

# Live long. Live healthy.

THE SCIENCE BEHIND ISAGENIX

# WHY DIETS FAIL

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# Live long. Live healthy.



## A word from the chief...



Here's a New Year's resolution for you—**ditch the fad dieting**. More than 45 million will be starting a fad diet this year that will end in failure, again. It doesn't have to be this way. The message of this Winter 2015 newsletter is that it's time to make a change with the help of good nutritional science through Isagenix.

A variety of reasons exist for why diets fail

(get the details on Page 3). But chief among the contributors is muscle loss and a slower metabolism. Together these will eventually lead to weight regain. Another problem is hunger, and lack of satisfaction, from the improper nourishment provided by most fad diets. We need a solution that is simple and convenient.

Solving these problems is the Isagenix 30-Day Cleansing and Fat Burning System. Through the combination of products used on Shake Days (see Page 10) and Cleanse Days (see Page 13), Isagenix supplies the time-tested tools for healthy weight loss. In fact, it does the opposite of fad diets by supporting muscle maintenance and boosting metabolism.

Now scientifically validated through clinical research (see Page 7), the 30-Day System is shown to be different than fad diets. What's more, unlike most diets, the latest evidence is showing that Isagenix is capable of producing long-term results. That's a big deal!

Live well and adventurously,

Suk Cho, Ph.D.  
Isagenix Chief Science Officer

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WHY



FAIL

**In 2015, more than 45 million Americans will start a new diet...**

...and, if history repeats, then two out of five will quit within the first seven days, and only one in five will make it three months (1).

Of those who do manage to stick to their diets and lose weight after a few months, the majority—80 to 90 percent—will regain all their weight and more.

A study published in the *International Journal of Obesity* adds even more pessimism to these diet fail numbers. Researchers found that only three percent of subjects maintained their weight loss after five years (2). Most had bounced back to where they started, or worse, gained weight.



## Diet Fail Reason #2: Slow metabolism.

Muscle is a metabolically active tissue, meaning it takes more energy (calories) to be maintained. Fad diets that result in muscle loss ultimately reduce metabolism, making it difficult to maintain weight loss.

Additionally, strictly reducing calorie intake slows down metabolism in an effort to conserve energy—a mechanism that helped humans survive through times of famine. When metabolism slows and the body becomes more efficient at using energy, it doesn't burn the calories needed to reach weight-loss goals and instead encourages weight gain.

### What's wrong with diets? Why don't they work?

The weight cycling problem stems from the very way *diet* is defined. It usually refers to a temporary change with an end in sight—a fad. Instead of steady, healthy weight loss, many turn to unhealthy fad diets for immediate gratification. While weight may be lost rapidly with most fad diets, it's likely to creep back on once normal eating resumes.

Weight regain is not simply due to lack of willpower, as some claim. There are real physical consequences of fad dieting that set dieters up for failure. Here's a look at four ways fad diets alter body physiology, and why it's almost impossible to maintain weight loss on these diets:

## Diet Fail Reason #1: Muscle loss.

Restrictive fad diets put the body in a catabolic state, which causes tissue breakdown that affects both fat and muscle. The typical dieter engaging in calorie restriction loses 75 percent of their weight as fat and 25 percent as muscle (3). Dieting can have an even more drastic impact on muscle status. Dieters may be impressed with the quick weight loss on a typical fad diet; however, a majority of it could be muscle mass.

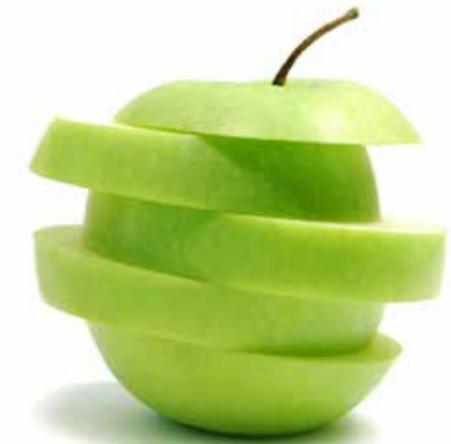


## Diet Fail Reason #3: Depriving the body of essential nutrients.

Fad diets are often devoid of essential vitamins and minerals, which may lead to significant side effects—including irritability, headaches, mood swings, mental fatigue, and digestive upset—and serious long-term consequences. For example, extremely low-fat diets can interfere with absorption of fat-soluble vitamins. Low-fat dieters commonly lack adequate amounts of essential fatty acids needed for many organ systems in the body including heart and brain.

## Diet Fail Reason #4: Poor satiety.

Satiety (feeling full) is regulated by appetite hormones, namely leptin and ghrelin. Leptin is produced by fat cells and sends signals to the brain to reduce food intake when a person is full. Ghrelin is known as the "hunger hormone" and is produced primarily by the stomach and intestinal tract and initiates the cascade of events that signal hunger. According to a study from the *New England Journal of Medicine*, the off-and-on experience for dieters may be due in part to the persistence of hormones that drive the urge to eat (4). Perhaps even more surprising, alterations in appetite hormones were still seen in dieters a year after restrictive dieting.



**Despite that, the failure of dieting has not stopped dieters from trying. In fact for 2014, the weight-loss industry is predicted to be worth \$60.5 billion (5).**

While fad diets claim to be the solution to sustained weight loss, science supports healthy lifestyle changes and balanced diets people can adhere to long term.

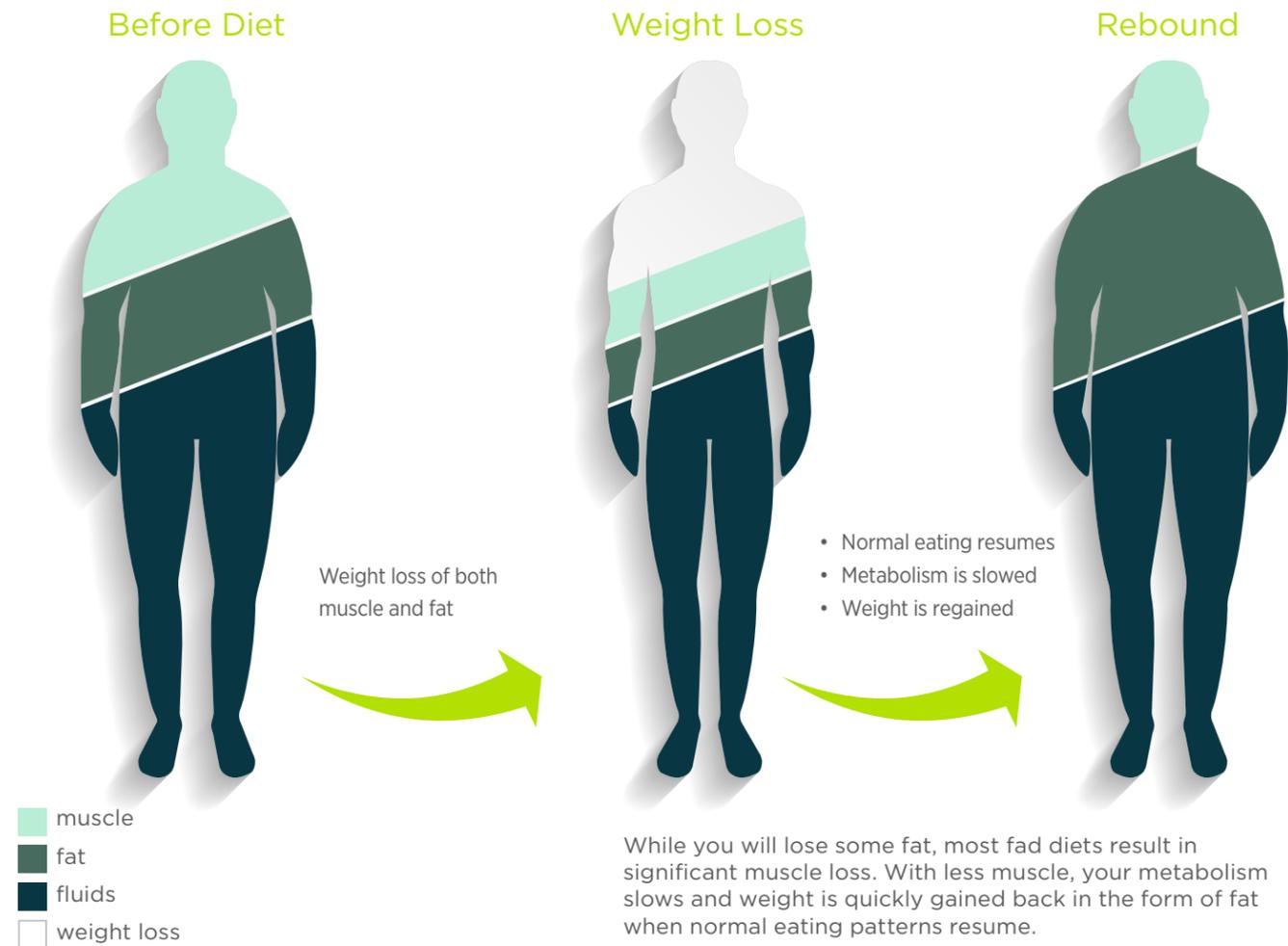
What Isagenix offers is a system of products that tackle these obstacles of weight loss and maintenance from all fronts: Shake Days and Cleanse Days to support fat loss and muscle maintenance, good nutrition, and balanced meals and snacks for satiety.

Ditch fad diets and commit to the Isagenix lifestyle for healthy weight loss that can be maintained.

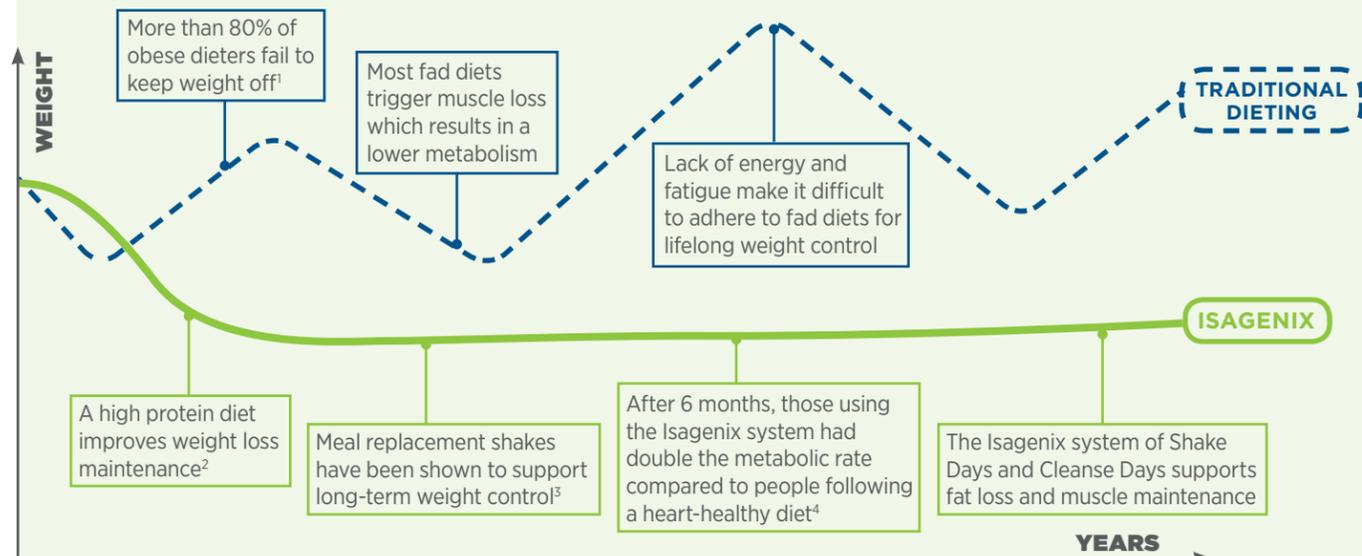
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# WHY FAD DIETS DON'T WORK



## THE ISAGENIX DIFFERENCE



## The Science Behind the Isagenix 30-Day System

Rewind back to 2002, Isagenix was born out of an idea—call it a stroke of inspiration or a practical, thoughtful approach to a nutritional program—to produce a line of products like no other.

An important distinction was that these products would be combined into a system involving “Shake Days” and “Cleanse Days.” The Shake Days replaced two meals a day with shakes, allowing for flexibility on a third meal. The Cleanse Days, conversely, were one or two days a week of fasting supplemented by the herbal drink, Cleanse for Life, and Isagenix Snacks™ wafers.

It was this Isagenix 30-Day Cleansing and Fat Burning system (along with additional supportive products like Natural Accelerator, IsaFlush, and the adaptogenic-drink Ionix Supreme) that propelled the company to new heights in bringing convenient health and weight management to thousands of people.

Fast forward 12 years, it's easy to see that Isagenix science has come a long way. Seeking scientific validation of its core system, the company has now funded several independent clinical studies performed at colleges and universities.

Clinicians including Dennis Harper, DO, and Robert Watine, M.D., are credited with putting Isagenix on the path to clinical research by collecting data on their own patients using the products.

Beginning in 2009 at New York Chiropractic College, “proof of concept” of the Isagenix system began with two independent open-labeled pilot trials. The principal investigator, Mary Balliet, Ph.D., submitted her research to the renowned scientific conference Experimental Biology. It would be the first time that the system would strike interest within the scientific community, paving the way for further interest and research.

By the time 2010 and 2011 rolled around, the company had sought out collaborations with several colleges and universities for a variety of research

studies. It was also in 2011 that Isagenix partnered with University of Illinois at Chicago (UIC), a leading research institution in the field of health sciences, health promotion, and disease prevention.

The UIC partnership would prove to be particularly fruitful, largely because of the selection of **Krista Varady, Ph.D.** as lead investigator. Dr. Varady's previous research offered encouraging results from intermittent fasting and alternate-day fasting regimens for weight loss and cardiovascular health.

Unlike other regimens, however, the Isagenix system was the first to incorporate both an intermittent fasting (Cleanse Days) and a calorie-restricted regimen together (Shake Days). Dr. Varady noted that she was excited at the prospect of comparing the system to a heart-healthy diet, the gold-standard benchmark.

Sure enough, after a 10-week study, subjects on the Isagenix system turned out to have superior results across all clinical parameters in comparison to the heart-healthy group. Notably, they lost more weight, more total body fat, and twice as much visceral fat leading to greater improvement in cardiovascular risk factors (2,3).



The UIC study was a major milestone for Isagenix. Its findings were reported in two reputable peer-reviewed journals in 2012, *Nutrition Journal* and *Nutrition and Metabolism* (2,3). In addition, in 2013 the study won the award for best poster in the Obesity Research Interest Section at the Experimental Biology conference.

It should have been no surprise that the results of the UIC study would attract other researchers who had an interest in evaluating Isagenix products. The company, however, was interested in taking research a step further—a new challenge for the Isagenix system. “Most companies would stop there, but not Isagenix,” said **Chief Science Officer Suk Cho, Ph.D.** “The question was whether people could maintain their weight loss. We also wanted to evaluate the detoxification component of the system.”

In collaboration with a new principal investigator, **Paul Arciero, Ph.D.**, at Skidmore College, and toxicologist Don Patterson at AXYS Analytical Services, it was time to build on where prior research had left off. A new study was designed that would evaluate the system on both women and men, how it would affect arterial flexibility and blood flow (both markers of cardiovascular health), as well as its impact on basal metabolism.

The study was also the first to evaluate a “cleansing” factor by measuring the increase in circulating toxins as a result of the Isagenix system—the essential first step in detoxifying and eliminating harmful compounds from the body. It would be the first study of its kind to evaluate the influence of nutritional intervention on an increase in circulating toxins as a result of the weight loss achieved by a combination of “Cleanse Days” and “Shake Days.”

After an initial 10 weeks, the Isagenix system proved once again to deliver results consistent with the UIC study. The findings were presented as a poster at Experimental Biology and as an abstract in *The FASEB Journal* (4).

At this point, Isagenix gave Dr. Arciero the funding to extend the study with a 12-month weight maintenance period. The initial subjects were split into two groups, with half assigned to a dietitian-counseled, heart-healthy diet and the other half continuing on a maintenance program using Isagenix products.

After six months, the preliminary results were exciting for Isagenix. The system was still showing promising results with considerable metabolic and cardiovascular improvements, along with weight loss and metabolic rate maintained or improved. Currently underway is a review of the final data of the Skidmore College study after 12 months of weight maintenance.

Dr. Cho notes that few companies that market nutritional products ever venture into funding quality research to demonstrate the efficacy of their products. “We did. We want to show that using our products in the long-term leads to lasting benefits,” says Dr. Cho.

For customers who've enjoyed the system from its early years, it should come as little surprise that Isagenix products have worked so well.

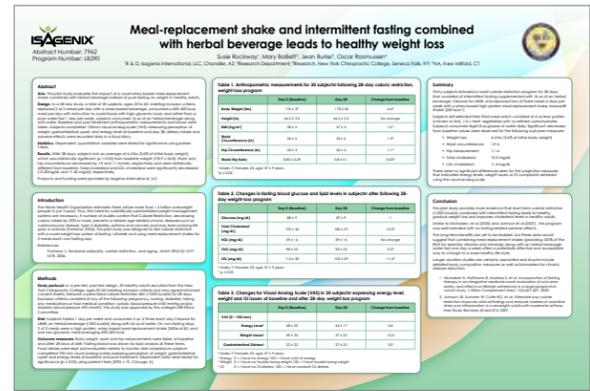
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# ISAGENIX® Timeline

Isagenix is born. An in-house pilot study provides only scientific validation for products.

2002

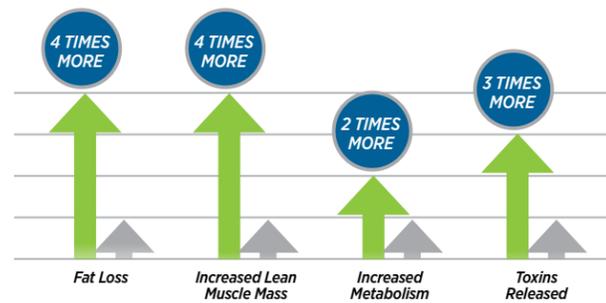


2010

Results from two pilot trials performed at New York Chiropractic College are presented at Experimental Biology.

Two peer-reviewed journals publish the findings of the study performed at University of Illinois at Chicago.

2012



2014

Skidmore College performs 10-week weight loss study on Isagenix products that is then extended to include a 12-month weight-maintenance phase.



# Why Shake Days Work



Essential to successful weight loss and weight maintenance is the adoption of day-to-day dietary strategies that promote a long-term adherence to a healthy diet. This also happens to be where most people get it wrong.



A strict diet plan may be easy enough to stick to for a week or two, and it will very likely produce results. But if long-term success is the goal then a dietary strategy that supports compliance, flexibility, and good nutrition is paramount. Because if a diet system can't be integrated into everyday life it can almost be guaranteed that any weight lost will be regained, and maybe even then some.

What's different with an Isagenix system for weight loss is its strategic combination of Cleanse Days and Shake Days. Cleanse Days are based on the concept of intermittent fasting, while Shake Days are calorie-restricted days consisting of replacing two meals with nutrient-dense IsaLean® Shake (or other IsaLean meal replacement option) and having a third healthy meal around 400 to 600 calories.

This one-of-a-kind combination definitely works best together, but Shake Days are effective and unique even on their own for reasons based upon the science of satiety, metabolism, and nutrition.

## Shakes that Satisfy

If hunger strikes an hour after having a meal-replacement shake, then success may be difficult. However, because protein is one of the big players in satiety it has increasingly become the darling of weight-loss and maintenance strategies. Research is showing more and more that optimal protein intake, sources, and timing is essential not only for satiety, but also for muscle building and fat burning (1-3).

IsaLean and IsaLean Pro Shakes provide 24 or 36 grams of protein, respectively, amounts that optimize satiety and muscle protein synthesis when consumed at each meal (4). This dietary intake pattern is significantly different than the amount of protein intake for many people – all carbs or mostly carbs for breakfast, high carb with a little protein for lunch, and finally an overload of protein at dinner. Data from national surveys confirm this by showing adults consume three times as much protein at dinner compared to breakfast (5).

It's not just the amount of protein at meals that matters. Protein type also plays a large role. When it comes to protein sources, no other protein has more support behind it showing superiority for satiety, muscle building, and fat burning than whey protein (6-8). This is due to whey protein naturally having the highest concentration of branched-chain amino acids that are fast digested and absorbed. Whey protein makes up the majority of the protein blend in IsaLean Shakes, but combining it with casein yields greater satiety due to casein being a slowly digested protein (9).

## Low-Glycemic

Also contributing to satiety are fiber, fat, and carbohydrates. The latter, carbohydrates, are what people usually think of when



considering glycemic index or load. However, the combination of protein, fiber, and fat, also greatly influences the glycemic response from the entire meal. Studies have shown that a long-term diet consisting of low-glycemic foods and meals not only helps with weight loss (10), but also results in decreases in obesity-related disease markers such as C-reactive protein and favorable increases in other health markers (11, 12). Because IsaLean Shakes have the right balance of protein (24 grams), carbohydrates (24 grams), fiber (8 grams), and fat (6 grams), they are low-glycemic, which has been validated through clinical testing.

**Nutrient-Dense**

IsaLean Shakes also provide other nutrients seriously lacking in most diets. The USDA continues to find that most adults are lacking in important nutrients including fiber, calcium, and vitamin D, the lack of which have been identified as a public health concern (13).

IsaLean Shakes fit the description of being nutrient-dense providing 8 grams of fiber per shake, with about 30 percent and 80 percent of daily recommendations for calcium and vitamin D, respectively, not to mention other vitamins and minerals. Plus, it's likely impossible to put together a regular meal with the nutrient profile of IsaLean Shake in just 240 calories, which gives true meaning to "maximum nutrition in minimal calories."



**Flexibility**

Though a structured dietary plan is the suggested guideline for a Shake Day with Isagenix, especially when weight loss is the goal, the true greatness is the flexibility of Shake Days that allows for long-term use. When following a suggested Shake Day schedule, the guesswork and effort in making the majority of a day's healthy meals comes down to combining water, ice, and shake mix in a blender or shaker cup. A third meal allows for satisfaction from whole foods and flexibility in choosing the meal's content.

Once weight is lost and maintenance becomes the goal, Shake Days shine further. People will often use shakes to replace one meal per day, or they might replace two meals a couple days a week. IsaLean Shakes can be easily adopted into any dietary regimen as a fool-proof meal that satisfies and nourishes.

Shake Days are central to weight-loss success with an Isagenix system and they can easily be modified to support healthy weight maintenance. In short, they provide a routine that's easy to stick to, provides the right nutrition in the right amounts, and offers real-world flexibility.

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# CLEANSING: An Essential Part of Isagenix Success

Even with weight-loss clinics readily available, calorie counts on menus, and public policy initiatives aimed at supporting a healthier population, people are struggling to lose weight and keep it off.

**The repeated cycle of weight loss and regain shows that the simple remedy of eating healthier and exercising regularly isn't working.**

A new solution is needed to help people achieve a healthy weight and maintain it. Mounting scientific evidence for intermittent fasting as an effective tool for weight loss and maintenance may be the solution for preventing repeated cycles of dieting. Intermittent fasting is a pattern of eating that involves going without food for several hours or up to a couple days. And it can become a lifelong habit.

Isagenix Cleanse Days include a specific form of intermittent fasting because cleansers drink the detox-supporting beverage, Cleanse for Life. Not only are cleansers benefiting from intermittent fasting, but they are also supporting their body nutritionally to rid itself of impurities. Cleanse for Life® provides nutritional support in the form of antioxidant vitamins and botanicals, which are essential for effective detoxification. Additionally, nutritional support is needed to counteract the oxidative damage caused by toxins.

Studies on intermittent fasting have shown that it's as effective for weight loss as cutting calories (1). In one study, overweight women who fasted intermittently for six months lost more weight than women who restricted their calories each day (2).

How intermittent fasting works to support weight loss and maintenance is multifaceted.



## Improves insulin sensitivity

One of the ways intermittent fasting helps is through improving how well insulin ushers glucose from the blood (after eating food) into cells where it is used for energy. It's an important part of healthy weight management. Similar to how drinking coffee habitually can dull the response to caffeine, an excess of carbohydrate intake can decrease sensitivity to insulin. When people are less sensitive to insulin, they cannot efficiently use the food they eat leading to a cascade of health issues including fatigue and increased hunger—two culprits in weight gain.

Insulin sensitivity is “reset” by fasting. Healthy men who fasted for 20 hours every other day for 15 days had increased rates of glucose uptake, signifying improved insulin sensitivity and better blood sugar control (3). With insulin sensitivity becoming an increasingly common issue among aging adults (4), intermittent fasting may be especially effective for older adults with weight-loss goals.

## Resets calorie intake

Although it seems counterintuitive, evidence suggests that when intermittent fasting becomes a lifestyle, less food is commonly consumed during normal calorie days (5).

The exact mechanism has not been identified; however, some theories suggest that changes in calorie intake could be due to shrinking of the stomach causing people to become full faster. Another theory suggests that relying on fat for fuel during fasting can up-regulate or down-regulate certain genes involved in metabolism affecting appetite regulation. More research is needed, but there's no denying the benefits of calorie control for weight loss.

## Encourages adherence

One of the biggest issues with fad diets is that people cannot adhere to them long term. They are usually restrictive, can leave people feeling sluggish and tired, and often cause muscle loss. The key to weight loss and maintenance is a diet plan that fits into your lifestyle.

There are various definitions of intermittent fasting and it's up to the individual to choose what works best for them. And while it may seem daunting at first, studies show that satisfaction during fasting increases with time (6).

## Maintains muscle mass

Muscle is a very greedy tissue. It requires a lot of calories just to exist and puts the body to work resulting in a higher metabolism. For that reason, muscle is an important player in weight loss. Because fasting requires a period of time without significant food intake (including protein), some fear that it would cause muscle loss. While long periods of fasting will cause the body to turn to muscle for energy, short periods (24 to 48 hours) are not going to result in significant muscle loss.

A study with 16 obese subjects who incorporated alternate day fasting had an average weight loss of 12 pounds with 99 percent coming from fat (7). That's a very different outcome than many diets—on average, typical dieters shed about 75 percent of weight as fat and 25 percent as muscle, leading to a decreased metabolism and greater risk of weight regain.

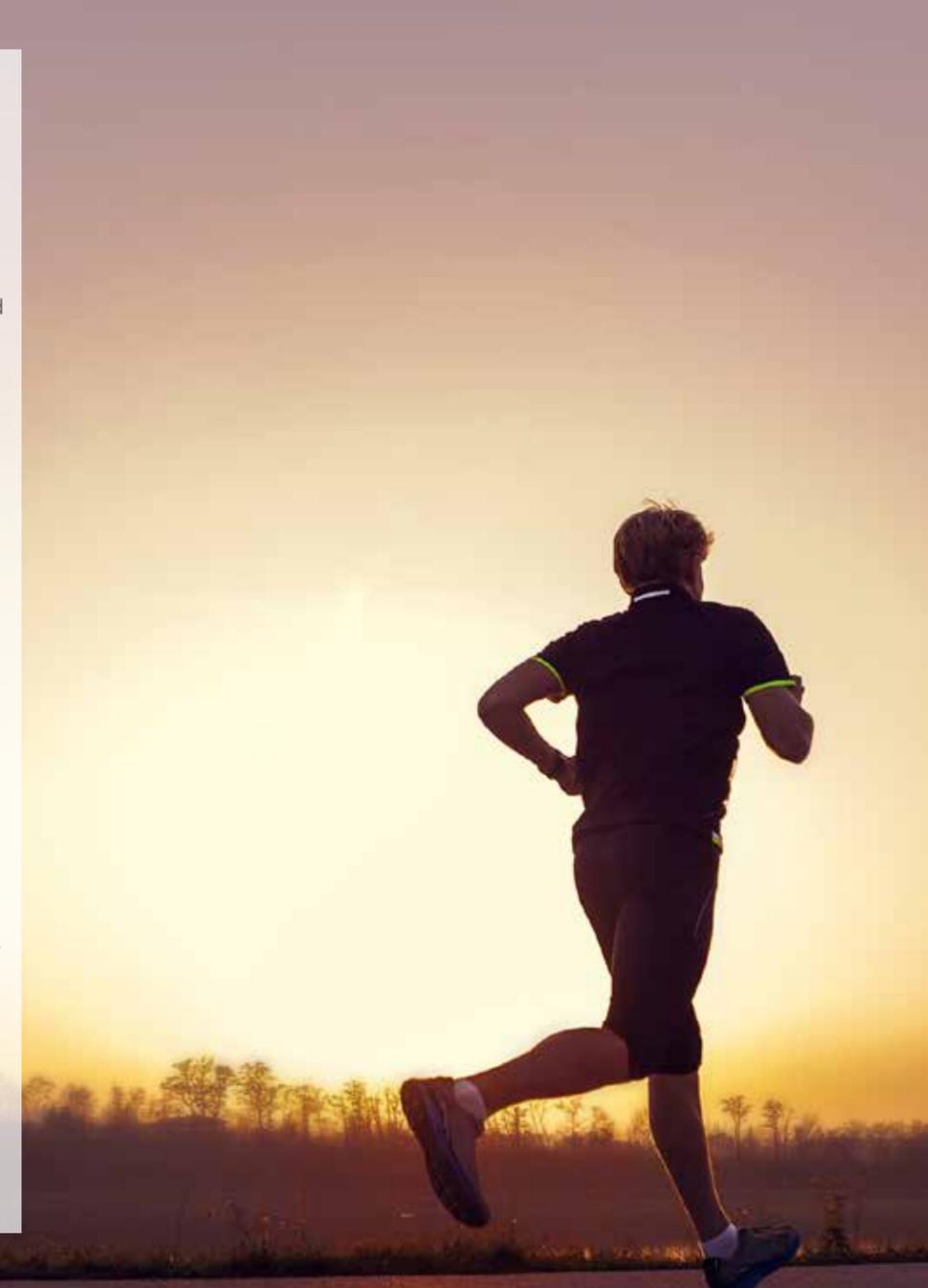
## Supports weight-loss maintenance

Researchers have evaluated weight loss patterns for the average dieter. The key is to make a dietary change that can be maintained for the long term and support muscle mass. Because there are many ways to do intermittent fasting, it can be integrated into any lifestyle to support weight maintenance.

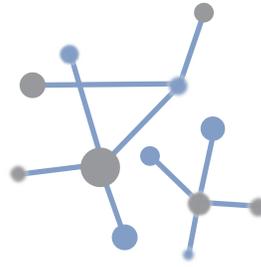
Cleanse Days, or intermittent fasting days, are just another tool in the weight-management toolbox. Combined with a healthy diet including Shake Days, regular exercise, quality sleep, and stress-relieving practices like meditation, they can lead to long-term weight maintenance.

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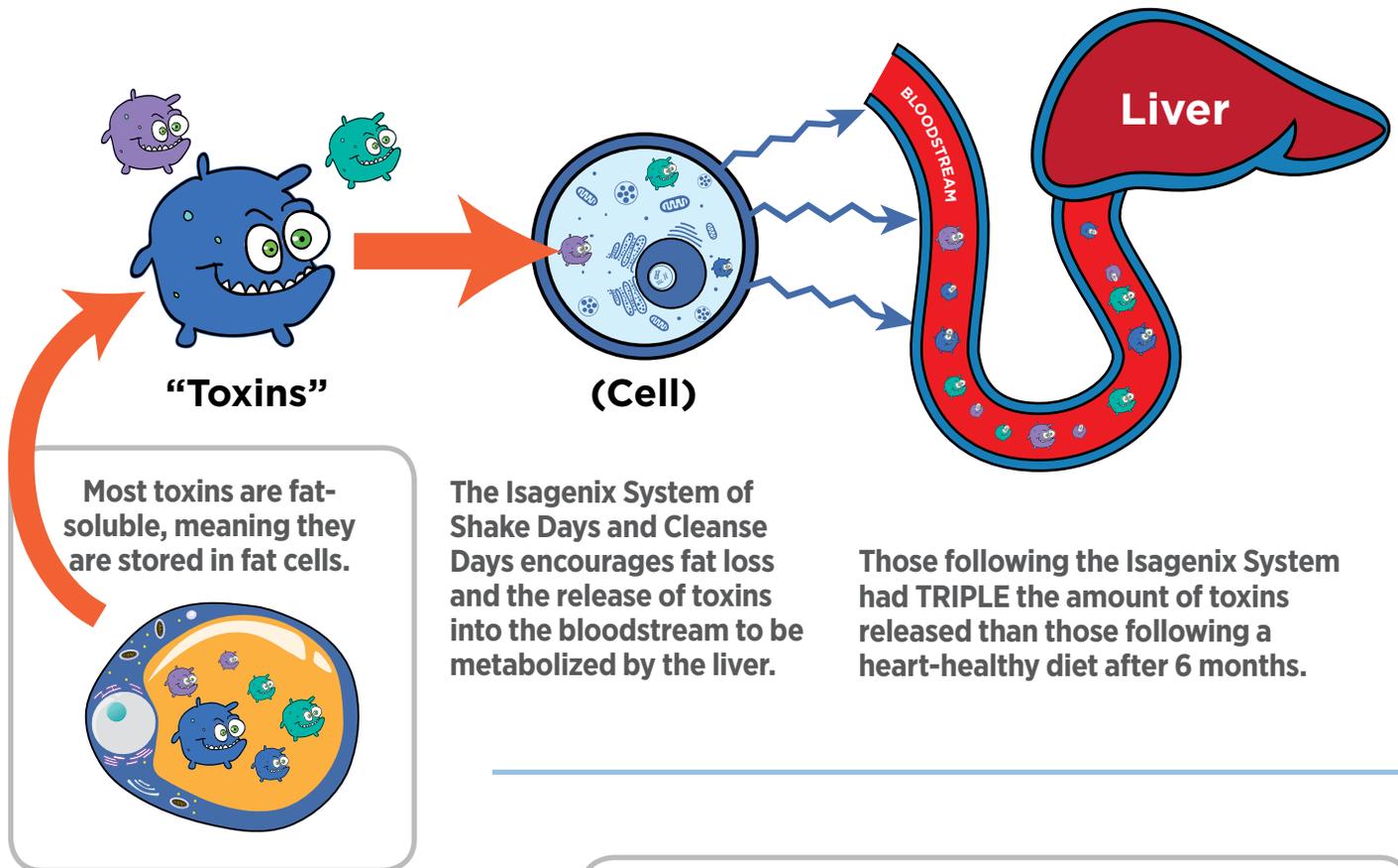


# Detoxification with ISAGENIX



# 80,000

The amount of manufactured chemicals that are in common use worldwide. (GAO)



**CLEANSE FOR LIFE®** contains ingredients that support the body's natural detoxification systems.\*

## 3 Phases of Detox

### Phase 1

The toxin is metabolized by phase 1 enzymes to make it more water-soluble.

### Phase 2

Enzymes make the toxin even more water-soluble and less reactive. Antioxidants also add protection.

### Phase 3

The less reactive toxin, metabolite, is transported into the bloodstream for elimination.



\* These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.