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Beginner's Health and Fitness Guide

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PART I: OPENING Q&A AND GENERAL MYTH-BUSTING

I don't want to become some huge bodybuilder freak, I just want to get in better shape and look better. Should I read this?

That's what this guide is for. It's a basic guide to diet & fitness for beginners who want to get in better shape. If you want to look better, improve your overall athletic ability, or just improve your health, read on. If you're a bodybuilder or athlete, you probably already know most of this.

I'm a female; does any of this apply to me?

All of it applies, actually. With very few exceptions, the principles of diet & exercise are the same for men and women. And don't worry about becoming a manly she-beast from lifting weights; most women can't gain muscle at anywhere near the rate of men, no matter how hard they lift. Remember, female bodybuilders are lifting weights constantly, eating twice as much as you and taking male hormones. Getting huge doesn't just happen to men, let alone women.

A word of warning: many female fitness magazines tend to be really idiotic and gimmicky, fixating on things like "spot reduction" that were disproved 50 years ago, and trying to sell whatever their advertisers are pushing that month. If the magazine shows a skinny bimbo doing curls with 5 lb dumbbells, you should probably throw it in the trash.

There are a few female-specific notes in this guide, but they are rare, because the differences are almost always insignificant for the purposes of promoting general fitness.

There is all this contradictory advice! I'm so confused!

The methods for improving fitness are actually very well understood, and, aside from minor matters of detail, have changed very little in the last 30 years or so. Most of the seeming contradictions in fitness advice are really just hairsplitting arguments over matters of detail that need not concern the beginner, or are due to hucksters peddling utter garbage. There is almost universal consensus among knowledgeable people about what works and what doesn't. That's what this guide is based on.

There are two basic considerations: diet and exercise. The same advice for each applies to almost everyone. The exceptions are at the extremes, e.g. the very obese needing to lose immense amounts of weight to stay alive, and the people pursuing extreme levels of performance or muscular development. Both of those are beyond the scope of this guide.

Can't I just exercise a fat part of my body to make the fat go away? Can I just do a bunch of sit-ups to make my gut go away?

No. So-called "spot reduction" is a myth. You can't exercise one part of your body to make fat in that part of the body go away; it doesn't work that way. You can only reduce your overall body fat, not make it go away in a specific area.

I want to get abs, what workout should I do?

Having visible abs has very little to do with doing abdominal exercises, and a whole lot to do with how much body fat you have. If your abs are covered in a layer of fat, any ab exercises you do are made virtually redundant. To get abs, you need to get your body fat down with diet and exercise. And ab exercises won't make fat over your belly go away, either (see the spot reduction myth above). Although abdominal exercises rarely make a difference in how you look, though they can be beneficial for other reasons. If you do ab exercises, do them holding a heavy plate and in the 8-12 repetition range.

I have an injury/disability/chronic health problem. Should I follow this guide?

Anyone with a diagnosed medical condition should follow their doctor's advice on what activity level is safe for them. If that doesn't match what this guide says to do, don't follow this guide. The dietary advice here is pretty universal, but there may be specific medical conditions that call for different diets. Don't ignore qualified medical advice based on something you read here. With that being said, most General Practitioners are not experts on health and fitness. Consult a nutritionist or exercise/sport scientist for the best advice.

PART II: MINDSET

There can be many mental and emotional barriers to getting in better shape. Some are fairly extreme and beyond the scope of this guide, such as anorexia or bulimia. However, the ones that get most people in trouble are very simple, and are generally not that hard to overcome once they are recognized.

The most important aspect is not the specifics of a program or the details of a diet (though those are obviously important), but how you look at the situation. I don't mean in the sense that your mind is more powerful than what you do in the gym, although you'll need to have some self-discipline and commitment for obvious reasons. The main problem is that most people look at fitness in a warped, incorrect way, and that's why they flunk, not because it has to be so hard in and of itself. What I mean is that you can't look at diet or exercise as a short-term ordeal that ends at some point when you aren't out of shape anymore. They must be seen as long-term lifestyle changes. That sounds kind of scary, but is actually not a big deal when you think about it.

Consider this: when people start dieting and exercise, they are often extremists about it. They try to work out 2 times a day, 7 days a week, or go on some crazy diet where they eat 500 calories composed entirely of herbal tea and tree bark. They hurt themselves or get sick or just hate life generally, and they fail. Then they get discouraged and get fat and out of shape again.

Was that a failure of willpower? Sort of, but the main problem is that the whole approach is wrong. You don't get in shape by killing yourself. You get in shape, and more importantly stay in shape, by accumulating significant, but livable, improvements to your lifestyle over time, and building on that. *Not* by going through some horrible ordeal requiring Olympian willpower.

Eating healthy has to just become how you eat most of the time. Exercise has to become a habitual thing you do every day or two, like mowing the lawn or taking out the trash. If you do just a little better all the time, but really stick to it, you can accumulate big gains very fast, and improve upon them over the long term. Once you start seeing improvements without having to kill yourself, it becomes very easy to keep on improving.

Another thing to consider is that many people find it hard to get into the shape they want because they have bad habits, especially when it comes to diet. Some of these are obvious, but many of them are not. Education about diet and exercise is very spotty, and the media (and even fitness magazines) often report nonsense that just adds to the confusion. Part of the purpose of this guide is to educate you enough to be able to identify your bad habits in the first place, and not just stop them, but replace them with habits that are positive. Habits are hard to break, but the rewards for replacing bad habits with good ones are immense and long-lasting. After a short while, you won't feel those cravings for sweets or soda. You'll start to feel anxious if you miss a gym day. You'll think "How did I live like this? Why did I spend those years being so unhealthy? This is so easy!" It is. Just read on.

PART III: DIET

Introduction to diet

Diet is probably the most important single factor in your health, body composition and overall appearance.

Food determines how big you are. If you consume more calories than you expend, you will get bigger. If you consume fewer calories than you expend, you will get smaller. If you meet your maintenance needs, you will stay the same. Regardless of your metabolism, body composition,

genetics, or whatever, your body *must* obey the laws of physics and biological imperatives. Now, your calorie needs can change over time. But in the end, it really is calories in and calories out. Everything else is just fiddling around the edges of this basic fact.

You can't get big if you don't eat big. That goes for muscle, fat, whatever. You can lift huge weights 10,000 times a day, and if you don't eat more calories than you expend, you won't gain a milligram of mass. Conversely, if you burn 10,000 calories a day and eat 11,000 calories a day you will gain weight. Exercise and food selection plays a big role in what that extra weight becomes (fat or muscle), but the weight comes from food.

With that out of the way, what should you eat?

General dietary advice

Before going into the nitty-gritty of calorie counting and so forth, you can improve your health a great deal by changing the staples of your diet and your patterns of eating. This sounds like a big deal, but is actually pretty simple and relatively painless. I'm not going to tell you to eat tree bark and fungus, for instance. That kind of extremist dieting is for morons.

First, the obvious stuff: fast food and soda. Cut it out.

Fast food is almost always extremely unhealthy, high in saturated fat and trans fat, very calorie-dense, and should thus be avoided by everyone. The occasional burger is harmless in the grand scheme of things, but if fast food is a staple of your diet, cut it out.

Soda is the other thing that should be massively reduced by almost everyone. Soda is extremely calorie-dense, has no nutritional value, and for various reasons, you shouldn't be dumping massive amounts of simple sugars into your system. There is debate over if diet soda is neutral or still bad for you; my suggestion is to limit it, too. Drink water instead, with the occasional coffee or tea for variety. After a few months of this, your soda cravings will slowly dissipate.

For those with a sweet tooth, all kinds of sweets are calorie monsters. But the worst of the worst may be ice cream, especially premium ice creams - a pint might give you a few days worth of saturated fat and half the calories you should be taking in. You don't need to never eat something sweet again - that's ludicrous. Just eat it rarely and in smaller amounts.

Finally, be aware that many "frappuchino" coffee beverages are made almost entirely of dairy fat and syrup, and can have absurd amounts of calories. Brewed tea and coffee are almost calorie-free, and a packet of sugar only adds about 20 calories, but some of these blended "coffee" things have on the order of 400 calories.

Many people make the first steps towards weight loss just by cutting out soda and dropping the Big Mac content of their diet. Aside from being made of unhealthy ingredients, fast food and soda are so awful because they make it easy to ingest immense calories without being especially aware that you're doing it. I'm not telling you that you need to abandon everything you like forever. You just can't have obviously unhealthy foods be a main component of your diet. Having a *reasonably-sized* portion of something "unhealthy" that you really like 1-2 times a week is not a problem *if the rest of your diet is in order*. But for too many people, unhealthy foods *are* their diet.

Macronutrients and more

Macronutrients are just things like carbohydrates, fats and proteins. All are necessary, and none are evil *per se*. To summarize:

Carbohydrates ("carbs"). Despite what you may have heard, these are not evil. They are a necessary source of energy for your body. The problem is that people over-consume certain sources of carbohydrates, most notably simple sugars from soda and candy, and starches from white bread. If you have to cut down on one macronutrient, cut down on carbohydrates. People in Western cultures consume far too many carbohydrates on average.

Proteins. These are necessary for your body to maintain its muscles, repair damage to them, and generally hold itself together. Most people get enough protein, though an intense exercise program may call for eating more for optimal results. If you cannot manage to take enough protein into your diet, protein powder may be the key. **TrueProtein** sells among the cheapest and also highest quality protein powders (you can also use the code LMR104 when checking out for an extra 5-10% off). Optimum Nutrition is another well-recommended powder.

Fats. Fats are not evil, either. Eating *dietary* fat does not mean that *body* fat will instantly appear on your gut or ass; your body doesn't work that way. Fats perform a variety of necessary functions. The problem is that people over-consume saturated fats and trans fats, which raise LDL ("bad") cholesterol and lower HDL ("good") cholesterol, and under-consume healthy fats like monounsaturated fats (found in high concentrations in olive oil

and canola oil) and Omega-3 fatty acids (found in fish, flax seed oil and other sources). Fats also have more calories ounce-for-ounce than carbohydrates and proteins, making very high fat foods astoundingly calorie-dense.

There is some disagreement over what the ideal ratio of carbohydrate to fats to protein in a person's diet should be. In fact, [one recent study](#) is now showing that this ratio matters much less than previously thought. For most people, something in the neighborhood of 40% carbohydrate calories/30% protein calories/30% fat calories would be about the right ballpark, with approximately 1/3 of your fat calories coming from each type of fat (saturated, polyunsaturated, and monounsaturated). The general population skews towards lower protein, and more carbohydrates and fat, and more importantly tend to get their carbs and proteins from unhealthy sources.

Alcohol. Technically a macronutrient, though most people don't think of it that way. Alcohol itself has calories, and some alcoholic drinks are very calorie-dense due to their sugar content. If there's anything like a useless source of calories, alcohol is it. Alcohol consumption has been consistently shown to result in sustained, significant decreases in testosterone and growth hormone levels. In addition, it also directly inhibits how the body processes proteins. If you're trying to build muscle, it is best to cut down on alcohol consumption.

Cholesterol: I'm including this here as a subset of fats, though technically it isn't a macronutrient. Cholesterol in food does not directly translate into high blood cholesterol for most people. For those with high cholesterol, specifically high LDL ("bad") cholesterol, focus on cutting saturated and trans fats, which contribute to cholesterol production in the liver.

Dietary fiber: This is a subset of carbohydrates, though people don't usually think of fiber that way. Dietary fiber has many health benefits, and almost everyone should eat more of it.

Water: Drink more water. Water regulates virtually every bodily process in some way. Drinking more water is a simple, virtually cost-free thing you can do to improve your overall health. Also, if you drink water, you aren't drinking calories, and will feel fuller. Finally, drinking plenty of water is essential to getting the most out of your workouts in a safe manner. The recommended amount differs from person to person ([If you've heard anything about 8 glasses a day, it's bunk](#)), but there's no danger in drinking more.

Vitamins & minerals

Micronutrients are things your body needs in small quantities, like vitamins and minerals. In general, most people do not need to heavily supplement these, provided that their diet is optimal. However, few people have an optimal diet. Furthermore, there is scientific evidence that, in some cases, supplementation can provide concrete health benefits.

The recommended daily allowance (RDA) is a reasonable baseline for most vitamins and minerals, but keep in mind that it is a minimum value for preventing nutrient deficiency, *not* the optimal amount for the best possible health or performance, and does not take into account the most up-to-date research. As a result, taking a multivitamin supplement that gives you a flat 100% RDA dose is not necessarily the best way to go, but it is a reasonable and conservative way to cover any deficiencies in your diet.

Keep in mind that men will want a multivitamin without iron, while women will want one with iron. In fact, [11% of women between the ages of 20 to 49 have an iron deficiency](#).

Since writing this guide, several people have asked me about sodium. Sodium is generally something that most don't need to be concerned about. Your body needs a small amount of sodium to function. However, an excess of sodium can cause major heart problems down the line if your kidney can't filter it fast enough. Stick to the dietary guideline of no more than 2300mg a day of sodium (see [this article](#) for more information).

One supplement that is extremely beneficial and backed up by a ton of scientific evidence is [Omega-3 fatty acids](#), most commonly supplemented through fish oil. If there is one supplement that everyone should take, this is it. Don't focus on total mg of fish oil; instead, take enough fish oil to get a total of approximately 720mg of EPA and 480mg of DHA a day.

But what if you want to go beyond that and try to get closer to "optimum" nutrition through supplements? Going deep into this subject is beyond the scope of this guide, but there are a few basic things you should keep in mind:

1. The tolerable upper level (UL) is a reasonable place to start when trying to determine the maximum amount of a vitamin you should take. That doesn't mean that you should take the UL value of every vitamin, just that if you stay below the UL, you aren't in risky territory in terms of overdose. Note that the UL is often *much* higher than the RDA.

- UL for vitamins
- UL for minerals

2. Put some thought into what you're taking, and why you're taking it. Look for scientific studies supporting the value of taking more than the RDA of a given vitamin or mineral. And don't just fixate on one study; look for a consensus among credible sources.
3. Remember, they're called *supplements* for a reason. Researching and buying supplements is not something for beginners to concentrate on. Focus on getting your diet in order first.

Keep in mind that I'm not saying you need to do any of this to be healthy or get into shape, though an Omega-3 supplement is highly recommended unless you eat fish 24/7. Other supplements are worth looking into, but are not essential by any stretch of the imagination.

Finally, if you see a supplement being promoted that you're not sure about, use the [Snake Oil](#) chart for reference. It charts popular supplements by the amount of scientific evidence backing them. The stuff you should be taking is at the very top.

Specific kinds of things you should eat

Note that the list below does not account for condiments and toppings; it just lists good food items. For instance, turkey breast is very good for you. Turkey breast covered in heavy cream sauce or deep fried in lard is not. Use your brain here.

Your dietary staples should include:

- Lean animal protein sources, including but not limited to:
 - Most turkey and chicken in general, especially if it is skinless. Turkey and chicken breasts especially.
 - Ground turkey, chicken, beef or pork.
 - Virtually all forms of fish, even the fattier fishes are very good for you. Tuna, while also good, should be eaten sparingly if you're concerned about mercury consumption.
 - More exotic-type meats, if you can find them: buffalo, ostrich, lamb, elk, venison, alligator, etc.
 - Whole eggs. [The unhealthiness of whole eggs is a myth](#); contrary to past assumptions, they have no impact on heart disease at all. The main reason for this is that cholesterol in food does not impact the actual cholesterol level in your blood; almost all your cholesterol is made in you liver, based mainly on your saturated fat and trans fat consumption.
- Whole grains, including but not limited to:
 - Whole wheat bread, bagels, rolls, etc.
 - Whole wheat pasta
 - Brown rice
 - Oatmeal
 - Whole grain breakfast cereals and muesli
- Virtually all fruits and vegetables, including beans and dry-roasted nuts.
- Healthy fats like olive oil (for sauces, dressings & low-temperature cooking) and canola oil (for high-temperature cooking), and Omega-3 rich fish oil.
- Low fat dairy products like skim milk, low fat/nonfat yogurt and reduced fat cheeses. Just be aware that some "reduced fat" cheeses are still relatively high in saturated fat.

Notes for vegetarians

Not eating meat or animal products does not guarantee that you are eating a good diet. Aside from omitting animal products, the same basic advice applies to you as to everyone else: eat a variety of foods, eat whole grains, limit your saturated fat and trans fat intake and stick to healthy oils. However, vegetarians have some other issues to consider.

Vitamin B12. This is a nutrient that vegetarian diets can be deficient in, because it is a bacterial product that is not very prevalent in vegetable matter. You will probably want to take a supplement containing B12 or soy milk fortified in B12. Lack of B12 can cause a form of anemia.

Omega-3 fatty acids, especially DHA. These are essential fatty acids that you have to make a point to get into your diet. Soybeans, walnuts,

flaxseed, pumpkin seeds, and canola oil are good sources of other essential fatty acids, but not DHA. Your best bet is probably to take a vegetarian Omega-3 supplement that specifically includes DHA as a primary ingredient. Non-vegetarians normally get a passable (though sub-optimal) amount of essential fatty acids from eggs, fish and shellfish.

Calcium. It can be more difficult to obtain enough calcium if you do not consume dairy products. Leafy green vegetables (not lame iceberg lettuce, I mean the dark green stuff), soy, almonds, oats, most beans and sesame seeds can be good alternate sources of calcium. You may want to consider a supplement containing calcium. Non-vegetarians usually get enough calcium; it is just from dairy sources high in saturated fat.

Iron. Iron is available in many plant products like whole grains, nuts and green leafy vegetables. However, iron is often not as easily absorbed from these sources as it is from sources like red meat. The good news is that adequate consumption of vitamin C, which vegetarians can easily get plenty of, greatly aids in the absorption of iron. Non-vegetarians usually get enough iron from meat, but it is usually from meats high in saturated fat.

A good mix of foods and a vegetarian multivitamin can essentially negate most of the presumed negatives of even the strictest vegetarian diet. Vegetarianism doesn't relegate you to being a scrawny noodle; there are even vegan bodybuilders. You have some additional things to consider nutritionally, but you will also tend to avoid pitfalls of non-vegetarian diets, most notably dangerously high saturated fat consumption. Note that almost all supplements are now available in vegetarian versions.

More information on vegetarian diet needs can be found at the [Vegetarian Resource Group](#).

Healthier cooking methods

The methods below are, barring any other dumb additions, generally healthy ways of cooking because they add little or no unhealthy fats.

- If it is a vegetable, eating it raw
- Steaming (especially) or boiling
- Baking, broiling, roasting without added fat
- Smoking and grilling
- Stir frying with vegetable oil

The best advice I can give is to learn how to cook so you can control your diet better. It is actually very easy to do, and is guaranteed to impress potential mates. Any number of beginner-oriented cook books can get you started. It is hard to not improve your diet just by cooking your own food; restaurant food is generally not much better than fast food, and they give you way too much of it.

Counting calories

Happily, I can skip most of the explaining, and just refer you to [FitDay](#) or [The Daily Plate](#), handy calorie counting sites that do most of the thinking for you.

Some important pointers:

Almost everyone over-estimates the calories they burn. Your early workouts feel really hard, but you probably aren't actually exerting yourself that much; your body is just over-reacting to your sudden desire to not be a lazy slug. Also, if you don't time yourself, 10 minutes can easily feel like 30 for your first few workouts. Use a watch to time your workouts, or if you have a smartphone, there are a variety of applications available. I've heard good things about [RunKeeper](#).

Almost everyone under-estimates the calories they eat. This is because the actual servings people eat do not correspond to the generic serving sizes on nutrition labels or calorie counting sites. For instance, you might eat an 8oz steak, but the standard serving size is typically something like 3 oz. This goes for almost everything, so try to get a handle on the real quantities you are consuming.

Fitday tends to grossly over-estimate lifestyle calories burned. For a realistic result, you should choose "sedentary" as your activity level. Even with sedentary checked, it's best to ignore FitDay in this department altogether. Instead, use the [Basal Metabolic Rate calculator](#).

Now that you know how to count your calories, how do you figure out how many calories you need to meet your goals? The best tool I've found for this is the [Fat Loss Calculator](#) from Scooby's Workshop. Fill in your data there, and then look at the "Daily calories to maintain weight (TDEE)" box.

Use that number to set your goal. If you'd like to lose one pound (~3500 calories) per week, subtract 500 calories from that number. If I need to eat 3000 calories a day to maintain my weight, I will lose one pound a week eating 2500 calories a day. Conversely, I will gain one pound a week eating 3500 calories a day.

If you follow the numbers exactly, there's no way to fail. That's the beauty of thermodynamics!

How often should I eat?

It doesn't matter. Although many will claim that you can speed up your metabolism by eating more meals a day, a review of pertinent studies reveals that this is not true (Source: [1](#), [2](#)). Common sense dictates that three meals a day should be fine. At the other end of the scale, if you are trying to force yourself to eat more so you can gain weight (e.g. for bodybuilding), you will probably need to eat more big meals per day just to get enough calories into your body.

Starvation is bad, OK?

Weight loss is largely a matter of reducing calories and increasing activity. So if 500 fewer calories a day than you need to maintain is good, 2000 less is better, right? Not really. Because below a certain threshold, your body thinks you are one of those starving refugees on TV, and does a bunch of things that hurt your long-term weight loss.

Read that again: starving *is a bad way to lose weight*.

Why this is so:

- Your metabolism slows down. Your body will burn fewer calories to maintain itself, and you will feel awful. This is bad for weight loss because as soon as you quit starving yourself, you'll gain weight fast because your metabolism has bottomed out.
- You will tend to lose muscle more than fat. Your body will naturally try to conserve fat and cannibalize muscle if it thinks it is outright starving. This is bad because your real goal is FAT loss, not weight loss. This is how you have people who lose 100 pounds and reach their "ideal" weight, but still look amazingly flabby. Also, losing muscle slows your metabolism down even further, amplifying the giant horrible rebound effect once you quit starving yourself.
- Your life will be a living hell. You'll eventually feel horrible, the diet will fail, and you'll binge eat and regain everything you lost, plus interest.

You want to run a clear-cut, but tolerable calorie deficit to sustain weight loss over the long term. Very obese people may be put on very low calorie diets by their doctor, but these are medically supervised and designed for people who need to lose weight *now* or suffer severe health problems. Be safe and stick to 500 fewer calories a day than you burn, which is the equivalent of one pound lost per week.

More info on bad dieting:

- [ExRx - Why Low Calorie Diets Fail](#)
- [T-Nation -Dieting Disasters](#)

Female nutrition

Women's nutrition is about 99% the same as men's. Some **exceptions** to note:

- It goes without saying that you need fewer calories than the typical man of your height.
- Make sure you are getting enough iron. Iron deficiency anemia is very common in young women. Be aware that a woman's RDA for iron is 50% higher than that for men (15mg vs 10mg), and USRDA numbers should generally be considered bare-minimums to prevent malnutrition, not ideal targets for optimum performance.
- It is generally accepted that women need more calcium and vitamin D, because they are more prone to osteoporosis.
- Folic acid is a highly recommended supplement for pregnant women.

PART IV: EXERCISE

Introduction to exercise

After all that talk about the importance of diet, why exercise? Because, while it isn't as important as diet, it is still pretty hugely important to your overall health and fitness.

- Exercise determines HOW you gain or lose weight, and your body composition generally. You can diet down to, say, 120 pounds. But do you want to be 120 pounds of sleek, sexy muscle, or 120 pounds of gross, flabby loser? Exercise largely dictates the outcome.
- Exercise burns calories, which makes it easier to lose weight in conjunction with diet.
- Exercise promotes strength, endurance, and resistance to injury and illness, all of which are pretty great in and of themselves.

So exercise makes it easier to lose weight, and plays a big role in the composition of your body. There are two main kinds of exercise, cardiovascular (aka cardio, aerobic, etc.) and weight lifting (aka weights, lifting, resistance training, etc.)

Cardio: Any type of exercise that sustains an elevated heart rate consistently for a long period of time, such as running, cycling, or elliptical machine

Weight lifting: Pretty self explanatory, you push around heavy weights.

Cardio vs. weights

For most people, meeting their fitness goals requires that they do some of both, not one or the other.

I'm going to start with the case for weight lifting, because it seems to have the most misconceptions associated with it.

Are you trying to lose weight? Lift weights. Lifting burns tons of calories, and lifting weights while dieting will cause you to retain more muscle and lose more fat than just diet and/or cardio. Because the name of the game when it comes to not looking awful is FAT LOSS, not weight loss. Do you want to be that guy who loses lots of weight and still looks flabby and useless? Of course not.

Are you just trying to "tone up"? Lift weights. "Toning" is kind of a nonsense term, because you don't actually "tone" anything. You can only lose fat and gain muscle, and lifting weights helps you do both, by burning calories and promoting muscle growth. Like I said before, you get huge by eating huge, not lifting weights; lifting just determines how much of your weight is muscle vs. fat.

Are you a woman? Lift weights, because I already explained why lifting won't turn you into a man, and all the other benefits still apply to you. And if you are a 1 in 1,000,000 woman who can pack on muscle mass like a man, just stop working out as hard and it will go away.

Lifting weights also makes you stronger, less injury prone and promotes stronger bones and looking better naked. It speeds up your metabolism a bit and makes you healthier in general.

But what about cardio? For one thing, it burns lots of calories. But cardio is also good for everyone because it improves your overall endurance and ability to exert yourself over an extended period. It promotes cardiovascular health and contributes to increased bone density. Basically, your ability to perform pretty much any kind of physical activity is helped by being in good cardiovascular health, and it makes it less likely that you will eventually die from your heart exploding.

My suggestion is to alternate weights and cardio, for instance doing 3 days of weights, 2 days of cardio, and taking the other 2 days off. Doing both on the same day tends to cause one or the other to suffer from reduced effort, and generally burns people out.

What cardio should I do?

Pick one. Seriously, it really doesn't matter, as long as you stick to it. Work up to 30 minutes of it at a time, and do it fast enough that you're breathing hard and working up a sweat. From there, constantly try to increase the intensity of your workout. This can be done in a number of ways:

- For running and biking, increase the distance covered
- For treadmills, increase the duration or speed
- For exercise bikes and elliptical machines, increase the duration or resistance setting

Always start with a warm-up where you spend a few minutes working out at low intensity, and then gradually work up to full speed and/or resistance. This will make you feel better during the workout, and reduce the chance of injury.

An example of an excellent starting cardio plan is the "Couch to 5k" plan, which starts from couch potato level and will transform you into being able to run a 5K without stopping in just two months.

If you have bad joints, look at swimming or an elliptical machine, or biking (real or stationary). These will let you get a serious workout without pounding your joints to bits.

Lifting weights - recognizing a good program

There are many good weightlifting workout programs out there. Later on, I'm going to list several examples of them. It really does not matter which ones you pick, provided that you do them properly. You will notice that the good ones all have several things in common.

First, they are based almost entirely on compound movements. Compound movements are simply lifts that involve the movement of 2 or more different joints. For instance, a bicep curl only involves one joint (the elbow). A bench press involves two kinds of joints (elbows and shoulders). Compound is much better than isolation (1 joint), especially for beginners, for several reasons.

- They do a much better job of stimulating overall muscle growth and development than isolation movements.
- They allow you to work out more efficiently. You can hit every major muscle group with a small number of exercises.
- They more closely resemble ways you will exert your body in real life. They are better at producing practical, useful strength.

Examples of compound movements include:

- Squat
- Deadlift
- Bench press
- Military/overhead press
- Bent over rows
- Dips
- Chin-ups/pull-ups
- Clean & jerk

Isolation movements aren't evil or worthless, but they are a poor choice for beginners interested in overall muscular development.

Second, related to the first, good programs work out the entire body. You will never get the results you want just doing your arms or chest; it doesn't work that way.

Third, good workout programs make you move a substantial amount of weight. Doing some girly program where you do a huge number of repetitions with tiny weights won't do you much good (including if you are, in fact, a girl). To stimulate muscle growth at the expense of just carrying fat around, you have to place a substantial load on the muscle. That means using enough weight that you can only do 5-10 repetitions of a compound lift before needing a rest. The exact number of repetitions or sets you do isn't important, but you can't get results without placing a real load on your muscles.

Fourth, good programs have you using barbells and/or dumbbells, not machines. Machine exercises are inferior to using free weights in almost every situation. Any workout program that is based around using machines is almost guaranteed to be stupid and mostly a waste of your time. One exception you might consider is a lat pulldown machine if you aren't strong enough to do chin-ups and don't have an assisted chin-up machine available, but even here the real exercise is markedly superior. Further reading: [Why weight machines are bad for almost everyone](#).

Lifting weights - general guidance for following any program

Track your progress in writing! I can't emphasize this enough. Write down how much you lifted & how many times you lifted it every session. You won't have any sense of concrete progress if you don't, and you'll lose track of your lifts and screw things up. Every week, focus on beating your numbers from last week. If you cannot do this, it's time to analyze your diet and your sleep habits, because something is wrong.

Don't be afraid of barbells or dumbbells. The key to safely using them is to focus on good technique (form), and to increase the weight you are using gradually. Only do the exercise for as long as you can do the exercise properly and control the weight. If you can't control the weight, reduce the weight until you can.

Do a good warm-up. A few minutes of light cardio is a good general warm-up. Then before you do each exercise, do 8-12 reps with very light weight. Many weight lifting workouts have a built-in warm-up, where you start with a light weight and then increase the weight gradually with each set.

It is not important what weight you start with, but where you end up. Be conservative at first, but from then on constantly try to add weight or increase the number of repetitions for every exercise from workout to workout. If you do this, you'll be working very hard soon enough. 2.5% more weight per week is a realistic goal, and at first you may gain more like 5%/week. That sounds small, but it adds up to a huge strength improvement in a year.

You have to push yourself to get results, but don't be stupid. Soreness and stiffness are normal; genuine pain is not. If you hurt yourself, give yourself plenty of time to 100% recover from an injury before you start again, or you'll just re-injure yourself.

Most barbell exercises can be substituted with their dumbbell equivalent, or vice versa, and achieve the same training effect. As a beginner, you may find it easier or more comfortable to work with dumbbells, and this is fine. The only exceptions are squats and deadlifts, because it can be difficult to get enough weight on dumbbells without making it very awkward.

You need days off from lifting. Do not try to lift on off-days in a lifting program in an effort to make faster progress; you'll over-train and start doing worse, not better.

Lifting weights: example programs

The following are good, proven programs to follow for weight lifting. The key thing to keep in mind is that you don't need a perfect program for you, because one doesn't exist anyway. You just need to follow a program that is fundamentally sound and work hard at it. Some of the programs are more bodybuilder-oriented or athlete-oriented, but in truth they all do the same basic things and work on the same basic principles. For a normal person working hard at them, they'll produce the results a normal person would want: more strength, more muscle and less fat.

Starting Strength:

<http://newbie-fitness.blogspot.com/2006/12/rippetoes-starting-strength.html>

http://startingstrength.wikia.com/wiki/Starting_Strength_Wiki

I like this program a lot, though I would recommend beginners do dumbbell rows instead of Pendlay Rows or Power Cleans (because they are easier to do correctly), and stick to the military press instead of the optional hang cleans (for the same reason).

Bill Starr Linear 5x5:

http://madcow.hostzi.com/5x5_Program/Linear_5x5.htm

This is a very good, basic workout from a renowned strength coach.

Big Boy Basics:

<http://www.t-nation.com/readTopic.do?id=459533>

This program is a bit more complex than the other two and incorporates more workouts per week, but is definitely worth a look.

Lifting weights: A simple beginner program

People seem to be put off by the programs I've linked to, either because they can be a bit jargon-heavy, or because they seem to be aimed at the hardcore bodybuilder or athlete. They are, but the reasons these programs work them are the same reasons they'll work for you; they're fundamentally sound weightlifting programs. Keep in mind that you won't be dieting or taking supplements like those guys, and you'll be starting with weights you can handle and working your way up gradually. So there really is no problem with a normal person - male or female - who just wants to look and feel better doing one of these programs.

That said, there seems to be a big demand for a much simpler starter program. So here it is: [Sean10mm's "Stripped" 5x5](#). This program combines some of the best elements from Starting Strength and 5x5 and presents them in a format easy to understand for beginners.

Lifting weights - common terminology

Repetition (rep)	Doing an exercise 1 time properly
Set	A group of repetitions. If you do 5 repetitions in a row and then stop, that is one set of 5 repetitions.
Intensity	The amount of effort you are expending.
Form	How correctly you are doing the exercise. Strict form is important to prevent injury & get the most benefit from the exercise.
Barbell (BB)	A long bar you put weights on, meant for two-handed exercises
Dumbbell (DB)	A short bar with weights on the ends, meant for one-handed exercises

Lifting weights - notes for women

The same principles apply to both men and women. Seriously. You can follow a "super power lifter man program" as hard as you can for years and never get big, just leaner and stronger and better looking.

If you somehow start to get visible muscles you don't want, reduce your calorie intake, or reduce the intensity of your weight workouts and make up the difference with more cardio. Without continued heavy lifting, the extra muscles will go away. Remember that gaining muscle is a slow, gradual process.

There is an excellent article on women & weight lifting here: [T-Nation - Fun With Women!](#)

[Stumptuous](#) is a brilliant dedicated site for women and lifting that closely aligns with the principles covered in this guide.

Stretching

I wanted to add a couple quick notes about stretching, because it's a common beginner question and there are a number of myths associated with it.

Firstly, static stretching (any stretching done in place, holding for X number of seconds) **should never be done before exercise**. It can cause muscles to tighten rather than relax, putting the body at a greater risk of injury and limiting the muscle's capacity to perform. Instead, perform active movements simulating the exercise you are about to perform. Before a weightlifting session, perform the lifts you are about to do with little or no weight. Before a run, perform a light jog. Before playing sports, do some quick plyometrics or active warmups.

As far as stretching after a workout, this is the best time to perform static stretches because the muscles are warm. A reader (thanks Jules!) suggested the [Runner's World Complete Guide to Stretching](#).

PART V: MEASURING PROGRESS

The most important thing about measuring progress - any kind of progress - is to track it in writing. Whether it is weight you are lifting going up, or weight on your body going down, write it down! You can't meet goals if you have no idea what your real progress is. If you prefer to track online, check out [Bodyspace](#), [DailyBurn](#), or [Physics Diet](#) for you nerds out there.

Watching your weight

Your body weight isn't everything - composition is more important - but it is certainly good to know. What follows are tips for tracking your weight.

A common pitfall in tracking weight is to weigh yourself at different times of the day. Your body weight can easily swing 5 pounds based on how hydrated you are, when the last time you ate or had a bowel movement was, and so on. For most consistent results, weigh yourself first thing in the morning, preferably fully evacuated. Incidentally, this is also a lower weight than any other time of the day.

Don't weigh yourself every day, you'll see too much random variation to know if anything is going on, and the overall change you are looking for is only going to be a few pounds a week. So weigh yourself once a week.

Progress beyond poundage

The thing about your weight is that it doesn't tell you what you're made of, just how much of you there is. The name of the game is losing fat, not muscle, so what happens if fat goes down and weight stays the same or goes up? You made up the difference in lean mass, of course. You shrink in areas that were full of fat, because muscle is more dense than fat. People on good programs often see larger changes in clothing sizes that their weight change would suggest. This is a good thing, because your real progress in terms of appearance is better than the scale is telling you.

The best way to track your overall progress appearance-wise is by measuring yourself with a tape measure in areas you want to get bigger or smaller, and by taking pictures of yourself at regular intervals. This way you can see how your body composition is changing for the better. [Here is a short guide on how to take body measurements.](#)

As I noted earlier, for lifting weights you should always track your progress in writing. Really, you can't effectively implement a good weight program - even a simple one - without doing this.

PART VI: MORE QUESTIONS & ANSWERS

Q: I read about (insert diet or fitness program here) and it isn't mentioned in this guide. Is it any good?

A: Maybe. This guide only covers the basics, and fitness and nutrition are big subjects. Please keep in mind that there is a lot of huckster garbage associated with diet and exercise. You really need to be careful.

Signs someone is trying to rip you off:

- Extravagant claims of massive improvement in a short period of time with little or no effort. If it sounds too good to be true, guess what? It is.
- Claims of secret or suppressed knowledge that "the [diet/fitness/medical/exercise] establishment" doesn't want you to know about. Claims that all well-established forms of exercise like running and lifting weights are wrong.
- Claims about spot reduction or converting fat to muscle, both of which are impossible. Losing fat and gaining muscle are possible, but you don't literally turn one into the other.
- Use of meaningless language like "toning" or "sculpting" instead of talking about quantifiable changes to body composition, strength or endurance.
- Magical language. Your personal spirituality is beyond the scope of this guide, but appeals to vaguely defined concepts like "energy fields" that are never actually explained and "internal cleansing" of various "toxins" that always remain nameless are usually strong indicators that someone is trying to con you.
- Overuse of scientific-sounding language that is never actually defined. Real programs may have some jargon in them, but they will explain what the jargon means. At worst, you'll be able to easily find the meaning of their terminology, because they're using real concepts with a real scientific basis. Con artists just tend to throw lots of big words at you in the hope that you just give up and assume that they're smarter than you are, and you can never find out what they actually mean, because they just made it up to sell you something.

Q: I drastically changed my diet for the better, and nothing happened after a week. Or, I suddenly stopped losing weight for a week after weeks of weight loss. What happened?

A1: Maybe nothing. Sometimes weight loss has minor hiccups for no apparent reason. Maybe you had an extra glass of water the night before, or just retained some extra water for some random reason. If you are sticking a good diet, give it another week or two before you worry about changing things.

A2: All else being equal, to stay at 280 pounds takes more calories than it does to stay 180 pounds, even if the difference is all fat. So if you lost a lot of weight, this may be a contributing factor.

Q: I'm really sore from working out. What do I do?

A: Soreness doesn't necessarily mean anything, but it can be unpleasant. For a little soreness, just suck it up. If it is severe, you may want to take an extra day off, or do a reduced version of your regular workout until it improves. Ibuprofen is the over-the-counter painkiller of choice for muscular pain. I'm not going to tell you to ignore the instructions on the label, but prescriptions of 800 milligrams for minor pain are commonplace (the over-the-counter dose is 2 tablets of 200mg each). You can also remove soreness with a foam roller or any other types of deep tissue massage.

Note: Don't confuse soreness with pain; outright pain is often a sign of an actual injury. If you injure yourself, stop working out the injured area until it is 100% recovered. If you experience severe pain and/or loss of range of motion, see a doctor.

Q: I experience a sharp pain in my side when I'm doing cardio. What's going on?

A: Probably nothing more than a "side stitch", a fairly common complaint of runners, especially new runners just getting into shape. Curiously, there is no good scientific explanation for this pain, but it will go away on its own. As your fitness improves, you will generally stop experiencing them.

Q: I experience sharp pain in my shins from running. What's happening?

A: Probably "shin splints." This is just caused by straining or overworking the muscles to the side of the shins. Taking a break from running until the pain goes away is generally all that is necessary. Normally the muscles adapt over time and you quit getting shin splints. If not, the problem could be caused by flat feet (fallen arches), which can be treated with insoles that help overpronation. A physiotherapist can aid with this part.

Q: I've been lifting weights for a while, and have suddenly stopped making progress even though I'm trying hard. What happened?

A1: You may have simply over-trained and need a rest. Take a few days off, and then go back at it again.

A2: Your body may have adapted to the workout you are doing. You can't keep doing exactly the same workout all the time and continue to get results quickly; at some point your body gets used to it and you start to have diminishing returns. To change things up, you can:

- Change the number of reps per set, while keeping the total number of reps about the same (for instance, going from 5x5 to 3x8)
- Change from dumbbells to barbells or vice-versa
- Change to a variant on the same exercise, or a different exercise that works the same muscle groups

A3: At some point you will need to eat more food to continue making rapid strength gains. Of course, if you don't want to get bigger anymore, at some point you will have to accept some limit on your strength gains.

PART VII: THANKS

Thanks to kponds & everybody else at the Something Awful [Watch & Weight](#) forum for their input. Also thanks to [/fit](#) for making the guide the official sticky.

Hungry for more? This guide is just a start. If you want to read a comprehensive guide to health and fitness, I recommend the book [Brain Over Brawn](#) by Clint Cornelius.

Change History:

2006

October 14 - First draft.

October 15 - Added notes for vegetarians, added starting cardio plan & warm-up information. Fixed assorted minor errors.

October 16 - Added additional Q&A information, minor changes to wording/layout.

October 17 - Added hints for avoiding fraudulent fitness programs. Removed profanity.

2007

January 24 - Updated workout links, added more supplement information.

2009

February 25 - Minor changes, new links to the Starting Strength Wiki and to Stumptuous.

2010

March 6 - Removed information about more meals/day having a positive effect on weight loss in light of recent studies. Large grammar/spelling cleanups. Added a few more useful links, guides, and sources.

May 29 - Robert Kent graciously reformatted this guide to make it easier on the eyes. Thanks, Robert!

June 4 - Fixed formatting, changed saturated fat recommendations based on recent studies.

June 7 - Added more information on shin splints.

2011

January 27 - Complete edit of the guide for grammar, tone, and style. Long overdue!

2012

May 16 - Added section about stretching.