A word from the chief...

Stress is the single greatest overlooked factor with an impact on health. Are you aware of the stress epidemic? More than a third of U.S. adults experience chronic stress that ultimately robs them of their health. In fact, statistics suggest that stress contributes to more than 60 percent of all chronic health problems. These include obesity, metabolic syndrome, and cardiovascular risk. A healthy diet, regular exercise, and good stress-management habits are essential. Stress is a health factor that can only be addressed if we choose to adapt.

As you'll learn in this newsletter, stress affects both your physical and mental health. And, as it turns out, it can be contagious. Similar to catching a cold, we can catch the stress of other people and absorb the stress from ambient noises, sights, and activities that surround us. Our body responds to these stressors with a cascade of cellular and hormonal alterations that could harm the body's metabolism, put health at risk, accelerate the aging process, and even lead to accumulate visceral belly fat.

Isagenix has a solution to offer: Adaptogens that help you adjust and adapt better to life’s ups and downs. With the use of our Adaptogens, in Ionix Supreme, e+, and t+ Chai, you can mitigate the effects of chronic stress, contagious stress, and the stress related to aging and performance. Protecting your health with these natural herbal blends helps you handle life and all of life’s moments with a healthy attitude.

Live well and adventurously,

Suk Cho, Ph.D.
Isagenix Chief Science Officer

During the 1950s and ‘60s, the concept of “ADAPTOGENS” was born.

Russian toxicologist Nikolai Lazarev first coined the term “Adaptogen” in 1957. Subsequently, he turned over his project to his protégé, Dr. Israel Brekhman, who continued research on these plant substances and who introduced Adaptogens, and their healthful effects, to the Western world. Brekhman is also credited with developing formulas with Adaptogens that promote health by helping people cope with everyday stress, maintain high levels of energy, and free the body from fatigue (1). According to Brekhman, Adaptogens are botanicals that:

- are traditionally used to increase the body’s ability to cope with internal and external stressors.
- exhibit stimulating effects after both single-time use and prolonged use, leading to increased working capacity and mental performance under stressful and fatigue-inducing conditions.
- are entirely safe, having no negative side effects.

His concept was based on theories of how an organism adapts to stress. However, much of this early research was nonspecific and left out the underlying mechanisms behind the adaptogenic effects on stress. Today, research on Adaptogens is more revealing and has expanded immensely to include studies surrounding their biochemistry, phytochemistry, and effect on the body. Multiple scientific reviews of experimental and clinical trials have concluded that Adaptogens are beneficial in guarding against stress-induced fatigue (1-5).

In more recent research, Adaptogens are hypothesized to act as metabolic regulators that not only help the body adapt to environmental stressors, but also protect against harm from stressors at the cellular level (5). In addition, recent clinical trials are providing important information for their use in improving energy, cognitive function, memory, attention, and mental and physical performance, particularly under stress (6-9).

Based on the current research, Isagenix offers a daily plan on how to incorporate Adaptogens into your daily life.

ADAPTOGENIC DAY PLANNER

Here is an excellent plan to help fill your body—and your day—with a healthy boost of Adaptogens, designed for a better you.

EARLY MORNING
- Drink e+™ for a quick energy boost to start your day.
- Enjoy 1-2 servings of Ionix® Supreme to combat stress and support healthy aging.

MIDAY
- Enjoy the soothing goodness of t+ Chai.

MIDAFTERNOON
- Take a shot of e+ for a quick energy boost to get you through a mid-afternoon slump.
- If you don’t read the naturally caffeinated energy boost of e+, drink t+ Chai to promote clarity.

EVENING
- Drink a warm cup of t+ Chai to balance your mood and relax.
- Enjoy 1-2 servings of Ionix® Supreme to help reduce the effects of daily stress.

PRE-WORKOUT
- Replace your early morning or midafternoon e+ with a pre-workout e+ for a natural energy boost that aids performance and recovery.

POST-WORKOUT
- Enjoy 1-2 servings of Ionix® Supreme to support recovery after workouts.
When Nikolai Lazarev and Israel Brakhman studied ADAPTOGENS scientifically, their hopes were to provide a natural means of improving strength, energy, and stamina. Research soon uncovered that Adapto gens work by normalizing the body’s functions under stress (1, 2). All Adapto gens help the body reduce and resist the effects of stress, but not all Adapto gens work the same way. They each have their own mechanism of action to benefit overall health. Here’s a deeper look at some of the Adapto gens in Isagenix products including Ionix Supreme, e+, and t+ Chai.

**WOLFBERRY** *(Lycium barbarum)*
A red-orange berry regarded by ancient herbalists as nourishing to the liver, kidney, and eyes. Modern studies support these traditional claims by showing that wolfberry has antioxidant properties and protects the body from oxidative stress (3-5).

**RHODIOLA** *(Rhodiola rosea)*
A plant that grows in the coldest regions of the world, including Siberia. It’s been used as an herbal medicine for several centuries in Russia and Scandinavia to increase physical endurance, improve energy levels, and help resist high-altitude sickness. In clinical trials, rhodiola has been shown to help strengthen the body’s resistance to stress (7).

**ELEUTHERO ROOT** *(Eleutherococcus senticosus)*
A small, woody shrub native to northeastern Asia. It has been used in China for more than 2,000 years as a natural remedy for reducing mental and physical performance under stressful conditions such as working in an emergency room (6).

**ASHWAGANDHA** *(Withania somnifera)*
Native to the dry regions of India, North Africa, and the Middle East. It’s an important component in Indian Ayurvedic medicine since ancient times mostly for its restorative benefits. In recent studies it has demonstrated antioxidant effects (8-11). Studies have also shown it to support healthy brain and immune function (10, 11).

**SCHIZANDRA** *(Schisandra chinensis)*
Known as the “five-flavor berry” because it contains all five of the basic flavors: sweet, salty, sour, pungent, and bitter. The berry grows as part of a woody vine native to the forests of Northern China and Eastern Russia. It has long been used in traditional Chinese medicine to nourish the kidneys and heart. In human studies, schizandra has shown to increase mental clarity and decrease feelings of fatigue and exhaustion (15).

**BACOPA** *(Bacopa monnieri)*
A plant popular in traditional Indian medicine for the enhancement of memory and to promote longevity. Studies have shown it to have antioxidant and adaptogenic effects on the central nervous system (12-14).

**REFERENCES**
DON’T CATCH STRESS!

We’ve all heard that stress is both unhealthy and unavoidable. But did you know that it’s also contagious?

New research from The Max Planck Institute for Human Cognitive and Brain Sciences and the Clemens Kirschbaum Technical Center in Dresden, Germany has recently addressed the intriguing possibility that stress can spread like an infectious disease.

These researchers conducted a large-scale study investigating stress moving from person to person through observation and its physiological responses (1). They found that both men and women become just as stressed when observing indirect stress through a one-way glass as they do from direct stress.

This empathetic form of stress creates the same cascade of harmful hormonal and physiological responses that were thought to only result from direct stress. Contagious empathetic stress, given the amounts of unavoidable direct stress we already register as experienced, also merits investigation within the research and healthcare communities.

Stress is needed for our survival. In short bursts it is protective, preparing us for “fight” or “flight,” but chronic stress, both direct and observed, can be harmful to the body (2). Increased concentrations of the circulating stress hormone cortisol is linked to a spectrum of metabolically related disorders including obesity and cardiovascular disease (2). Permanently elevated levels of cortisol can potentially disturb the immune system and can even become toxic to the brain (1). And this presents a valid argument for better attention to techniques and lifestyle stress management.

There are multiple avenues to stress management. Some are better known than others, such as relaxation, deep breathing, and routine exercise. Others are relatively new to the Western world, such as the use of stress-modulating herbs called Adaptogens.

Adaptogens affect multiple body systems including our neurological, endocrine, and immune systems, as well as the body’s homeostasis and energy metabolism (3). They offer a unique approach to stress management, especially for individuals that do not find meditation, yoga, or deep breathing their particular “stress-reducing” cup of tea.

Adaptogen expert Alexander G. Panossian, Ph.D., from the Swedish Herbal Institute, reported that an active component of the adaptogenic herb rhodiola (Rhodiola rosea) had biological activity that helped regulate the stress response (3). This herb is one of the primary adaptogenic herbs found in Ionix Supreme, along with wolfberry, ashwagandha, and amla berry to support the body in modulating the effects of chronic stress. Ionix Supreme is an adaptogenic tonic, suited for everyday use.

It’s our responsibility to do our part to stop the spread of unwanted worry, anxiety and pressures that come with everyday life. However, with Adaptogens, anyone who is confronted by stress can better manage their response to it. Along with other healthy habits such as exercise and quality sleep, stress can be controlled.

REFERENCES
ADAPTOGENS

1. How we react to mental stress is controlled by a complex interaction between the hypothalamus, pituitary gland, and adrenal glands. These three structures form the hypothalamus-pituitary-adrenal (HPA) axis and help control mood, energy levels, body temperature, and immunity.

2. The hypothalamus secretes hormones that trigger the pituitary gland to cause or stop the release of pituitary hormones. The adrenal glands release stress hormones like cortisol and adrenaline. In the first stage of the stress response, the hypothalamus releases a hormone that signals the pituitary to "activate" the adrenal gland to release cortisol. Cortisol is a classic stress hormone that is increased during times of stress.

3. Cortisol release is a proper and healthy response to normal levels of stress. This is certainly true for acute stress. However, chronic stress, like job pressures or family demands, can add on heavy doses of mental stress. Unfortunately, chronic stress seems to be a hallmark of modern life and can cause dysfunction in both the HPA axis and cortisol secretion patterns. As a result, prolonged stress response can negatively affect one of the most important organs in your body—your brain.

4. Adaptnogens can help by functioning like "STRESS VACCINES" by reducing the over-exaggerated responses to stress and by helping to maintain healthy cortisol levels. Adults experiencing high levels of stress who were randomized to taking ashwagandha were found to have decreased levels of perceived stress and cortisol (1). Researchers suggest that the supplement's "therapeutic activity may be attributed, at least in part, to its effect on the hypothalamic-pituitary-adrenal axis, which regulates serum cortisol concentration."

5. ADAPTOGENS, being restorative and stress-protective, support attention and focus while reducing risk of mental fatigue. In this regard, Adaptnogens are markedly different from caffeine. Adaptnogen effects have been noted to occur after only one single dose (4).

GREAT NEWS:
In a double-blinded, placebo-controlled, randomized study, investigators used a single dose of a combination of rhodiola (Rhodiola rosea), schizandra (Schisandra chinensis), and eleuthero (Eleutherococcus senticosus). Mental performance, such as attention, speed, and accuracy were assessed in tired individuals performing stressful cognitive tasks. The subjects in the Adaptnogen group exhibited improved attention and increased speed and accuracy during stressful cognitive tasks. There was also a tendency to reduce percentage of errors, which meant better accuracy, quality of work, and degree of care.

THE IDEA OF A "STRESS VACCINE" WAS COINED BY ADAPTOGEN EXPERT ALEXANDER G. PANOSSIAN, who explained that Adaptnogens mimic stress itself and create an adaptive response to it (2). This translates into increasing the work capacity of the brain by being "stress-protective" or "restorative." Dr. Panossian reasons that the chemical structures of Adaptnogens are similar to hormones like adrenaline (2). Components of the herbs may also resemble corticosteroids, which help to deactivate stress response (3).

HE YOU LOSE
cognition and have anxiety and poor mental performance.

THE RESULT:

YOU WIN
Improves mental performance, improves memory, and reduces stress.

TRULY SOMETHING THAT EVERY BRAIN CAN USE.
“Sleep is that golden chain that ties health and our bodies together,” said the 17th-century writer Thomas Dekker. We all know that adequate and sufficient sleep is key to good health. But did you know that too little sleep or poor sleep quality can make you age faster?

Chronic lack of sleep is associated with a myriad of health conditions including obesity, depression, and asthma. So what is considered poor sleep? According to the National Sleep Foundation, seven to nine hours of quality sleep is recommended each night for adults (1). Despite this, approximately 35 percent of Americans report their sleep quality is “poor” or “fair.”

But how exactly is sleep quality related to health? One reason may be due to how sleep affects telomeres. Telomeres are the protective caps at the ends of our chromosomes, that are a significant marker of cellular aging. As Isagenix Scientific Advisory Board member and telomere researcher Bill Andrews, Ph.D., says, “When telomeres shorten, bad things happen.” Indeed, previous research has linked shorter telomeres to poor sleep quality (2, 3).

Now, a recent study by researchers from the University of California, San Francisco, including Nobel Laureate Elizabeth Blackburn, have attempted to further characterize the relationship between sleep quality and telomere length, alongside another lifestyle factor implicated in telomere health—chronic stress. This new study, published in the 2014 December issue of the journal Brain, Behavior, and Immunity (4) included 87 obese subjects (BMI=35.4; 82 percent female) and looked at sleep quality, self-reported stress levels, and telomere length from several immune cell types (the best targets for measuring telomere length). They found that poor sleep quality was closely associated with significantly shorter telomeres in most immune cell types.

In addition, the role of stress was examined and for individuals under higher stress, poor sleep quality and shorter telomeres were positively associated. The authors concluded that poorer sleep quality was related to telomere length and that this relationship may provide clues linking poor sleep quality to poor health outcomes in the obese individual.

Next, for combating life’s daily stresses, Isagenix offers Ionix Supreme, a concentrated beverage full of adaptogenic herbs to improve stress management and reduce stress-induced fatigue along with the Adapton-rich, naturally sourced caffeinated e+ energy shot. Finally, for healthy, sustained weight loss and improved body composition, the 30-Day Cleansing and Fat Burning system has been shown in two independent studies from the University of Illinois at Chicago and Skidmore College to significantly reduce body weight, total body fat, and visceral fat.5

With Isagenix targeted solutions and weight management systems, you give your body the best chance at improving your sleep quality and “energizing” those telomeres.

REFERENCES
ATHLETES, ADAPT

**DURING COMPETITION,** a high jumper may harness adrenaline and nervous energy to increase focus, speed, and force during the jump. Here’s where stress is a good thing. But a little too much stress can cause muscle tension that interferes with the mechanics of technique, resulting in “choking” and a miss.
Adaptogens decrease the sensitivity of the body to stress, helping athletes become less susceptible. In addition, Adaptogens can improve resistance in the face of stress and fatigue during competition (8, 9). As a result, athletes not only gain from stress protection, but may also improve physical performance, mental alertness, and ability to perform under pressure.1

The enhanced ability to perform both mentally and physically under stress can prove indispensable in the competitive world of sports and fitness, where the difference between winning and losing often comes down to who handles stress the best.

Evidence also supports the use of Adaptogens for boosting endurance, stamina, and even power under strenuous athletic conditions (11-13). When taken by cyclists before exercise, rhodiola was shown to improve performance by lowering perceived exhaustion and the time needed to complete a six-mile ride (11), and when taken daily, eleuthero was shown to elevate VO2 max and improve endurance time by 23 percent (12). Athletes taking ashwagandha daily for eight weeks also improved their stamina by increasing VO2 max, but simultaneously increased sprint velocity and power (13).

Undeniably stress management is often an overlooked problem for athletes. Adaptogens offer a convenient way for an athlete to gain an edge over the competition. Through the use of Isagenix products featuring Adaptogens products that include Ionix Supreme, e+, and t+ Chai, athletes can not only help prevent the devastations associated with the stress response, but may also improve mental and physical performance and the ability to operate under pressure.1

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AS WITH COMPETITION STRESS,
too much life stress can hurt an athlete’s performance. When bombarded with continuous emotional and psychological stress, the same small dose of hormones that initially was beneficial in helping the high jumper to sail over the bar can be overproduced and hurt performance and the body. Substantial stress over time, in fact, can lead to a host of issues that could devastate athletes, including:

- Suppressed immune system leading to interruptions in training (1)
- Increased susceptibility to injury (2)
- Slower repair of damaged muscle and tissue leading to poor recovery (3, 4)
- Reduction in sleep quality leading to a decline in performance (5, 6)
- Increased appetite and incidence of emotional bringing in some athletes, leading to overeating, weight gain, and possibly reduced performance (7)

Stress from everyday life, training, and competition isn’t going anywhere. So what’s an athlete to do? Aside from developing better coping techniques to deal with stress, there may be a more immediate solution in the form of natural, plant-based Adaptogens found in Isagenix products that include Ionix Supreme, e+, and t+ Chai.

In 2010, a randomized, double-blinded, placebo-controlled study evaluated the use of Adaptogens by 40 stressed women performing nerve-wracking conditions (11-13). When taken by cyclists before exercise, rhodiola was shown to improve performance by lowering perceived exhaustion and the time needed to complete a six-mile ride (11), and when taken daily, eleuthero was shown to elevate VO2 max and improve endurance time by 23 percent (12). Athletes taking ashwagandha daily for eight weeks also improved their stamina by increasing VO2 max, but simultaneously increased sprint velocity and power (13).

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In 2010, a randomized, double-blinded, placebo-controlled study evaluated the use of Adaptogens by 40 stressed women performing nerve-wracking cognitive tasks (10). Those who received the Adaptogens showed a significant improvement in attention, speed, and accuracy, and made fewer errors while completing their work. Cognitive function under stress is clearly of value to athletes, who must remain alert and focused during fatigue and be able to quickly react to problems.

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REFERENCES:
ANYTIME IS A GOOD TIME FOR ADAPTOGENS

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EARLY MORNING
Enjoy 1–2 servings of Ionix® Supreme to combat stress and support healthy aging.†

EARLY MORNING
Drink e+ for a quick energy boost to start your day.

MID-AFTERNOON
If you don’t need the naturally caffeinated energy boost of e+, drink t+ Chai to promote clarity.

MID-AFTERNOON
Take a shot of e+ for a quick energy boost to get you through a mid-afternoon slump.

LATE MORNING
Enjoy the soothing goodness of t+ Chai.

EVENING
Drink a warm cup of t+ Chai to balance your mood and relax.

POST-WORKOUT
Enjoy 1–2 servings of Ionix® Supreme to support recovery after workouts.

PRE-WORKOUT
Replace your early morning or mid-afternoon e+ with a pre-workout e+ for a natural energy boost that aids performance and recovery.†

†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.