

# ISAGENIXSCIENCE

## Low Glycemic IsaLean Bars

*Clinical findings show bars don't spike blood sugar levels*



Fans of Isagenix IsaLean® Bars will find enjoying them all the sweeter now that a new study has shown that eating them won't spike blood sugar levels.

Whether customers have a preference for Lemon Passion Crunch or Chocolate Decadence

flavors, they can rest assured with clinical findings showing that both meal-replacement bars maintain normal levels of plasma glucose and have a statistically significantly lower glycemic effect when compared to standard controls. *"Bars" continued on page 2.*

### Suk's Letter

This is a company that delivers on its promise to provide "no compromise" products backed by science. So, this year, I've tasked our QRTS team to enhance our knowledge in regards to our latest research and development efforts, scientific findings related to our products and their ingredients, as well as tidbits that you can use to share with our Associates.

In this first issue, we hope you enjoy learning about our latest study on IsaLean Bars, reasons why Ageless Essentials Daily Pack is now one of the Isagenix Four Pillars of Health, and about the science behind Ageless Actives and its benefits to your health.

Live well and adventurously!

*-Suk Cho, Ph.D.*

### FOURTH PILLAR OF HEALTH: AGELESS ESSENTIALS DAILY PACK

Who wouldn't want to feel ten years younger, live long enough to play with their great-great grandchildren, travel the world at 80, or see who wins the Superbowl in the year 2050?

Ageless Essentials Daily Pack can help you live these dreams of a future with long-term health and quality of life.



The pack offers you the latest that science has to offer in terms of anti-aging nutrition. Convenient AM and PM packets make it is *the* solution for keeping your cells healthier, keeping your bones and heart stronger, and your brain and other organs functioning at their best. *"AEDP" continued on page 3.*

HIGH-PROTEIN BARS BEST FOR NUTRITION AND WEIGHT MANAGEMENT

*“Bars” continued from page 1.*

Glycemic effect is a measure of how a particular food affects blood glucose levels. Eating foods balanced in protein, fats, fiber and complex carbohydrates are considered a better approach to maintain blood sugar levels (1 & 2).

In the study, Brigham Young University researchers tested blood glucose response for each of the bars and white bread (standard control) in 11 adult subjects (five men and six women)—for this type of testing, experimentation is typically performed on 10 or more subjects with standard protocol.

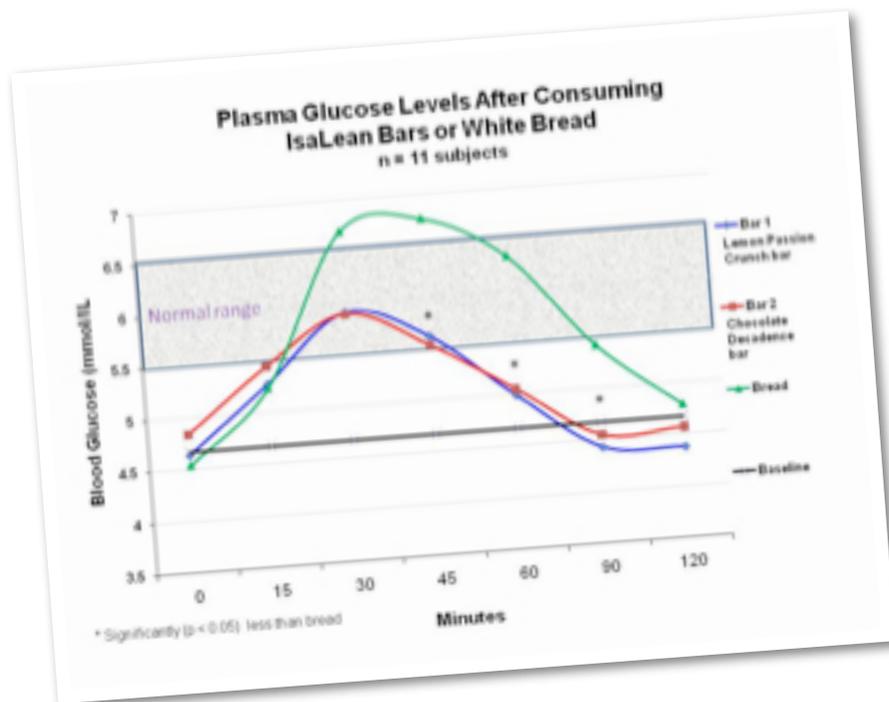
In a cross-over design, the scientists tested blood glucose response in each subject at the same time in the morning on three different occasions with a two-day washout period between tests.

Subjects fasted and abstained from rigorous exercise for 12 hours prior to testing. Each participant acted as his or her own control by testing the bread and the bars in a random order. The scientists took blood samples before subjects ate the test food and then at 15, 30, 45, 60, 90 and 120 minutes after eating.

The effect of the meal on glucose levels is typically evaluated over a two-hour period. After a meal including carbohydrates, plasma glucose levels (blood sugar) are expected to rise in a healthy adult and then return to a “normal” range between 5.5 to 6.6 millimoles per liter, or 100 to 120 milligrams per milliliter (mg/ml). IsaLean Bars maintained normal levels of plasma glucose levels at each testing period.

“Even at the highest plasma level seen at 30 minutes, glucose levels reached only just over 100 milligrams per milliliter, well within the ‘normal’ plasma glucose range,” said Isagenix Director of Research and Science Susie Rockway, Ph.D., CNS. “These results clearly show that IsaLean Bars do not lead to blood sugar spikes in healthy adults.”

These results came from healthy men and women and are not applicable to people with type 2 diabetes,



who should continue to monitor blood sugar with any food eaten.

**High-Protein Bars for Weight Management**

Meal-replacement bars have gained popularity as a convenient way to assist in weight management. The health-food bar market reached \$5 billion in 2010 and retail sales are predicted to increase 10 percent per year over the next five years.

IsaLean Bars represent a convenient, high-protein meal replacement designed to meet weight management and nutrition goals. “We designed them to appeal to a mass audience, many of whom struggle with being overweight or obese,” said Isagenix Chief Science Officer Suk Cho, Ph.D.

The bars are high in whey protein, offer a balanced amount of fats and carbohydrates, and provide daily requirements of vitamins and minerals. The combination of carbohydrates doesn’t lead to elevated blood glucose levels, as the BYU study has shown.

“Not all health bars are alike,” Dr. Cho adds. “With use of high-quality ingredients, you can have bars that taste delicious, deliver nutrient density with

minimal amount of calories, and yet have a low glycemic effect.”

The high-protein bars also present multiple benefits because of impact on satiety as well as muscle protein synthesis—aiding weight management and helping to maintain or increase muscle mass with age.

Unlike other bars in the marketplace, the Chocolate Decadence and Lemon Passion Crunch flavors also contain a blend of astragalus root, açai fruit extract and wolfberry extract—delivering “adaptogenic” phytochemicals with every bite for

helping consumers adapt to stresses of everyday life. They are also all-natural, containing no artificial flavors or colors.

World Health Organization statistics show more than 1 billion people are overweight and at least 300 million of those are clinically obese.

In the United States, the Centers for Disease Control and Prevention has reported that more than one third of adults (more than 72 million people), and, sadly, roughly one out of every seven children are obese.

## References

1. Radulian et al. *Nutr J* 2009.
2. Brouns et al. *Nutr Res Rev* 2005. 

*“AEDP” continued from page 1.*

The Ageless Essentials Daily Pack offers four potent supplements designed to serve as a foundation for slowing damage to metabolic pathways that contribute to age-related changes associated with poor health.

**C-Lyte** - Why do you need to supplement with vitamin C? Because damaging oxidative stress can be reduced in the body simply by consuming higher levels of this single water-soluble vitamin. It’s a tried-and-true vitamin that is also directly involved in the promotion of collagen synthesis (1). So, it’s also important for maintaining youthful-looking skin.

**IsaOmega Supreme** - The high concentration of omega-3 fatty acids in these fish oil softgels aren’t just any; they are not the short-chained omega-3s found in plants, but are the long-chained omega-3s that offer most benefit for the heart and brain: *docosahexaenoic acid* (DHA) and *eicosapentanoic acid* (EPA). In addition, the fish oil is molecularly distilled, ensuring it has no detectable amounts of toxins (heavy metals, PCBs and dioxins), which are often found in seafood and competing fish oil products. IsaOmega Supreme offers unmatched purity and potency and the right amount of long-chained omega-3s to meet recommendations (2) for support to cardiovascular health.

**Essentials for Women/Men** - National Health and Nutrition Examination Surveys (NHANES) have found that most Americans still lack vitamins and minerals in the diet to meet Institute of Medicine’s Recommended Daily Allowances for prevention of chronic diseases – a problem made worse with age and by adoption of popular diets such as Atkins diet, Ornish diet, and the South Beach diet (3-5). In 2002, a report in *Journal of American Medical Association* recommended taking a multivitamin daily for optimal health (3). Essentials for Women/Men offers you optimal doses of vitamins A, C, and E, as well as B vitamins, and minerals such as calcium and zinc. Each of these micronutrients must be consumed regularly to achieve a better quality of life into old age (3). The supplement is unique because of rapid disintegration and sustained-release absorption technologies.

**Ageless Actives** - With this product, Isagenix dives deeper into reversing the effects of age-related changes affecting health. *Coenzyme Q10* (coQ10) is a nutrient needed for that youthful energy that we’d all love to have in old age (6). We do get some coQ10 in food, but we absorb very little of it. In Ageless Actives it is offered in a form that is more easily absorbed in the body (more on pages 5 and 7). *Vitamin D* is an anti-aging hormone that acts on around 5,000 genes in the body. National recommendations recently

WHY DOES CLEANSING AND FAT BURNING SYSTEM WORK?

tripled in amounts (7); however, they are still not enough for what experts say is necessary for optimal health, particularly for people who are overweight or obese (more on page 5).

*Resveratrol* was made famous because it increases lifespan in several species. Studies show that in humans it supports cardiovascular health (along with grape polyphenols) and may help with the battle of the bulge (more on page 6).

To create the most advanced anti-aging supplement pack on the market, the QRTS department laid the groundwork for Ageless Essentials Daily Pack by performing a thorough review of the latest scientific studies.

The focus was on ensuring that the product reflected quantities and quality of nutrients that meet criteria in line with updated nutritional guidelines and therapeutic doses and forms.

Giving special attention to safety across all populations, the ultimate goal is to provide amounts of each quality nutrient and bioactives to keep consumers living healthier longer.

References:

1. Groff and Gropper. 2000.
2. American Heart Association. 2010.
3. Fletcher et al. *JAMA* 2002.
4. Ghanim et al. *J Clin Endocrin. Metab* 2010.

5. Dickinson and Shao. *CRN* 2006.
6. Gardner et al. *Am J Clin Nutr* 2010.
7. Institute of Medicine 2011.
8. Molyneux et al. *NZ Med J* 2009.
9. Davis et al. *Am J Ther* 2009.
10. Ghanim et al. *J Clin. Endocrin Metab* 2010. 

**Timing Tip**

Enjoy AM and PM packets at the same time as a balanced, high-protein meals such as IsaLean Shake for improved absorption.

The packets were designed to augment the nutrient density of the IsaLean Shake for greatest anti-aging benefits.

ANTI-AGING NUTRITION IN CONVENIENT AM AND PM PACKETS

Calcium, vitamin D and vitamin K2 for strong bones

B vitamins for a healthy brain and heart

High-potency fish oil for a strong heart

Vitamins A, C and E to battle oxidative stress

CoQ10, resveratrol, and vitamin D for youthful energy

Bioactives targeted to men's and women's unique needs



CAN TAKING A MULTIVITAMIN DAILY REALLY SLOW AGING?

Women who take quality multivitamins have an average of 5.1 percent longer telomeres, a study reports, which translates to a difference of a potential 9.8 years of age-related telomere loss. The length of telomeres, found at the end of chromosomes, decreases with cell division, making them one of the best-known markers of biological aging.

Reference: Xu et al. *Am J Clin Nutr.* 2009. 

## VITAMIN D STATUS AFFECTED BY OBESITY

People who are overweight or obese are more likely to have lower circulating levels of vitamin D and may have trouble with conversion to its hormonally active form, a Norwegian study suggests.

These findings, published in the *Journal of Nutrition*, may partially explain why carrying extra pounds raises risk of several poor health outcomes linked to low vitamin D. The hormonally active form is critical for maintaining cell health, strong bones, a strong immune system, and a healthy heart and brain.

A seasonal variation of both vitamin D metabolites in the obese subjects provided clues that excess weight disturbed the complicated conversion (hydroxylation) of the circulating 25(OH)2D to hormonally active 1,25(OH)2D in the kidneys.

The authors suggest that measurement of both serum concentrations, 25(OH)2D to 1,25(OH)2D, in overweight and obese persons may be valuable because of “the reduced bioavailability” of the fat-soluble vitamin that “accumulates in excess body fat and muscular tissue.”

The research confirms prior studies’ findings that people who are overweight or obese may need to obtain higher amounts of vitamin D from sun exposure, diet or supplementation. In addition, achieving a healthier BMI is predicted as a way to improve vitamin D status.

Reference: Lagunova et al. *J Nutr* 2011. 



## COQ10 ADDS TO MEDITERRANEAN DIET’S ANTI-AGING BENEFITS



Elderly men and women who supplement Mediterranean-style meals with coenzyme Q10 (coQ10) enjoy greater antioxidant protection that could slow aging.

In a randomized crossover trial, University of Cordoba researchers

found that the combination (Mediterranean-style meals and coQ10) improved antioxidant activity and reduced cellular oxidative stress in the subjects more successfully than the Mediterranean-style or Western-style diet alone.

The Mediterranean-style diet protocols also exhibited greater heart-protective benefits in comparison to the Western-style diet. The scientists noticed a significantly greater decrease in HDL cholesterol (the “good”

cholesterol) levels in response to the Western-style meals.

Writing in the December issue of *Age*, the authors concluded that the effect of the Mediterranean-style diet rich in olive oil, in combination with coQ10, may have “favorable effects on the aging process” and on the prevalence of age-related conditions.

Reference: Yubero-Serrano et al. *Age (Dordr)* 2010. 

## OMEGA-3 SLOWS MUSCLE LOSS



Supplementation with fish oil omega-3 fatty acids stimulates muscle growth and may help prevent muscle loss in aging adults, according to a new randomized controlled trial.

Reference: Smith et al. *Am J Clin Nutr* 2010. 

B VITAMINS CUTS RATE OF BRAIN SHRINKING IN HALF

Unfortunately, getting older comes with a common consequence affecting up to 16 percent of elderly people – gradual reduction in brain size, which is associated with problems in learning and memory. However, a new study reports that daily supplementation with high doses of B vitamins may help slow the rate of brain degeneration.

Oxford researchers gave 168 individuals over the age of 70 supplements containing high doses of folic acid (0.8 milligrams per day), B6 (20 milligrams per day) and B12 (0.5 milligrams per day), or a placebo as part of a randomized, double-blind controlled trial. Then, following two years of the supplementation program, the participants’ brains were assessed using serial volumetric magnetic resonance imaging scans.

The researchers reported their results in the September issue of *PLoS One*: the rate of brain shrinkage, or atrophy, in the group taking the supplements was 53 percent lower in comparison to the group taking the placebo. Their conclusion was that the high doses of B vitamins slowed the rate of brain shrinkage in elderly with mild cognitive impairment.

According to the authors, however, it is still unclear which vitamin provided the greatest benefit for the brain. They found that the reduced rate of brain atrophy was a result of an increase in either vitamin

B12 status or folic acid status, but could not conclude which of the two “vitamins is the most important.”

They added that vitamin B6 may be less important for brain health since there was a, “lack of association of atrophy with the change in cystathionine levels, a marker of vitamin B6 status.”

Folic acid and vitamin B12 play a role in protecting the brain, most likely because their presence helps to lower the concentration of the amino acid homocysteine in plasma. Higher levels of homocysteine are a risk factor associated with smaller brain size as well as problems with learning and memory — as well as related to poor heart and cardiovascular health.

The study adds to emerging evidence that supplementation with B vitamins may be a convenient way for elderly to help support memory and learning.

Reference: Smith et al. *PLoS One* 2010. 



RESVERATROL BOOSTS LEVELS OF FAT-CONTROL HORMONE



If shoring up heart and cell health isn’t reason enough to try resveratrol, then perhaps help trimming down the midsection will add some extra motivation. A new study from University of Texas Health Center suggests that supplementing daily with the anti-aging compound found in grapes may increase production of a

hormone produced by fat cells called *adiponectin*.

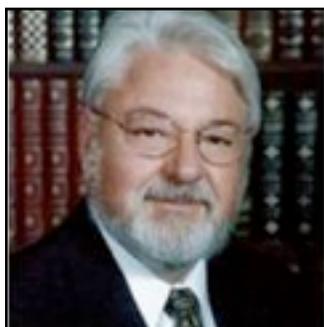
Adiponectin has a wide range of benefits and increased amounts of the hormone are associated with greater insulin sensitivity and reduced bodyweight. The study should interest anyone who is interested in losing weight or growing older, according to the study’s senior author Feng Liu, professor of pharmacology and member of the Barshop Institute of Longevity and Aging Studies at the Health Science Center.

The study may help unravel a novel mechanism by which resveratrol acts to deliver health benefits, apart from its well-reported activation of Sirtuin 1, the “longevity gene.”

Resveratrol is a multifaceted bioactive compound that came to light initially because of its connection to intake of red wine in the Mediterranean diet (rich in fruits, vegetables, lean meats, olive oil, and red wine).

Reference: Wang et al. *J Biol Chem* 2011. 

SPOTLIGHT ON COQ10



**Critical Factor for Youthful Energy**

William Judy, Ph.D. has studied coenzyme Q10 (coQ10) for more than 38 years. One of his greatest achievements was the development of technology to solubilize coQ10 in flaxseed oil and then stabilize it with conjugated linoleic acid to improve its absorption into the body.

This is the same technology found in Ageless Actives, which boasts 100 milligrams of coQ10 per 2 softgels.

In a comparison trial, *adult subjects absorbed eight times more of the patent-pending coQ10 than dry powder.*

The clinically effective dose in Ageless Actives helps restore coQ10 to youthful levels.

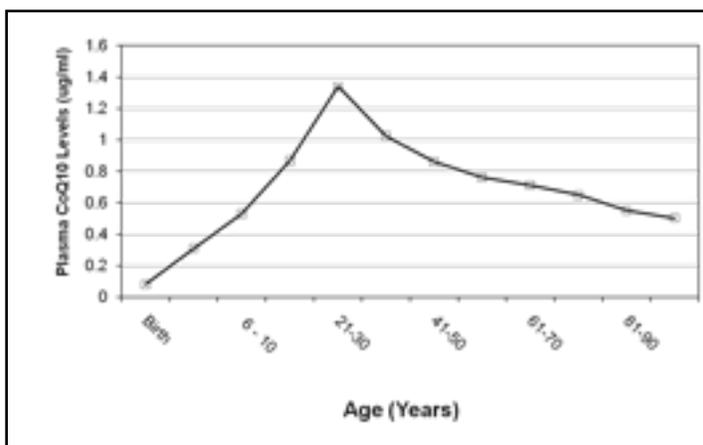
“CoQ10 peaks in your early 20s and diminishes as you age. By the time we’re 60, most of us make 50 percent lower than we need,” Dr. Judy says (see graph below).

Diminished levels can lead to grave consequences since the nutrient is required for the production of ATP energy in mitochondria. It is also vital for the protection against the destruction caused by free radicals generated in the body.

Supplementation with coQ10 as you age is critical for the health of your heart, brain, kidneys and liver, because these organs normally contain high amounts of the nutrient, Dr. Judy says.

The dosage found in Ageless Actives, combined with Dr. Judy’s patent-pending absorption technology, can also offer favorable protection against oxidative stress that could affect the integrity of cells and their components.

Within only a few weeks of taking Ageless Actives, coQ10 is replenished in all cells of the body and people find they notice increased energy levels. 



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ASK A NUTRITIONIST



**Have a question?**

Did you know that many of the most frequently asked questions are answered on our blog at [IsagenixHealth.net](http://IsagenixHealth.net)?

You can also now submit questions on the Web site via the new “Ask a Nutritionist” form (located in the bottom right corner labeled “Questions and Comments”). The form is intended to help streamline questions and get them answered more efficiently.

Moving forward, the QRTS department will be giving priority to inquiries submitted via this online form over those sent via e-mail. 