

The Arginine Solution

The First Guide to America's New Cardio-Enhancing Supplement
By Robert Fried, Ph.D. , Woodson C. Merrell, M.D.

In the field of medicine and health it is one of the revolutions of our time: the discovery that the amino acid L-arginine may be a "magic bullet" for the cardiovascular system. Now, as the evidence mounts, including research that recently won the Nobel Prize in Medicine, more and more scientists and doctors see the extraordinary health benefits of increasing arginine intake. A virtual arterial cleanser, arginine helps eliminate blockage and maintain blood flow. In this persuasive, groundbreaking book, Robert Fried, Ph.D., and Woodson C. Merrell, M.D., two renowned New York health experts, make the case for making arginine part of your life, while also pointing out the situations in which elevated intake may be contraindicated.

The Arginine Solution offers the research and clinical evidence that proves arginine's effectiveness in raising the body's production of nitric oxide, a principal blood pressure regulator. Arginine, an amino acid available in inexpensive supplement form, can have a powerful impact on your cardiovascular health. In addition, as it helps increase blood flow throughout the body, arginine can also boost...

- male potency
 - the immune system
 - mental acuity
 - and weight loss
- while it reduces the harmful effects of...
- aging
 - diabetes
 - asthma
- and many other conditions.

Drawing on the latest research, case histories, and their own experience, Drs. Robert Fried and Woodson C. Merrell have written a book that can improve the quality of life for many and even save lives - with a reliable, natural substance that plays an essential role in human health and longevity.

Chapter 1

A Few Grams of Prevention

The New Supplemental Safeguard for Your Good Health

Here's a double health to thee! - Lord Byron

If you're now reading these words, chances are you take your own health, and that of your loved ones, very much to heart. The ancient Greek physician Hippocrates called health "the greatest of human blessings," a sentiment that has been echoed by poets and philosophers throughout the ages. Health is today, as it has always been, the only currency whose presence or absence can make the poor rich, and the rich poor. "Give me health and a day," declared Ralph Waldo Emerson, "and I will make the pomp of emperors ridiculous."

Never before in human history has mankind understood so much about the multiple processes that preserve our well being, or rob us of it. From genetic engineering to pioneering brain research to potential cures for cancer, we stand poised at the threshold of a new era, a time when countless scourges that have so long afflicted our species are finally beginning to yield to unprecedented scientific investigation. Researchers the world over are increasing the knowledge base at an exponential rate. Sometimes it almost seems as if disease itself has become an endangered species.

But the same technological revolution that, with its right hand, forges new hope for cures is, with its left hand, foisting upon all too many of us the need for such cures. Consider this: For our ancestors in antiquity, food was rarely plentiful and obtaining it almost always required great physical effort. Modern life, on the other hand, has put the "ease" into disease. Today, we can lie on the sofa, TV remote control in one hand and cell phone in the other, and dial up a double-cheese pepperoni pizza for speedy home delivery.

The seductiveness of fast food, employment that requires long hours in sedentary pursuits, daily stresses for which the age-old "fight or flight" response can rarely be exercised without inviting trouble, a surfeit of cigarettes and alcohol and various drugs that are all too easily obtainable: These are but a few of the hallmarks of industrialized society for which our hard scrabble evolution as a species has ill prepared us. No wonder that so-called lifestyle disorders - heart disease, high blood pressure, strokes, diabetes, many forms of cancer, and so on - continue to fell so many of us every year.

Make no mistake: These are hardly overhyped conditions that only target "the other guy." An astonishing 7.5 percent of all American adults alive today have suffered a heart attack or periodic chest pains from heart disease. That's one out of every thirteen adults!

Even as medical researchers look for new ways to undo such damage once it's been wreaked, others look for ways to intercept disease before it's sunk its harpy claws too deeply into our flesh. In recent years, modern medicine

has seen a resurgence of interest in integrative medicine - an approach that combines the best of the "fix what's broken" philosophy of conventional modern health care with the "preemptive strike" philosophy long embraced by alternative medicine healers and preventative medicine specialists alike.

Perhaps you, or someone you love, are now suffering from some kind of broken part. Maybe you've been diagnosed with coronary artery disease, high blood pressure, adult-onset diabetes, impotence, or any one of a long list of terribly common health problems. There is nothing like the loss of good health to compel a keen interest in doing everything possible to foster its return.

On the other hand, perhaps you are now in nearly perfect shape, free of any major physiological disorders and totally committed to staying that way. You take seriously the constant drumbeat of caveats and public health advice.

You eat a wholesome diet low in fat and high in fruits, vegetables, and fiber.

You exercise most days of the week, and include both aerobic and strength training in your regimen.

You've quit smoking, or better still, you've managed to avoid ever having suffered an addiction to this most ruinous witches' brew of cynically tailored toxins.

You sleep at least six to eight hours each day.

If you drink alcohol, you do so in moderation.

And to manage the inevitable stresses of life better, you take time for yourself each day to meditate or use other techniques to elicit the relaxation response proven so beneficial in moderating stress hormones.

Perhaps, too, you have also been impressed with the accumulating evidence supporting the health benefits of nutritional therapy - "nutraceutical agents" like vitamins E, C, and the carotenoids; the beneficial omega-3 fatty acids found in cold water fish; the isoflavones in soy; and a host of other foods, from oat bran to garlic to olive oil, increasingly linked to good health. Other therapeutic agents, especially botanical remedies, are receiving unprecedented scientific study - and being embraced more and more by clinicians and patients alike because of their powerful healing properties.

We will be showing you how a long- and well-known nutrient, the aminoacid arginine, is fast emerging as one of the most potent nutraceuticals yet described. It works, when the body breaks it down, in the process releasing a simple gas called nitric oxide, or NO, a substance formerly best known for its presence in smog. In the body, however, NO is hardly a pollutant. Over the last decade, researchers have made a series of truly revolutionary discoveries about the critical functions NO plays in an astonishing array of bodily systems. Indeed, so momentous have these discoveries been, and so far-reaching their implications for bettering human health, that the most prestigious of all scientific awards - the Nobel Prize for Medicine - was bestowed upon three pioneering American NO researchers on October 12, 1998.

Already the work of the three Nobel laureates - Robert F. Furchgott, Louis J. Ignarro, and Ferid Murad - has inspired a legion of pharmacologists searching for new cures for ancient ailments.

Case-in-point: the bestselling anti-impotence drug Viagra, which arguably could not have been invented without an understanding of nitric oxide's key role in relaxing the smooth muscles of blood vessels. A wide range of other investigational drugs - designed to treat everything from atherosclerosis to septic shock - may soon hit the market, thanks to the NO discoveries.

Arginine-derived nitric oxide, or ADNO, is a multifaceted molecular marvel, one made all the more amazing by the fact that researchers only so recently discovered that it even exists inside human tissues.

Consider just a sample of the many jobs ADNO has now been shown to perform inside the human body:

- It relaxes arteries, thereby helping to maintain normal blood pressure, which would otherwise skyrocket when ADNO is in short supply.
- It helps keep open the coronary arteries that supply blood to the heart, preventing angina pain.
- It's a potent free-radical scavenger that helps to both lower serum cholesterol and prevent the "bad" LDL cholesterol from oxidizing and becoming even worse.
- It's a powerful anticoagulant, or blood thinner, that helps prevent blood platelets from clumping together into the clots that can cause heart attack and stroke.
- It enhances blood flow to the penis, helping to boost erections.
- It serves as a critical "bullet" by different immune-system cells that use it to kill foreign bacteria and viruses and even shrink or destroy some cancerous tumors.

- It's used by the brain to encode long-term memory and ensure blood flow to brain cells.
- It functions as a "messenger molecule" that allows nerve cells in the body and the brain to communicate with each other.
- It may reduce pregnancy-related hypertension, a potentially life-threatening condition for mother and child.
- It may help regulate insulin secretion by the pancreas, thereby reducing the risk of diabetes.
- It helps control the lung airways, allowing you to breathe easier and avoid common lung disorders.
- It relaxes "hypertonic" sphincter muscles, preventing and healing hemorrhoids and anal fissures.
- It stimulates the body into releasing the all-important human growth hormone (HGH), a key to longevity as well as improvement in body composition by boosting lean muscle mass and bone density while decreasing fat tissue.

Given such powerful and manifold effects, it is perhaps not surprising that ADNO has also been theoretically linked to some medical disorders. We detail these in the book's final chapter and strongly encourage you, if you suffer from one of these maladies, to discuss arginine supplements with your doctor before initiating self-treatment.

For the vast majority of men and women, however, the use of supplemental ADNO as a nutraceutical self-treatment is safe, devoid of side effects, and often startlingly effective in preventing, controlling, and overcoming common causes for ill health.

If you're looking for ways to counter problems already incurred, we invite you to read on to see how the Arginine Solution can play a role in a speedy return toward health. If you are now healthy but ever open to new strategies to preserve the robust status quo, we invite you, as well, to weigh the considerable evidence in support of ADNO.

An ounce of prevention, so they say, is worth a pound of cure. We wholeheartedly agree with this sentiment, if not exactly with the dosage level prescribed. As you will see in coming pages, when it comes to the Arginine Solution, you don't need nearly an ounce - a modest three to six grams of daily prevention is usually plenty for most adults.

Chances are you're already taking in at least this much, if not more, from your diet. Statistics show that most adults obtain over five grams each day from dietary sources including meat, poultry, fish, dairy products, eggs, cereals, nuts, potatoes, and many other foods. Later in this book, you will see how researchers have safely administered thirty to fifty grams or more

of arginine intravenously to patients with certain medical conditions - without triggering any major side effects.

Our recommendation, to be sure, is much, much more conservative. Indeed, our "Arginine Solution" - three to six grams taken by mouth in three divided doses per day - represents the average adult's normal intake. At this level, supplemental arginine appears reasonable and is usually safe - and not because the amount is too small to have much of an effect. Quite the contrary: As you will see throughout this book and in the extensive bibliography of scientific literature that follows, a multitude of studies offer compelling evidence that a few grams of prevention can be worth a ton of cure.*

Arginine costs relatively little. Given such a modest price and all the benefits it can provide to a variety of your bodily systems, medical economists calculating cost-to-benefit ratios would be hard pressed to find a better health-care bargain available anywhere today.

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