Go Strong, Not Skinny
Why being fit isn’t just about losing pounds.

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BEFORE
How you look on the outside might not reflect how you look on the inside. Everyone wants to be skinny, but in no way does “skinny” equate to healthy. You might ask yourself, “Are you skinny fat or a TOFI (thin outside, fat inside)?” If you think you might be, you aren’t alone. In fact, normal-weight obesity is quite common.

When researchers at Imperial College, London, scanned 800 people of a normal body weight with MRI machines, they found that up to 45 percent of women and 60 percent of men had high percentages of body fat. Most of this fat was deposited in and around internal organs. This fat, known as visceral fat, is most dangerous to health because of its association with raised risk of chronic diseases like type-2 diabetes and cardiovascular disease.

As you’ll learn in this Spring 2014 newsletter, the focus should be on losing visceral fat while holding on to muscle. That’s because muscle (as opposed to visceral fat) not only looks good, but also plays a central role in metabolism, supporting immunity, guarding against disease, and prolonging longevity. In these next few pages our Research and Science Team explores why strong is the new skinny.

Live well and adventurously,

Suk Cho, Ph.D.
Isagenix Chief Science Officer
Scales can’t be trusted as a determinant of health. It’s possible to weigh less, yet still be unhealthy. For this reason, the scale is not what you should be focusing on when trying to improve your health.

For example, a strong, muscular person could weigh the same as someone with a greater percentage of body fat, and yet their health would be drastically different. The same idea applies to someone who has a normal body weight but has a high percentage of body fat—also known as being “skinny fat.”

**Crash dieting leads to a slow metabolism**

There’s a common rule of thumb about dieting that everyone should know: for every pound of body fat loss, a person generally loses anywhere from an eighth to a quarter pound of fat-free mass—a small chunk—that’s made up of mostly muscle, liver or muscle glycogen (a stored carbohydrate), bone, and water (1, 2). However, certain diets can increase the amount of fat-free mass that is lost. An example of this is with “crash dieting,” when people go on extremely low-calorie diets. In the end, they end up losing a lot of weight, but it’s usually at the expense of a significant amount of muscle and bone (1, 2).

Muscle and bone are principal factors in influencing basal metabolic rate, which means that any loss leads to fewer calories burned daily (3). Supposing that after a crash diet a person returns to old eating habits, the result is going to be rapid weight gain (1). Discouraged by what the scale says, that person might be led to doing yet another crash diet. Unfortunately, due to a messed up metabolism from bone and muscle loss, weight loss becomes harder to achieve.

There’s a way out of this downward spiral of “weight loss cycling” and it involves getting strong and staying strong during weight loss. The goal is, ultimately, changing body composition. Some may have said in the past that it’s just not possible, but evidence from the scientific literature is suggesting otherwise—that you can burn fat while maintaining and building muscle (5-6).


Losing weight versus getting fit

It’s wrong to say that diet is more important than physical activity, or vice versa. For health and quality weight loss, they are equal sides of a coin. Because while it’s true that (in most cases) diet is by far going to be the greatest factor in the “calories in/calories out” equation, exercise is the greatest contributor to keeping or building stronger muscle and bones. For this reason it’s argued by some that exercise becomes even more important when losing weight.

When it comes to exercise for healthy weight loss, resistance training is best, lifting weights in particular. The “why” is simple: resistance training puts pressure on muscle and bones, stimulating adaptation (3). Muscle and bone adaptation basically means growth and remodeling. If you really want to spur adaptation, try resistance training at a high intensity (bringing heart rate up 80 to 90 percent of your maximum heart rate) (4).

Adaptation is itself an extensive, energy-draining process. In short, you’ll be burning calories. The nutrients from your diet are more likely to serve as building blocks for that growth and repair rather than storage in the form of fat. For this reason it’s argued by some that exercise becomes even more important when losing weight.

Staying stronger takes protein and nutrition

As important as exercise for adaptation, is nutrition. To put it metaphorically, a house or building just can’t be built (or built well) without the right materials in the right amounts and at the right time. Neither can muscle and bone growth and remodeling occur after resistance training without nutrients, including protein and calcium, or the right fuel in the form of sufficient dietary calories consumed each day.

Generally, the body will lose minor amounts of protein and calcium every day. But that loss can increase with weight loss and when the diet is lacking these nutrients. The dietary goal for a person losing weight should be to provide correct dosages of nutrients at the right time to optimize preservation of lean mass.

Steady weight loss (as opposed to what happens on a crash diet) combined with resistance training and regular intake of protein, calcium, vitamin D, B vitamins, and other nutrients help to preserve lean mass (5-9). So can sufficient calories per day for an average woman or man.

For lean mass preservation, the quality of nutrients matters, too, as is the case of protein. Depending on its source, the quality of dietary protein can vary. For example, whey protein is shown in studies to outrank other sources of protein for muscle growth because it’s rich in branched-chain amino acids (BCAAs) that stimulate protein synthesis. Whey protein is also absorbed more quickly and it’s more easily incorporated into tissues (10-13).

Building muscle and bone may seem counterintuitive for someone who simply wants to see a difference on the scale. After all, muscle and bone weigh more than fat. But muscle and bone have a greater density in comparison to body fat, so lend less to size.

Don’t focus solely on losing weight. A healthy, toned body can be achieved through a true body composition transformation. It’s there where Isagenix products can make a difference.

REFERENCES

Setting the Stage for Muscle

So you’re drinking delicious IsaLean® Pro Shakes every morning and at lunch, snacking on Whey Thins™ between meals, and eating a balanced meal that emphasizes lean portions of protein at dinner—all excellent for maximizing the maintenance of your body’s muscle, especially while losing weight.

But no matter how hard you might wish it were true, you can’t just eat and drink whey protein every day and expect to make serious muscle gains. That takes getting off the couch and into the gym! It can also take some prior knowledge about how to create the right conditions for muscle growth, or hypertrophy.

To begin with, muscle hypertrophy isn’t going to happen overnight and, as you might have guessed, it can’t happen without some effort. It takes time. It takes nutrition. And it takes exercise. The right kind of exercise counts, too.

Get intense

Intensity matters. Here’s a quick refresher as to why: intense exercise pushes muscle fibers to their limits and causes damage. It’s that damage that causes a cascade of events that leads to cell division and replication, which helps to repair the damaged muscle and form new muscle strands. Those new strands reinforce the muscle fibers, causing them to grow bigger and adapt to greater loads.

Only certain kinds of exercise will cause enough muscle damage to do the job of stimulating muscle’s adaptive response. Walking and jogging on the treadmill, while certainly healthy in their own right, just won’t do. They don’t count as intense.

It should be no surprise that resistance training is king for muscle growth. The evidence of resistance training’s effects on muscle adaptation has been demonstrated repeatedly by scientific studies and can be found on display with a visit to any local gym (1). There are several kinds: lifting free weights, using weight machines, using elastic bands, doing pushups and pullups, etc. Basically, resistance training includes any exercise where muscles contract against an external resistance.

Another type of exercise shown to stimulate muscle adaptation is high-intensity interval training (HIT). The approach of combining both HIT and weight lifting together makes for a quick yet productive workout as long as it is tolerable and performed safely (2). HIT involves repeatedly exercising against a strong resistance at a high intensity for 30 seconds to several minutes followed by a 1- to 5-minute recovery. The exercises that fit into this category can include runners sprinting or cyclists pedaling up a hill as fast as possible for a brief time period in repeated intervals.

Go harder over time

Apart from type of exercise, for muscles to grow they need to be overloaded repeatedly over time. It’s here where the principle of progressive overload becomes important. Progressive overload involves increasing workload gradually over time so that muscles will continually adapt and become larger (1). Otherwise, muscles will stay the same size. Or worse, if loads are too small or infrequent, muscles may decrease in size.

This is certainly observed in sedentary people. But it’s also seen in those who engage in endurance activities such as long-distance running. For these reasons, these athletes are encouraged to cross-train regularly with weights.

Gradually increasing resistance over time is simple—it just takes keeping track of where you are in terms of strength. So, if you’re benching 120 pounds with 10 repetitions every few days for a couple of weeks, make a record of it, and then lift a little more the next couple of weeks.

Be a failure often

Lifting to the point where you can’t lift anymore (without cheating) is called volitional fatigue. Volitional fatigue is thought to be one of the most fundamental factors that prepare muscle fibers for the biological changes that lead to muscle strength, power, and hypertrophy.

Multiple sets to fatigue beat out single sets for muscle strength. Resting between sets can really depend on how large loads are and personal goals. For instance, larger loads followed by longer rests of 1 to 5 minutes are superior for strength or power, while medium loads with rest of 30 to 60 seconds are best for hypertrophy. Smaller loads with high repetitions followed by rests of 20 to 60 seconds may be best for muscle endurance (3, 4).

Exhausting muscle through repeated sets to failure brings with it another huge plus for your health: the depletion of muscle glycogen, or the stores of carbohydrate found in muscles. When this glycogen is gone from muscles, it and other exercise-induced changes in muscle make them highly sensitive to insulin (5).

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Power up with protein and carbs post-workout
You’re probably familiar with insulin as the hormone that regulates blood sugar and that’s involved in type-2 diabetes. Well, another role of insulin is as an anabolic hormone. Not only will insulin drive glucose into muscles to replenish glycogen, but muscle-building amino acids, too. Insulin also increases the flow of blood to muscle, improving the delivery of glucose and amino acids to further enhance glycogen repletion and muscle growth (6).

It’s because of insulin that such a thing as the “protein window” exists. The protein window is that period, usually for an hour or two after workouts, when getting another dose of extra protein and sugar, such as from IsaPro® blended with fruit, can help boost muscle growth to the max. A dose ranging between 20 up to 40 grams of whey protein looks to be optimal after workouts for biggest gains (7-10).

Rest up
Once the damage is done in muscles, it’s time to let them recover. Getting appropriate amounts of rest can mean the difference between serious gains or injury as a result of overtraining.

Muscle adaptation will highly depend on quality of rest, and that means recovery days and quality sleep. How many days needed for recovery will depend highly on the muscle exercised and intensity of training. In general, too little rest or sleep deprivation, can severely impair recovery through decreases of activity of human growth hormone for muscle repair and growth (11).

The quality of sleep matters, as does the amount. Turning in early, making sure that your bedroom is dark, and taking Sleep Support and Renewal™ spray for a quick supply of melatonin every night is the basis for falling asleep faster, getting more deep sleep, and optimizing night-time recovery (11).

Stay consistent
Through intense exercise that progressively overloads muscles to volitional fatigue followed by proper rest, you have set the stage for maximal muscle building. The bad news is that most people do little or no exercise every week. As a result, the opposite of hypertrophy happens.

Hypotrophy, or muscle breakdown, can accumulate over time as a result of lack of use, lack of quality protein per day, or a combination of both. Those losses can reach a critical mass in older age leading to what health professionals call sarcopenia; or worse, accumulated muscle loss combined with obesity, sarcopenic obesity, which is associated with greater risk of chronic diseases including type-2 diabetes, cardiovascular disease, and several cancers (12).

Guarding against sarcopenia takes consistency. The best advice is not to just get physical activity once or twice a week, but to engage in some form of resistance training exercise every day. Then, you will be making the most of the quality protein Isagenix provides you daily for optimal muscle and strength.

REFERENCES
Do you want to build a strong, fit body? While pushing weights at the gym is key to building muscle and stimulating fat loss, what you eat—specifically protein—should be a priority.

Think of it this way: if your body isn’t supplied with the nutrients it needs for muscle recovery and energy replenishment, are you really getting the most out of your workout? The winning combination is when both diet and exercise are maximized to reach your health goals.

When it comes to making the most of protein, the key is to get the right kind, in the right amounts, at the right time.

Protein can be found in a variety of foods. Eggs, chicken, fish, dairy, and beef are all sources of protein. However, not all protein is created equal.

When it comes to a superior protein option, study after study shows nothing compares to whey protein. Whey has a high concentration of branched-chain amino acids (or BCAAs), which are quickly absorbed and used to build and repair muscle—especially if consumed after exercise.

Arguably the greatest benefit of consuming whey protein is the ability to maximize fat loss without losing muscle. A study comparing whey protein and soy protein found that subjects consuming whey had 62 percent more fat loss during 5 ½ hours after a workout (1).

Another study looking at the effect of supplementing with whey protein, soy protein, or carbohydrate after workouts for a period of nine months found that those consuming whey had 55 percent more muscle gain than either soy or carbohydrate groups (2). In fact, those who consumed soy protein had similar muscle synthesis as those who ate carbohydrates alone. For fat burning and muscle growth, the kind of protein you choose matters.

It’s becoming more evident that adults could significantly benefit from eating higher amounts of quality protein, especially when attempting to lose weight.

A recent study compared muscle synthesis in men and women who consumed controlled diets that provided three different amounts of protein: the Recommended Dietary Allowance (RDA) of 0.8 grams per kilogram of body weight, twice the U.S. RDA, and three times the RDA (3). Weight loss was induced by restricting total calories consumed and increasing daily exercise. After three weeks, those who consumed double or triple the RDA had greater muscle synthesis than those who consumed the RDA.

The authors of that study said that they believed that the RDA for protein should be based on a level to optimize health, not just to prevent deficiencies. Their data demonstrate that the current RDA wasn’t enough for sparing muscle mass during weight loss. More is key—around 1.2 to 1.8 grams per kilogram of body weight.

In addition to supporting muscle growth, higher protein diets have also been shown to increase satiety so you are less tempted to overeat at mealtime (4).
RIGHT TIME

Getting the right amount of protein each day is essential for keeping muscle in a constant building state (anabolic) rather than allowing muscle to be broken down and used for energy (catabolic). While the typical American diet does provide a fair amount of protein, it’s not distributed evenly throughout the day.

Most breakfast meals are low in protein (think bagels, pastries, and cereals), providing an average of 10 grams. (See graph below.) For many, lunch may consist of a sandwich or soup and provide around 15 or 20 grams of protein. Then, a massive 60 grams (such as a medium-sized steak) is often consumed at dinner. To keep the body in a constant building state and to support muscle growth, fat burning, and fullness, it’s best to eat around 20 to 40 grams of protein at each meal.

To investigate this theory, researchers compared two groups of people—one that consumed protein evenly throughout the day and one that skewed their protein intake more toward dinner (5). The “even” group consumed 30 grams of protein three times during the day while the “skewed” group ate about 10 grams at breakfast, 20 grams at lunch, and 60 grams at dinner. After just one week of following the diets, those in the even group had 25 percent greater muscle protein synthesis than the skewed group. The fascinating aspect of this study is that both groups consumed the same total amount of protein—90 grams—yet those who distributed protein consumption regularly throughout the day gained more muscle.

In addition to eating protein throughout the day, a key time to take advantage of the body’s muscle building ability is post-workout. After exercise, blood is rushing to your muscles. By consuming whey protein after exercise, it can be quickly absorbed by the small intestine, shuttled into the blood stream, and delivered to muscle tissue. Failing to consume protein after a workout is a missed opportunity to take advantage of all your hard work.

It’s not just about eating protein to get the results you want, it’s about getting the right kind, in the right amount, at the right time. Make the most of your protein by using Isagenix IsaLean® Shakes, Soups, and Bars featuring anywhere from 18 to 36 grams of high-quality protein. Also, don’t forget new Whey Thins™ featuring 10 grams of high-quality protein, an ideal amount at snack time.
Even when no work is being performed (such as when you are sleeping), muscle requires energy just to exist.

You know how it is with regular dieting—your long-lost skinny jeans make a temporary reappearance only to be retired to the back of your closet six months later. This frustrating scenario of weight cycling is all too familiar for most people. Although decreased motivation and willpower greatly contribute to “falling off the wagon,” weight regain is also influenced by biological changes in the body in response to decreased intake of energy or calories. The main biological reason for weight regain is a slowing metabolism caused largely by muscle loss. A reduction in calorie intake, especially calories from protein, can make the body become very efficient and work to conserve energy. Unfortunately, this means you are burning fewer calories. In a world where fad dieting has become the norm, how does one keep lost pounds off for good?

Recent research carried out by a group of scientists from the Netherlands reveals that a diet high in protein could be the key to sustaining permanent weight loss (1). Seventy-two overweight and obese men and women took part in the study, which compared the effects of two reduced-calorie diets after weight was previously lost. The only difference between the diets was that one consisted of high protein intake (1.2 grams of protein per kilogram of body weight per day) and the other consisted of normal protein intake (0.8 grams of protein per kilogram of body weight per day). After six months, the group eating more protein was found to retain greater muscle mass and a higher rate of metabolism, helping to keep lost weight from returning.

Previous studies investigating the effect of energy-restricted, high-protein diets on weight maintenance have reached similar conclusions (2). The fat-fighting power of protein lies in its ability to keep energy expenditure elevated as well as curb hunger despite reduced-calorie intake. This is another reason why Isagenix systems work so well for weight loss—they provide high amounts of quality protein to help you hold onto muscle during weight loss.

Rev up your metabolism with protein
The number of calories burned by the body, or energy expenditure, is greatly influenced by basal metabolic rate (BMR). BMR is the amount of energy, or rate of metabolism, required to support basic body functions when your body is at rest.

The greatest contributor to BMR is fat-free mass. Fat-free mass is largely made up of muscle, which is very energy demanding. Even when no work is being performed (such as when you are sleeping), muscle requires energy just to exist. Muscle cells and their components are constantly using calories to rebuild what is broken down during normal protein turnover. A higher protein diet not only increases energy-demanding protein synthesis and turnover, but has also shown to better preserve muscle during caloric restriction (1, 2). Keeping muscle mass and turnover rates high results in a higher BMR, faster metabolism, and greater energy expenditure.

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The thermic effect of food (TEF) is another factor that affects energy expenditure and refers to the amount of energy needed to break down, absorb, and digest food. The TEF differs between nutrients, with protein requiring more calories for digestion and metabolism than both fat and carbohydrate combined. Specifically, 0 to 3 percent of the calories obtained from fat are used for fat digestion, 5 to 10 percent of calories from carbohydrate are used for carbohydrate digestion, and 20 to 30 percent of calories from protein are used for protein digestion (2). This means that protein requires a substantial amount of calories for the body to metabolize and use it, compared to the other macronutrients. Simply by eating more protein in place of carbohydrate or fat, you will burn more calories.

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Isagenix: making the higher protein lifestyle easy
Sustaining weight loss over the long term is challenging but not impossible. A high-protein diet offers numerous metabolic advantages that will not only help you lose weight, but may also prevent regaining pounds, or worse, surpassing your starting weight. Better yet, it helps you lose the right kind of weight—fat—while maintaining muscle.

Isagenix offers a variety of convenient and delicious high protein meals and snacks that can aid weight-maintenance efforts. Incorporating these Isagenix products into your reduced-calorie diet will not only help you get into those skinny jeans, but will help you stay in them.

REFERENCES

Feel full longer with protein
Successfully committing to a reduced-calorie diet can be difficult when you are bombarded by cravings and hunger pangs. Ravenous hunger will only encourage overeating and weight regain. Research has shown high-protein diets to be superior to low-or standard-protein diets in causing a feeling of fullness, thereby leading to lower calorie intake (2). A reduced-calorie diet will lead to greater use of existing fat stores, as you quickly burn through the energy provided by the food you consume, as well as the carbohydrate stored in your body (glycogen). This increased reliance on fat for fuel has been suggested to reduce appetite.

Protein may also boost satiety by sending hormonal messages to the brain signaling fullness. When protein is eaten, sensors located in the gut are activated. Hormones such as glucagon are released, sending a message to your brain saying, “I’m full!” (3).
Are your hard-earned abs trapped under a layer of flab? The secret is out: the Isagenix nutritional cleansing system is the key to making your muscles “pop.” By combining fat-busting Cleanse Days with muscle-building Shake Days, you could be sporting that six pack and tight body you’ve always wanted by summer.

Building muscle and shedding unwanted body fat at the same time can be difficult because a certain amount of calories and high-quality protein must be eaten to prevent muscle breakdown. That’s where many diet plans go wrong. Sure, you will lose weight quickly on popular juice cleanses and other very low-calorie and low protein diets. But most of this will be water and muscle, and little will be fat. In the aftermath of the crash diet, you will be left with a slower metabolism, a less shapely physique, and an exceptional ability to store fat quickly. That’s where the Isagenix system is different. The Isagenix nutritional cleansing system is designed to transform your body by allowing you to build muscle and burn fat while keeping metabolism high. The secret lies in the combination of scientifically supported Shake Days with Cleanse Days. During Shake Days, the right type and amount of protein is consumed to maximize muscle synthesis when coupled with weight training. During Cleanse Days, the body efficiently melts away fat.

Although taking a day or two to abstain from eating on Cleanse Days may seem counterintuitive for muscle-building goals, disruption to the muscle-building process will be avoided when cleansing is done right and in combination with weight lifting during high-protein Shake Days. Studies have shown that Cleanse Days, or intermittent fasting as known to the scientific community, are great for obliterating fat stores and transforming the body, even in the muscle-minded.

Cleanse Days shrink fat cells
To say fat is a fact of life is an understatement—fat is a fact of about 40 billion cells! That’s how many fat cells the average adult has, and unfortunately that number can only increase; it can’t decrease. Think of fat cells like balloons. They start to fill up whenever calorie intake exceeds calories burned, and keep on inflating until they can’t inflate anymore. Once this happens, it can trigger the creation of new fat cells that are ready to be filled (1).

Even though the body cannot lose any fat cells, it can still shrink them into almost nonexistence. Cleanse Days help in this process because more calories are burned than eaten so the body will start to use fat for fuel, and this causes fat cells to shrink. Performing Cleanse Days on a regular or semi-regular basis means you’re giving your fat cells a repeated dose of fat-cell shrinkage, which equals more visible muscle and a more toned body.

Cleanse Days boost muscle-building compounds, helping to prevent muscle loss
Not only is human growth hormone an important part of muscle building, it also plays a role in preventing muscle breakdown and increasing fat burning. Cleanse Days are known to boost production of growth hormone (2). Fasting for just one day has been shown to increase growth hormone by an average of 1,300 percent in women, and nearly 2,000 percent in men (3).

This increase in growth hormone is one of the main reasons why completing a Cleanse Day will not abolish long-term, muscle-building goals. Growth hormone helps to defend against muscle loss on Cleanse Days by increasing the body’s use of fat for fuel. By forcing the body to rely on fat stores for energy rather than on protein hijacked from muscle, muscle loss can be minimized and fat burning can be maximized.

Additionally, fasting increases the body’s sensitivity to insulin, which is another hormone important to muscle-minded people. Insulin is important for muscle growth because it helps deliver sugar eaten during a meal to muscle where it can be used for energy during activity. Sensitivity to insulin is critical for meeting muscle-building and fat-burning goals because dietary carbohydrates can be efficiently used by muscle to stimulate growth rather than being converted to fat.
**Shake Days plus resistance training maximize muscle gain**

The IsaLean® and IsaLean Pro Shakes offer the perfect post-Cleanse Day nutrition to stimulate maximum muscle building. Both are high in whey protein, which is superior to other protein types for promoting muscle maintenance at rest or for bolstering muscle building after exercise (7-9). This is because whey protein is high in the amino acid leucine, which is seen by the body as the trigger for muscle growth. In addition, whey protein is absorbed and delivered to muscle quickly, further strengthening muscle synthesis.

No other protein has more research behind it showing superiority for muscle building, fat burning, and healthy weight management than whey. And studies have shown that the best nutritional strategy to maximize muscle growth and manage weight is to eat 20 to 40 grams of quality protein at regular intervals throughout the day (10, 11)—exactly what happens during Shake Days. By combining the Isagenix nutritional cleansing regimen of Shake and Cleanse Days with a regular gym routine, you have everything you need to achieve a tone, trim body, and to get those muscles to “pop.”

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**REFERENCES**


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