Defuse Multiple Cardiac Risk Factors With One Vitamin!

By Tiesha Johnson, RN, BSN

There is a vitamin that corrects cardiac risk factors better than any prescription drug. The only reason this highly effective vitamin has been avoided is because of its temporary uncomfortable side effects.

In a development that may radically alter how atherosclerosis is prevented, a naturally enhanced niacin compound has been developed that is far easier to tolerate.

For aging humans, niacin is often the only way to safely boost HDL and improve LDL particle size, while slashing triglyceride, LDL, VLDL, and total cholesterol levels.

Americans spend tens of billions of dollars each year on drugs that are not as effective as niacin. With the availability of this new "easy-to-tolerate" niacin, aging humans can defuse multiple cardiac risk factors, while saving huge dollars compared to overpriced pharmaceuticals. >>>


Pharmaceutical companies conspire with the Federal government to create today's dysfunctional health care system. While outrageous profits are earned on cardiac drugs, atherosclerosis remains the leading cause of disability and death. Today's system that emphasizes expensive, narrowly targeted drugs is an obvious failure.

Life Extension's pursuit of nutritional approaches for age-related disorders began nearly 30 years ago. It was based on the fundamental insight that billions of pharmaceutical dollars were spent to develop partially effective drugs, while an entire field of evidence-based dietary solutions was ignored.

In fact at this very moment, Merck is in the process of attempting to gain FDA approval for a new niacin "drug" called Cordaptive™. This represents yet another instance of a drug company attempting to profit off a needlessly expensive pharmaceutical form of a natural supplement.

The encouraging news is that a new, naturally enhanced niacin compound operates along numerous physiological pathways to defuse cardiac risk factors—without drugs and their unwanted side effects. It has the power to raise beneficial HDL, drastically reduce LDL, and dramatically "gut" triglyceride levels—while correcting a number of abnormalities that lead to progressive arterial dysfunction and occlusion.

A broad spectrum of drugs targeting heart attack and stroke risk factors have come and gone, some with questionable efficacy, many with unfavorable adverse effect profiles. Since adequate HDL (high-density lipoprotein) is required to remove excess cholesterol from the arterial wall, it is easy to see why conventional drugs such as fibrates or statins provide only limited efficacy. None of these drugs is as effective in raising artery-protecting HDL as is niacin. None of these drugs corrects the combination of lipid abnormalities (high LDL and VLDL and low HDL) that commonly plagues aging humans as well as niacin does.

This article describes a significant advance in the defense against America's leading killer, utilizing a new easy-to-tolerate form of niacin.

Why You Should Not Be Satisfied with Standard Niacin

The main problem with niacin supplementation over the years has been one of compliance. Many people experience the side effect of "cutaneous flushing"—reddening of the skin and a burning sensation—that turns away up to 40% of individuals from taking advantage of this highly beneficial nutrient.

Life Extension has identified an enhanced high-compliance niacin that sidesteps these unwanted effects—and confers its many health benefits, safely and naturally. Individuals are always best served by preventive strategies that reduce cardiac risk factors across the board—something Big Pharma can only dream about with its obstinate commitment to synthetic drugs. Many natural supplements, however, readily accomplish this broad-spectrum strategy in an elegantly simple fashion. Niacin is an excellent example with powerful research to support it.

Niacin raises HDL levels by blocking HDL uptake in liver cells, which in turn promotes the removal of cholesterol from blood vessel walls. Remarkably, niacin also activates another receptor called PPAR-gamma, which mediates anti-inflammatory effects in blood vessels. In fact, according to Oxford University cardiovascular researcher JE Digby, "Nicotinic acid [niacin] is the most potent treatment clinically available for lowering LDL cholesterol and VLDL cholesterol and raising HDL cholesterol."

Big Pharma's Beguilingly Simplistic Approach to Cardiac Health

The public has been kept in the dark about niacin's multi-pronged beneficial action, as drug companies instead direct billions towards isolating and treating specific cardiac risk factors. However, as you may have read in the May issue of Life Extension Magazine, the matrix of cardiovascular risk factors is far from simple, despite what you've been led to believe through dumbed-down, multi-billion dollar ad campaigns for lipid-lowering statin drugs. Mainstream
DEFUSE MULTIPLE CARDIAC RISK FACTORS WITH ONE VITAMIN

In fact, the term "multiple dyslipidemia" is often used in the research community to denote the complex physiological interactions produced by low HDL, high LDL, and high triglyceride levels. Taken together, they exert a negative synergistic effect on the body that raises cardiovascular risk more than any one factor alone.1,11

Drug companies have seduced the public into focusing on individual risk factors,10,19 because they can then sell you individual drugs to treat them (without regard for other critical risk factors). The more they can isolate, the more drugs they can market—and the greater their windfall profits. This is why you should not be fooled when you overhear someone boasting that their LDL score "improved" in a matter of weeks after taking one of these drugs.

This myopic approach to cardiovascular protection and healing has been highlighted emphatically by noted cardiovascular researcher Anhu Pandian at the Emory School of Medicine. He recently observed that "[traditional] guidelines focus single-mindedly on the control of LDL cholesterol as the primary objective, with the control of other lipid components viewed as a secondary objective." 11

Pandian went on to point out that although prescription drugs such as statins have proven to possess LDL-lowering benefits, a significant residual risk of cardiovascular events remains.1 Other researchers estimate that residual risk runs as high as 9% annually!10 This can then lead to the pharmaceutically convenient "need" for additional drugs, such as the fibrates, to specifically try to raise HDL levels,16,17 along with other costly interventions to target triglycerides—and still others to address oxidative damage to the vascular wall.

All well and good for the pharmaceutical industry—but what about for you?

"Flushing" and Itching—Standard Niacin's Achilles' Heel

The reason you should not be satisfied with standard niacin supplementation has to do with the above-mentioned side effects, which make compliance challenging.

Despite its remarkable, multi-factorial cardiovascular health benefits, even the most recent research has confirmed that standard niacin therapy produces intense "flushing," a burning sensation, and uncomfortable itching in the majority of people who take it, an effect that leads to discontinuation of therapy in large numbers of patients.18-20

We now know that this "flushing" results from the release of large amounts of prostaglandin D2 (PGD2), which causes dilation of small blood vessels.18,19

A team of committed cardiovascular researchers at the Tufts University Medical Center, led by Dr. Theo C. Theoharides, PhD, MD, Professor of Pharmacology and Internal Medicine, recently discovered that niacin specifically triggers the release of PGD2 from mast cells, which are involved in all kinds of allergic-like skin reactions.21

If they could find a way to block release of PGD2 and other inflammatory mediators following niacin ingestion, the team reasoned, they should be able to prevent niacin-induced flushing. And anything that reduces flushing would increase tolerability and patient compliance with this most valuable of lipid-correcting treatments.1 Theocharides and his team set to work.

A Cutting-Edge Natural Method to Block "Flushing" with Flavonols

They knew that flavonols—a class of plant-derived polyphenols—could inhibit the natural release of histamine and other inflammatory mediators from animal mast cells, and their own earlier work had shown similar effects in human mast cell cultures in response to allergic and inflammatory triggers.22-25,28a From that work they concluded that "flavonols may be suitable for the treatment of allergic and inflammatory diseases."
Recognizing the biological similarity between the PGD2-mediated niacin flush reaction and the histamine-mediated flush and itching caused by allergic reactions, Theoharides' team hypothesized that flavonols might be active in preventing the niacin flush in humans. To test their hypothesis, the team conducted a pilot study among four normal male subjects. Subjects received a 1-gram standard niacin tablet alone or 2 hours after two softgels of a dietary supplement each containing 150 mg of the flavonol quercetin.

The subjects reported their flushing-related symptoms on a visual scale. After the niacin-only dose, redness and burning sensation were both given mean scores of 4.75 on a 5-point scale, and the discomfort lasted for more than 3.5 hours. When niacin followed the quercetin supplement, however, the discomfort scores plummeted to just 2.5, and lasted for less than 1.75 hours. Release of PGD2 from mast cells was inhibited by the quercetin as well. This was encouraging preliminary evidence for flavonol-mediated reduction in niacin flush.

Another flavonoid, luteolin, also attracted Dr. Theoharides' interest because of its ability to block the activation of mast cells and other immune cells in both allergic inflammation and serious autoimmune diseases such as multiple sclerosis and psoriasis. The group found that they could effectively prevent mast cell activation and interactions between mast cells and other inflammatory cells simply by pre-treating cell cultures with luteolin. Again reasoning by analogy, Theoharides' team hypothesized that luteolin might also prevent the niacin-induced flush by preventing activation of tissue mast cells and release of the offending inflammatory compounds.

In a simple but elegant experiment, the researchers confirmed their hypothesis dramatically. They measured skin temperature in rats' ears as a means of tracking the flushing reaction to niacin doses. As predicted, ear temperature rose dramatically after a single dose of niacin alone. Pre-treatment with luteolin inhibited the flushing effect by 88%, and quercetin blocked 96% of the reaction. By contrast, aspirin (which is commonly recommended as an anti-flushing medication) inhibited only 30% of the flushing.

The effects were even more impressive at the molecular level: plasma PGD2 and serotonin levels nearly doubled after the niacin-only dose, but pretreatment with luteolin brought levels of the inflammatory molecules right down by 100% and 67%, respectively.

What does all this mean for people who are at risk for the cardiovascular consequences of lipid disorders? Plenty. A patented flavonoid-based niacin combination based on Theoharides' work may dramatically reduce the amount of unsightly and uncomfortable flushing associated with niacin therapy.

Because so many people discontinue niacin as a result of flushing, the availability of this unique combination of ingredients will contribute to increased patient compliance with what may be, in many cases, life-saving treatment. Experts increasingly believe that niacin may be vastly superior to prescription lipid-lowering drugs (alone or in combination), because it has so many complementary effects—not only lowering LDL and triglyceride levels, but also raising beneficial HDL levels, which contribute to removal of cholesterol from vessel walls. This new, high-compliance niacin combination with quercetin and luteolin in olive kernel oil represents a major new advance using a safe and time-honored nutritional supplement.

**Three Additional Health Benefits of Niacin Recently Discovered**

Even as Dr. Theoharides and his colleagues were finalizing their revolutionary new niacin formulation, more data on niacin's benefits was emerging. Here are just a few of the latest highlights:

1. **Breaks Down Fats in Fatty Tissue**
   Niacin was first found to have an impact on
lipolysis of stored triglycerides (fat breakdown) more than 40 years ago. But with the recent discovery of specific niacin receptors in adipose cells, a potential new pathway towards treatment of metabolic syndrome was opened. Niacin not only lowers LDL cholesterol, but also VLDL triglycerides, which are implicated in the insulin resistance that characterizes the metabolic syndrome. Niacin receptors also stimulate cholesterol mobilization out of the macrophages called "foam cells," contributing to the actual reversal of atherosclerosis. And through its action on the cellular receptor PPAR-gamma, niacin promotes the flow of beneficial HDL cholesterol out of fatty tissue and into the circulation.

2. Ramps Up Levels of Anti-Inflammatory Cell-Signaling Proteins

The recognition that fatty tissue is tantamount to an active chemical factory, spewing out both dangerous inflammatory hormones and highly protective cell signaling proteins has led to a revolution in the way we think about metabolic syndrome. Not surprisingly, niacin is turning out to have a major role in affecting that balance.

In a recent clinical study, German researchers gave extended-release niacin supplements to 24 patients for four weeks, increasing the dose weekly from 375 mg per day to 1,000 mg per day, and then further boosting it to 1,500 mg for another six weeks. Levels of protective adiponectin rose 54% in the first four weeks, and an astonishing 94% during the second time period. This was the first observation that niacin may exert a beneficial effect beyond its contribution to lipid profile improvements.

Adiponectin boasts anti-inflammatory effects, and some researchers believe that niacin's adiponectin-boosting properties contribute further to the overall reduction in cardiovascular risk that we see with niacin supplementation. Adiponectin, similar to many biological molecules, comes in several forms, and the high molecular weight complex is thought to be especially protective.

When Auburn University researchers administered niacin to 15 men with the metabolic syndrome in a study published just last year, they found not only that total adiponectin levels rose by 46%, but that high molecular weight adiponectin accounted for 63% of that increase. They concluded that at least part of the cardiovascular benefits of niacin may be related to the shift towards more high molecular weight adiponectin—and other experts now agree.

An increased circulating level of leptin is commonly seen in obesity. Elevated leptin levels are independently associated with leptin resistance, which is linked with increased cardiovascular risk and insulin resistance. Chinese researchers have now shown that niacin inhibits secretion of leptin while increasing levels of substances that increase insulin sensitivity and enhance lipid metabolism in animal models.

3. Transforms LDL into Its Safer "Buoyant" Form

LDL cholesterol is typically considered one of the "bad" forms of lipid, and it turns out that even within the LDL category some forms are worse than others. Small, dense LDL molecules are even more strongly associated with cardiovascular disease than are normal-sized LDL particles.

Researchers at the Washington School of Medicine in Seattle showed that patients treated with intensive cholesterol-lowering therapy including niacin had a tendency towards greater improvement in their coronary artery disease than those treated with placebo. The improvement was attributed to increased buoyancy (larger size, lower density) of the LDL particles. A subsequent study by the same group demonstrated the effect directly: LDL buoyancy increased by 7.7% during treatment with lovastatin plus the fat-trapping agent colestipol, and was increased by 10.3% when the statin drug was replaced with niacin. Even more importantly, increased LDL buoyancy was associated with decreased disease severity, as measured by coronary stenosis—further evidence of niacin's potential to reduce disease risk.
Summary

Despite its relative obscurity in the eyes of the public, niacin has been the most effective treatment for lipid abnormalities and defense against chronic endothelial dysfunction since its first use in the mid-20th century. It attacks the problem on all fronts, lowering LDL and triglycerides and raising HDL, while enhancing the activity of anti-inflammatory cytokines and raising levels of other protective endogenous compounds such as PPAR-gamma.

This multi-pronged attack gives niacin a tremendous edge over Big Pharma's single (or at best dual) combinations of cholesterol-lowering drugs. Because the majority of people who use niacin experience uncomfortable flushing, however, the supplement has been dramatically underutilized, resulting in too many people turning to narrow-spectrum prescription medications.

Recent advances in our understanding of the factors behind "flushing" have reduced this problem, specifically through Dr. Theo C. Theoharides' breakthrough combination of niacin with natural flavonoid molecules.

Theoharides and his colleagues have earned the title of "real doctors" by demonstrating their commitment not only to achieving optimal lipid profiles, but to improving their patients' quality of life and likelihood of adhering to an otherwise difficult treatment regimen. People who use flavonoid-enhanced niacin will experience the benefits of nature's oldest lipid-correcting nutrient while minimizing troublesome side effects.

If you have any questions on the scientific content of this article, please call a Life Extension Health Advisor at 1-800-226-2370.

References:
40. Am J Cardiol. 1998 Feb 26;81(4A):52B-59B.