 minutes won't contribute significantly to cardiovascular fitness.

The heart rate you should maintain is called your target heart rate. There are several ways of arriving at this figure. One of the simplest is: maximum heart rate $(220 - \text{age}) \times 70\%$. Thus, the target heart rate for a 40 year-old would be 126.

Some methods for figuring the target rate take individual differences into consideration. Here is one of them:

- Subtract age from 220 to find maximum heart rate.
- Subtract resting heart rate (see below) from maximum heart rate to determine heart rate reserve.

- Take 70% of heart rate reserve to determine heart rate raise.
- Add heart rate raise to resting heart rate to find target rate.

Resting heart rate should be determined by taking your pulse after sitting quietly for five minutes. When checking heart rate during a workout, take your pulse within five seconds after interrupting exercise because it starts to go down once you stop moving. Count pulse for 10 seconds and multiply by six to get the per-minute rate.

CONTROLLING YOUR WEIGHT

The key to weight control is keeping energy intake (food) and energy output (physical activity) in balance. When you consume only as many calories as your body needs, your weight will usually remain constant. If you take in more calories than your body needs, you will put on excess fat. If you expend more energy than you take in you will burn excess fat.

Exercise plays an important role in weight control by increasing energy output, calling on stored calories for extra fuel. Recent studies show that not only does exercise increase metabolism during a workout, but it causes your metabolism to stay increased for a period of time after exercising, allowing you to burn more calories.

How much exercise is needed to make a difference in your weight depends on the amount and type of activity, and on how much you eat. Aerobic exercise burns body fat. A medium-sized adult would have to walk more than 30 miles to burn up 3,500 calories, the equivalent of one pound of fat. Although that may seem like a lot, you don't have to walk the 30 miles all at once. Walking a mile a day for 30 days will achieve the same result, providing you don't increase your food intake to negate the effects of walking. For a more in-depth study of this topic, read [The Truth About Exercise Intensity and Weight Loss](#) .

If you consume 100 calories a day more than your body needs, you will gain approximately 10 pounds in a year. You could take that weight off, or keep it off, by doing 30 minutes of moderate exercise daily. The combination of exercise and diet offers the most flexible and effective approach to weight control.

Since muscle tissue weighs more than fat tissue, and exercise develops muscle to a certain degree, your bathroom scale won't necessarily tell you whether or not you are "fat." Well-muscled individuals, with relatively little body fat, invariably are "overweight" according to standard weight charts. If you are doing a regular program of strength training, your muscles will increase in weight, and possibly your overall weight will increase. Body composition is a better indicator of your condition than body weight.

Lack of physical activity causes muscles to get soft, and if food intake is not decreased, added body weight is almost always fat. Once-active people, who continue to eat as they always have after settling into sedentary lifestyles, tend to suffer from "creeping obesity."

CLOTHING

All exercise clothing should be loose-fitting to permit freedom of movement, and should make the wearer feel comfortable and self-assured.

As a general rule, you should wear lighter clothes than temperatures might indicate. Exercise generates great amounts of body heat. Light-colored clothing that reflects the sun's rays is cooler in the summer,

and dark clothes are warmer in winter. When the weather is very cold, it's better to wear several layers of light clothing than one or two heavy layers. The extra layers help trap heat, and it's easy to shed one of them if you become too warm.



In cold weather, and in hot, sunny weather, it's a good idea to wear something on your head. Wool watch or ski caps are recommended for winter wear, and some form of tennis or sailor's hat that provides shade and can be soaked in water is good for summer.

Never wear rubberized or plastic clothing, such garments interfere with the evaporation of perspiration and can cause body temperature to rise to dangerous levels.

The most important item of equipment for the runner is a pair of sturdy, properly-fitting running shoes. Training shoes with heavy, cushioned soles and arch supports are preferable to flimsy sneakers and light racing flats.

WHEN TO EXERCISE

The hour just before the evening meal is a popular time for exercise. The late afternoon workout provides a welcome change of pace at the end of the work day and helps dissolve the day's worries and tensions.

Another popular time to work out is early morning, before the work day begins. Advocates of the early start say it makes them more alert and energetic on the job.

Among the factors you should consider in developing your workout schedule are personal preference, job and family responsibilities, availability of exercise facilities and weather. It's important to schedule your workouts for a time when there is little chance that you will have to cancel or interrupt them because of other demands on your time.

You should not exercise strenuously during extremely hot, humid weather or within two hours after eating. Heat and/or digestion both make heavy demands on the circulatory system, and in combination with exercise can be an overtaxing double load.

For more help with this subject, be sure to visit www.livingstrong.org .

Name: _____

Height - inches: _____

Age: _____

Birth date: _____

Gender: _____

Measurements:

Start date: _____

End date: _____

Difference:

Neck	_____	-	_____	=	_____
Chest	_____	-	_____	=	_____
Right Upper Arm	_____	-	_____	=	x2= _____
Right Fore Arm	_____	-	_____	=	x2= _____
Waist	_____	-	_____	=	_____
Abdomen	_____	-	_____	=	_____
Hips	_____	-	_____	=	_____
Right Thigh	_____	-	_____	=	x2= _____
Right Calf	_____	-	_____	=	x2= _____
			Total inches lost		<input type="text"/>
Circumference					
Body Fat % estimate	_____	-	_____	=	_____

SUPRAILIAC (mm)	_____	-	_____	=	_____
Caliper Body Fat % estimate	_____	-	_____	=	_____
(mm difference/original reading)	Total Reduction of body fat in %				<input type="text"/>

BioImpedance Body Fat % estimate	_____	-	_____	=	_____
B.M.I.	_____	-	_____	=	_____

body weight	_____	-	_____	=	_____
Estimated Body Fat %	_____	-	_____	=	_____
fat pounds	_____	-	_____	=	_____
lean body lbs.	_____	-	_____	=	_____

Results Summary

Number of weeks analyzed:	<input type="text"/>	Inches lost:	<input type="text"/>
Food compliance %	_____	Fat reduction %	<input type="text"/>
Exercise compliance %	_____	Fat lost lbs	_____
Water compliance %	_____	Muscle gain lbs	_____
Rest compliance %	_____	Strength gain %	_____
Average compliance %	<input type="text"/>	Weight loss lbs	_____
(fat lost + muscle gained)	Total health and fitness turn-around		<input type="text"/>
(muscle gain x 75)	Total Metabolism change		<input type="text"/>
	Actual age change		_____

Fitness Training, exercise, nutrition, lifestyle classes Waiver and Assumption of Risk

Bring this signed release to the first class

Waiver, Informed Consent, and Covenant Not to Sue: I have volunteered to participate in a program of physical exercise, nutrition, and lifestyle change under the direction of Living Strong Fitness Training which will include, but may not be limited to, weight and/or resistance training. In consideration of Living Strong Fitness Training's agreement to instruct, assist, and train me, I do here and forever release and discharge and hereby hold harmless Living Strong Fitness Training and/or Brian Konzelman and/or instructors from any and all claims, demands, damages, rights of action or causes of action, present or future, arising out of or connected with my participation in this or any other instruction and/or exercise program including any injuries resulting therefrom.

Assumption of Risk: I acknowledge and agree that I assume the risks associated with any and all activities and/or exercises in which I participate. I recognize that there could be dangers inherent in exercise for some individuals. I acknowledge that the possibility of certain unusual physical changes during exercise does exist, including abnormal blood pressure; fainting; disorders in heartbeat; heart attack; and, in rare instances, death. I understand that as a result of my participation in any exercise, nutrition, and/or lifestyle change program, it is possible that I could suffer an injury or physical disorder that could result in my becoming partially or totally disabled and incapable of performing any gainful employment or having a normal social life.

I recognize that an examination by a physician should be obtained prior to involvement in any exercise program. If I have chosen not to obtain a physician's permission prior to beginning this exercise, nutrition, and/or lifestyle change program I hereby agree that I am doing so at my own risk.

I understand that results are individual and may vary. I acknowledge and agree that no warranties or representations have been made to me regarding the results I will achieve from this program.

THIS WAIVER AND RELEASE OF LIABILITY INCLUDES, WITHOUT LIMITATION, INJURIES WHICH MAY OCCUR AS A RESULT OF (1) EQUIPMENT THAT MAY MALFUNCTION OR BREAK (2) ANY SLIP, FALL, DROPPING OF EQUIPMENT AND (3) OUR NEGLIGENT INSTRUCTION OR SUPERVISION. I ACKNOWLEDGE THAT I HAVE THOROUGHLY READ THIS WAIVER AND RELEASE AND FULLY UNDERSTAND THAT IT IS A RELEASE OF LIABILITY. BY SIGNING THIS DOCUMENT, I AM WAIVING ANY RIGHT I OR MY SUCCESSORS MIGHT HAVE TO BRING A LEGAL ACTION OR ASSERT A CLAIM AGAINST LIVING STRONG FITNESS TRAINING and/or BRIAN KONZELMAN OR FOR YOUR NEGLIGENCE OR THAT OF YOUR EMPLOYEES, AGENTS, OR CONTRACTORS.

Date
Print name
Email address
Phone
Vocation
Signature