

I'm not a robot



low-calorie diet with protein shakes for 12 weeks. During this time, they also engaged in a strength training regimen and lost 4.2 kilograms of body fat while gaining 4 kilograms of fat-free mass. Its not just possible for a beginner, regardless of age, to lose body fat while gaining lean mass, but quite doable. All it takes is some heavy weights and enough protein. Body recomposition as a beginner is one thing, but what if you're a reasonably experienced lifter or bodybuilder? You might not be overweight, but you carry some excess body fat. You want to get in shape without sacrificing your ability to gain muscle mass. The answer is yes here as well. However, it wont be as easy. You can still gain some muscle while losing fat but wont see any dramatic increases in muscle mass in a few months while getting shredded. The scientific literature offers support for your endeavors as well. Italian elite gymnasts eating less than 2,000 calories a day lost weight, reaching body fat levels close to 5% after a month of regular training. We are not talking about recreational exercise here, but rather 30 hours a week of elite-level gymnast training. Despite their low body fat levels and a large calorie deficit, they still gained half a kilogram of muscle this month. Twenty-four highly trained athletes reduced their calorie intake by 20%, creating an energy deficit. They lost both body weight and fat throughout an 8 to 9-week long study. During this time, they engaged in strength training four times per week and managed to increase their fat-free mass by 2% despite weight loss and underfeeding. Female International Federation of Bodybuilding and Fitness (IFBB) athletes increased their fat-free mass during competition preparation. Not all of them did, but at least some managed this feat. Before you say steroids, the scientists closely monitored the participants hormone levels. Anabolic hormone levels decreased substantially (a natural consequence of calorie restriction), which indicates that drugs were not involved in the results. Several relevant studies feature highly trained rugby players. In one of these studies, 24 young elite players lost more than a kilogram of body fat during pre-season training while increasing their fat-free mass with the same amount. However, they might have regained muscle mass lost between seasons if they took a break from training. In that case, muscle memory would explain at least some of the results. As you can see, even trained individuals can lose body fat while gaining muscle mass. A recent study concluded that despite the common belief that building muscle and losing fat at the same time is only plausible in novice/obese individuals trained individuals can also experience body recomposition. However, the possibility of something does not necessarily guarantee that it will happen, which is apparent in a case study of a natural bodybuilder during competition prep. He lost almost as much muscle mass as body fat during a 14-week contest diet, even though he trained adequately and followed a strict diet plan. Fat-free and fat mass in a natural bodybuilder dieting for 14 weeks, going from 14% body fat to 7%. In summary: Body recomposition takes hard work and dedication, but it is possible in both untrained and trained persons. Muscle protein synthesis (MPS) and muscle protein breakdown co-occur 24/7, from before birth until the day you die. Muscle protein synthesis minus muscle protein breakdown equals muscle protein balance or just protein balance for short. When your muscle protein synthesis exceeds your muscle protein breakdown, you are in a positive protein balance. Your muscle mass increases. When breakdown exceeds synthesis, you enter a state of negative protein balance, leading to a loss of muscle mass. How many calories you eat is vital for your basal muscle protein synthesis. During a calorie deficit, you build less muscle. Maintaining or increasing your muscle mass keeps your basal metabolic rate stoked and makes it easier to stay at low levels of body fat year-round. The most powerful way to stimulate muscle protein synthesis is by hitting the weights. Strength training increases MPS significantly for up to 24 hours. That increase is not dependent on calories. Instead, all thats required to build muscle after a workout is amino acids, the building blocks for your muscle cells you get from eating protein. You dont need a massive meal to boost muscle protein synthesis following a strength training session. Protein, like a whey protein shake, is sufficient to flip the switch and start building muscle. Creating a positive protein balance this way increases your lean mass following a workout, even though you dont eat enough for calorie balance. Thats how powerful the anabolic effect of strength training is when you combine your training session with a protein intake. As with muscle protein, you both store and burn body fat simultaneously. When you are in a calorie balance, you accumulate as much fat as you burn. That means that your body fat does not increase or decrease. If you increase your food intake to a calorie surplus and eat more than you burn off, you gain weight and body fat. If you burn more calories than you consume, your body weight goes down, as do your body levels. The trick to building muscle and losing fat is to stimulate muscle protein synthesis regularly while eating plenty of muscle-building protein and fewer calories you take in. Sounds easy? It is, in theory. The challenge is to stay consistent over time. Every day, your muscle protein balance and body fat balance shift from positive to negative and back repeatedly. Regardless of your calorie balance over the day, you lose and gain muscle all the time. After a meal, you build muscle and store more fat than you burn. Between meals, as you enter a fasted state, you break down more muscle tissue and fat mass than you build or store until your next meal. Over a month or longer, the synthesis and breakdown of muscle and fat are about equal if you eat as much as you need and without strength training. In other words, you are weight stable, and so is your body composition. MPS=muscle protein synthesis, MPB=muscle protein breakdown When trying to build muscle and lose fat simultaneously, the time period were talking about is an important factor. The longer the time, the easier it gets to do both things at the same time. If we are talking months, it shouldnt be all that hard at all. In that case, you will have alternated between gaining muscle mass and losing body fat many times. If you have been training correctly and eaten enough protein during this time, you should have improved your body composition. That means that you have built muscle and lost fat at the same time over those months of training and dieting. However, you probably havent done so at the same time if you are talking about the exact second, the same minute, or the same hour. If the measurement period is short, it can be impossible to do both things simultaneously. The hours after a Thanksgiving dinner, for example, you will build more muscle than you break down. However, you will surely gain body fat at the same time. Over Thanksgiving week as a whole, however, you can lose weight and body fat despite that day of overfeeding, as long as you restrain yourself during the other days. To gain muscle mass, you need to be in an anabolic state. To lose weight and body fat, you need to take in fewer calories than you burn. Losing fat is a catabolic process. You need to be in a calorie deficit. You cant, unfortunately, get away from that fact. So, if you want to gain muscle and lose fat, you must prime your muscle protein synthesis. It must exceed your muscle protein breakdown over time while you remain in a calorie deficit. Thats not a simple task. Anabolism and catabolism are opposites of each other. Body recomposition requires effort and discipline. If you dont train haphazardly, your results will also be haphazard. The three-step solution for anyone looking to build muscle and lose fat at the same time is as follows: Engage in resistance training regularly. You keep your muscle protein synthesis elevated and build muscle mass even though youre in a calorie deficit. Eating a high-protein diet plays an important role. Getting plenty of protein ensures your muscles have the building blocks they need to grow and prevents muscle breakdown. Cut calories. Reducing your caloric intake and eating fewer calories than you burn is essential for weight and fat loss. Lets break it down, step by step. The best way to train to build muscle and lose fat simultaneously is the same way youd train for muscle building at any other time. The main difference is that your ability to recover from high-intensity physical activity during a calorie deficit diminishes. There is no standard protocol for body recomposition training, but the following guidelines make for an approach that fits most lifters: Perform 1020 total sets per muscle group per week. Thats the optimal training volume to maximize muscle hypertrophy according to up-to-date research. The greater your training experience, the more training volume you need, while beginners and intermediates will likely thrive on the lower end of that rep range. Include both compound exercises and isolation movements in your workouts. Compound exercises like the bench press and the squat are time-effective and make for a good foundation in any workout split, while isolation work lets you focus on individual muscle groups. Free weights or machines is mostly a matter of personal preference. Perform 615 reps per set. While you build muscle with both lower and higher reps, a moderate rep range is the perfect balance for most lifters. You avoid the injury potential of very heavy weights and the discomfort of high-rep training to failure. Read more: >> How to Build Muscle: Exercises, Programs & Diet You can, of course, follow any training program you like. But if you prefer a pre-programmed and highly effective workout split for building muscle, we offer an expensive selection for different experience levels in our StrengthLog workout tracker. Beginner Barbell Program:Our most time-effective training program for the beginner to get started. Three workouts per week with three exercises per workout provide a solid foundation of training for your whole body. This program suits those new to strength training who want to start an effective routine that doesnt take too much time since it is wholly based on compound movements. StrengthLogs Full Body Hypertrophy:In this program, things get a little more serious. You still train three times per week, but you train all muscles more thoroughly each workout, using a combination of compound and isolation movements. This is an excellent three day-routine for building muscle! StrengthLogs Upper/Lower Program, 4 days/week:The number of workouts has increased to four per week in this program, with the training split between two upper body workouts and two lower body workouts. This program is more minimalistic than the one above and only contains compound movements. But if you want to, you can complement it with additional isolation exercises. Bodybuilding Ballet:Our most popular training program for bodybuilding, designed as a classic bro-split. Its a premium program for intermediate and advanced bodybuilders, available in four- five- or six-day training versions. Bodybuilding Blitz: a 5-day workout program that combines training for muscle growth and strength. The training sessions are short, which can be beneficial if youre on a tight schedule, but highly effective nonetheless. Read more: >> The 10 Best Bodybuilding Splits: a Complete Guide These programs, and many more, are available exclusively in our workout appStrengthLog. Its almost like a certified personal trainer in your pocket. Some programs, likeBodybuilding Blitz and Bodybuilding Ballet, require a premium subscription, but StrengthLog itself is entirely free. You can download it and use it as a workout tracker and general strength training app and all basic functionality is free forever. Want to give premium a shot? We offer all new users a free 14-day trial of premium, which you can activate in the app. Download StrengthLog for free with the buttons below: >> Click here for our list of training programs. Your training is not the only factor determining whether your body recomposition is successful or unsuccessful. What and how you eat is also crucial. The two primary factors are the size of your calorie deficit and your protein intake. You must be in a calorie deficit to lose fat, meaning you burn more calories than you consume. This is the one factor set in stone. The problem is that a calorie deficit also makes it more challenging to gain muscle. Ideally, you want to be in a caloric surplus to gain muscle. However, the excess calories would prevent you from losing fat. So thats a no-no if you want to build muscle and lose fat. A calorie deficit increases your muscle breakdown and reduces muscle protein synthesis. In addition, taking in fewer calories than you burn can significantly decrease your testosterone levels. If you are overweight or obese, you dont have to worry much about it. In fact, calorie restriction mightincreaseyour testosterone levels if you carry a lot of body fat. On the other hand, if your body fat percentage is healthy, but youre looking to increase your muscle definition and get your abs to show, a calorie deficit will likely reduce your testosterone levels significantly. The solution? Ensure you consume fewer calories than you burn, but dont be too aggressive. A >1,000-calorie deficit makes you drop weight rapidly, but youll find it very hard to add lean mass at the same time. For body recomposition purposes, a moderate caloric deficit is ideal. For most, the sweet spot is ~500 calories fewer than they burn. Youll lose fat and wont compromise your ability to add muscle to your frame. You can use our calorie calculator to help you figure out how many calories you should eat every day:>> Calorie Calculator: Resting Metabolic Rate and Daily Need Slow and steady wins the race. Dont overdo your calorie deficit and youll be in a good place to build muscle and lose fat simultaneously. Calories arent the only thing to keep track of when your goal is losing fat, not just body weight. A high-protein diet is a vital component in this process, especially if you want to build muscle at the same time. When youre in a caloric deficit, your body begins to break down muscle tissue to meet its energy demands, which results in muscle loss. A weight-loss diet with little protein and no lifting can result in a 50/50 fat loss/muscle loss scenario. Thats a body recomposition for the worse. Fortunately, you can prevent this by: Lifting weights to stimulate muscle protein synthesis (MPS). Eating more protein. A high-protein diet gives your body the necessary nutrients to maintain and repair muscle tissue. The combination of strength training and plenty of protein boosts MPS to the point where it exceeds muscle breakdown. To maintain muscle mass during caloric restriction, 2 grams of protein per kg (0.91 grams per pound) of lean body mass (LBM) per day is enough for most people. However, youre not most people. You want to lose fatandbuild muscle. Higher protein intakes, 2.33.1 grams per kilogram (1.041.4 grams per pound) of lean body mass per day, will help you accomplish this goal. In addition to repairing and building muscle tissue, protein can help you lose fat. Protein is more satiating than fat and carbs, meaning it keeps you feeling full for extended periods. By consuming high amounts of protein, you wont be as hungry during the day even though your daily calories are lower than usual. Protein also has a more significant impact on your metabolism. When you consume protein, your body needs to work to break it down, which increases your metabolic rate. A higher metabolic rate means your body burns more daily calories even when not exercising. Its also important to note that the source of protein you consume matters. Animal-based proteins, such as meat, poultry, fish, and dairy, are considered complete proteins because they contain all the essential amino acids your body needs. Plant-based proteins, such as beans, lentils, and nuts, are often incomplete and may need to be combined with other protein sources to ensure you get all the essential amino acids. If you eat an exclusively plant-based diet, an alternative strategy is to eat more protein: increasing your intake by ~25% guarantees your muscles have access to the amino acids for similar results. If your diet consists exclusively of plant-based proteins, you should increase your overall protein intake by ~25% for similar results. In summary: Calories in minus calories out is the number one factor for weight loss. However, that equation does not tell how your body uses those calories. By engaging in strength training and keeping your protein intake high, you use more of what you eat to build muscle. Once youve figured out your daily caloric and protein intake, you can divide your protein and lifting can result in a 50/50 fat loss/muscle loss scenario. Thats a body recomposition for the worse. Fortunately, you can prevent this by: Lifting weights to stimulate muscle protein synthesis (MPS). Eating more protein. A high-protein diet gives your body the necessary nutrients to maintain and repair muscle tissue. The combination of strength training and plenty of protein boosts MPS to the point where it exceeds muscle breakdown. To maintain muscle mass during caloric restriction, 2 grams of protein per kg (0.91 grams per pound) of lean body mass (LBM) per day is enough for most people. >> Intermittent Fasting and Strength Training: The Ultimate Guide No supplements will do the job for you, but some are helpful for building muscle while losing fat. Creatine is the single most effective supplement for gaining lean body mass and strength and improving exercise performance. While it has no proven fat-burning properties, research shows that people using creatine generally lose a little more body fat compared to placebo. Reasonably inexpensive and convenient, a quality protein powder makes it easier to get enough protein. While protein concentrate or isolate are likely the best options if you use dairy products, while soy protein isolate is a high-quality plant-based alternative. Caffeine stands at the ready whenever you need a pick-me-up or an energy boost, whether you prefer regular coffee or caffeine in supplement form. It is the active ingredient in most pre-workout products and has proven to be effective for improving performance in almost any type of exercise. Read more: >> The 5 Best Supplements to Gain Muscle >> The 5 Best Supplements to Get Shredded Want to learn more about dietary supplements? Which ones are worth your money, and which are questionable or useless? Check out theStrengthLogs Supplement Guide, our free guide where I review 26 of the most popular supplements. Maybe. An energy surplus makes it much easier to gain muscle mass. If you keep your overfeeding under control, you dont have to acquire excessive amounts of fat along with the muscle. It is pretty easy to maintain the muscle you have gained during a bulk when you switch to dieting your fat away. Maintaining muscle mass during a cutting diet is much easier than gaining muscle. It is probably more effective in the long run to alternate periods of moderate overeating with periods of dieting. It might also be better for your mental well-being. Maintaining a calorie deficit over more extended periods can be challenging not just for your body but for your brain as well. However, when you bulk and cut the traditional way, you invariably gain body fat during parts of the year. If you are not comfortable with those fat gains, staying in a calorie balance most of the year and peaking once or twice a year might be an alternative. In addition, even if you give building muscle and burning fat at the same time a go, you dont necessarily have to do it year-round. If nothing else, now you know that you dont have to give up gaining muscle during a cutting phase. Read more: >> How to Bulk: The Complete Guide to Muscle Gain >> How to Cut: Lose Fat and Keep Your Muscle Mass Lets summarize! These are the key points to build muscle and lose fat. At caloric balance or in a surplus, 1.6 grams of protein per kilogram of body weight (around 0.8 grams per pound of body weight) per day is enough to promote maximal gains in muscle mass for almost everyone. If you increase that to 2.2 grams per kilogram (or 1 gram of protein per pound) of body weight daily, you cover all your bases, even if you are an elite strength athlete or competitive bodybuilder. However, if you are on a fat-loss diet, eating fewer calories than you burn, you might need even more protein. Go for 2.3 to 3.1 grams of protein per kilogram (1 to 1.4 grams per pound) of lean body mass per day. The leaner you are, the higher your protein intake should be within that range. No surprises here. One thing to remember is that your ability to recover from your workouts is diminished on a diet. That means you should follow an individualized training program that adjusts for this. The training program you used while bulking up might not be ideal. While strength training is the most anabolic tool in your toolbox, avoid marathon sessions that break your muscles down as much as they build them up. Focus on exercises that give you the most bang for your buck. That means compound movements where you can use heavy loads and hit more than one muscle group at a time. Then add isolation work as needed. Your training program should be designed to stimulate muscle growth, not to burn fat. You handle that part in the kitchen. Exercise that burns fat, like endurance training, offers, at best, a modest effect on body composition and fat loss. Cardio is excellent for overall health and things like insulin sensitivity, which benefit your physique in the long run. Ignoring it is a mistake, but dont rely on it to get shredded. Both high-intensity interval training and low intensity cardio can behelpfulfor fat burning purposes, but your diet is the foundation of your fat-loss success. The less calories you eat, the faster you lose body weight and body fat. Strength training is such a potent muscle-building activity that it can prevent the loss of muscle mass even during large energy deficits. Gainingmuscle mass is a different kettle of fish. While you can do it, its much more challenging. If you want a reasonable chance of success, aiming for a moderate calorie deficit is probably wise. Besides, you want enough calories to perform well during your high-intensity workouts. The importance of sleep when building muscle and losing fat cant be overstated. However, its often the part of the equation many athletes dont pay enough attention to. Sleep deprivation is your enemy when going for a body recomposition. You lose less fat despite being in a calorie deficit and risk muscle loss instead. In addition, your anabolic hormones take a nose-dive. When you sleep, you repair muscle fibers and release growth hormones. In one study, the testosterone levels of young men decreased by 15% after a single night of sleep deprivation. If your sleep isnt on point, make it the first thing you prioritize. You can lose body fat fast. The larger your caloric deficit, the quicker you lose weight and body fat. Gaining muscle mass is much more challenging and takes a much longer time. When youre new to strength training, your results come pretty rapidly, but not at the same rate as your ability to lose fat. If you are already well-trained, gaining a few hundred grams of muscle a month is excellent. On the other hand, you can quickly lose several kilograms of body fat during the same month. Adjust your expectations accordingly. Dont expect to be able to replace a lost kilogram of body fat with a kilogram of muscle mass. That is not realistic. If you are not overweight, you have to accept that you cant gain muscle mass at the same rate you can lose fat. During the last month of the pre-contest diet, most bodybuilders dont increase their lean muscle mass. Instead, they focus on losing as little muscle as possible. Your energy availability and hormonal status do not promote anabolism when youre really lean. As long as you carry a significant amount of body fat, you can build muscle and lose fat simultaneously, but be prepared for the fact that it will get more and more challenging to add pounds of muscle as you lean out. Can you build muscle and lose fat at the same time? Simple answer: yes. More complex answer: maybe. You cant say for sure that a particular individual will be able to. It depends on many physiological and behavioral factors. Most of us wish we were born with better genetics for building muscle. Unfortunately, not everyone is genetically blessed. If you have to fight for every gram of muscle mass you put on, you will find it hard to build muscle and lose fat simultaneously, compared to someone whose biceps grow just by looking at the barbell. The same thing goes for your diet. Not everyone utilizes the food they eat in the same way. Some people build more muscle, while others store more fat at the same caloric intake. Other factors, like your hormones, how well you sleep, and your entire life outside the gym, including stress, also affect your chances of gaining muscle while losing fat. If you succeed in building muscle and fat at the same time depends on many thingssome work for you, others against you. Its impossible to say if you can do it before you try. Physiologically, it is possible. And with the will to accomplish it, you likely can, with hard work and discipline. Give it a go! Further readings:

How to build muscle and lose weight. How to build muscle and lose weight at same time. Best workout for weight loss and muscle gain. How to workout to lose weight and not gain muscle. How do you lose fat and gain muscle at the same time. How to lose weight and gain muscle in the gym. How to workout and gain muscle. How many days a week should i workout to lose weight and gain muscle.