Medicinal Properties in Whole Foods
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Stress-Related Eating and Metabolic Syndrome:
An Important Cause of Obesity among Women

Metabolic syndrome, the aggregation of ailments including obesity, type 2 diabetes, hypertension, dyslipidemia, and atherosclerosis, is the most rapidly growing health concern of Western nations. It finds its origin deep in the interaction of overeating, fat accumulation, sugar load and insulin resistance. By inhibiting stress-induced hunger in that population of individuals who are stress eaters (mostly women), potent pending fractions of two herbs; Asian cork tree and Magnolia bark extracts, collectively referred to as "Relora®" demonstrate complementary anti-anxiety actions that address the initiating fundamentals of the metabolic syndrome.

Herbal remedies have been gaining prominence over the past few decades as their ingredients have been refined and their place in modern medical therapeutics has become better characterized. Herbs and other "dietary supplements," now referred to collectively as "nutraceuticals," enjoy several distinct advantages over pharmaceuticals. Their safety, although not absolute, has been confirmed by their use in traditional healing practices over centuries. In addition, they do not require a New Drug Application, allowing more rapid progress into the marketplace, considerably less research and development expense, and the ability to market proprietary remedies. Further, herbal remedies often produce healthful side effects as opposed to damaging ones. Certainly, in the case of this promising herbal extract combination, the side effects normally found in anti-anxiety medications (drowsiness, dry mouth, etc) are absent.

Metabolic Syndrome
Sometimes referred to in the medical literature as the "Western Pentad," this collection of ailments includes obesity, type 2 diabetes, hypertension, dyslipidemia, and atherosclerosis. There is no doubt that they are intimately related to each other. Research has narrowed down the origins of the syndrome to a few of its earliest manifestations but has yet to identify the root cause. One of the earliest discernable manifestations of type 2 diabetics is elevated levels of both glucose and insulin, caused by something called "insulin resistance." This insulin resistance lies at the heart of the metabolic syndrome. [DeFronzo 1991]

As glucose levels in the body rise, it stimulates increased insulin production (up to a point). Excess insulin has a number of deleterious effects. It raises noradrenaline levels (more on this hormone later), which, in turn, can induce insulin resistance; it favors kidney dysfunction and hypertension; it favors atherosclerotic plaque formation; and it stores fat. Insulin resistance can be hereditary, but it is a guaranteed result of obesity. Elevated intracellular fat stimulates gluconeogenesis and depresses both glucose oxidation and insulin production. [DeFronzo 1998] In fact, "lipotoxicity" may be the primordial event that initiates diabetes [DeFronzo 1997]. Furthermore, both insulin and glucose levels produce an inverse variation in the number and activity of their receptors and pathways at the cell membrane and within the cell. [American Diabetes Association 1998] The same inverse relationship exists with gene expression inside the cell, providing another positive feedback loop, this time to insulin resistance [Yki-Järvinen 1994]. The bottom line is that a vicious cycle forms, particularly in women, whereby the more they eat high fat, high sugar foods in response to stress, the more fat they store and the more insulin they secrete, which in turn causes problems with glucose balance, which then causes women to store more fat.
Interestingly, noradrenaline (the hormone that increases in response to excess levels of insulin in the body) is a stress response chemical, released under conditions of emotional upset. Further, glucocorticoids (such as cortisol) are also stress-response chemicals in some women, [Epel 2001] and these hormones are responsible for storing abdominal fat and raising blood glucose levels.

Weight gain is the most common triggering mechanism for the metabolic syndrome. Once this wagon starts rolling, it becomes increasingly difficult to arrest the vicious cycle that ends in blindness, renal failure, osteoarthritis, heart attacks, strokes and premature death for growing numbers of people. Obesity and its related diseases are the most rapidly growing health issue in Europe and America. The prevalence of obesity has increased by 10-40% in the majority of European countries in the past 10 years and by nearly 70% (BMI>30) in the United States between 1978 and 1991. [International Obesity Taskforce http://www.iotf.org]

A certain proportion of people, primarily women, eat more when they are upset. [Laitinen 2001] These people have been found to respond to stress with an increased output of glucocorticoids [Epel 2001], and stress naturally increases output of the hormone noradrenaline. How great would be the impact of a safe, natural mood stabilizer on the early stages of the metabolic syndrome?

An Answer to this Health Challenge?

The search for herbal products begins in cultural anthropology by identifying remedies used in traditional societies around the world and in ages past. In addition to gathering vast amounts of information about possible treatments and conditions, this accumulated wisdom goes a long way toward establishing the safety of the products.

The biochemical laboratory takes over next, extracting, identifying and purifying the multiple components of the herb using such techniques as solvent extraction, high-pressure liquid chromatography and supercritical fluid chromatography. Finally, research laboratories and organizations test the products for purity, safety, stability and effectiveness in test tubes, in animals and ultimately in human subjects.

By combining a specific patent-pending Phellodendron extract (NPS00033) with a patent-pending Magnolia extract (NPS00039), researchers at Next Pharmaceuticals, Inc, Irvine, California, discovered a synergistic anti-anxiety effect with enhanced mood improving qualities. They named the unique product Relora®.

Relora® has been found to help control occasional mild anxiety and the associated symptoms: irritability, emotional ups and downs, restlessness, tense muscles, poor sleep and concentration difficulties. It further asserts a benefit on stress-related eating disorders with a view to lowering glucocorticoid levels, reducing weight and thereby preventing the metabolic syndrome.

The patent-pending anxiolytic Phellodendron extract (NPS00033) is combined with “NPS00039,” a patent-pending fraction extracted from Magnolia species that demonstrates both anxiolytic and anticonvulsant properties. Magnolia extracts are used in Mexican traditional medicine for their antispasmodic effects, among other indications. In the Central Nervous System, NPS00039 demonstrates highly significant binding to neurotransmitter receptors specific for enhancing mood and producing a calming effect.

A number of compounds in Relora® have undergone several rigorous tests of their effectiveness, safety and freedom from side effects. Suto [1997] extracted, concentrated and identified two of these chemicals in 1997. A very interesting benefit of these compounds is that they do not produce the drowsiness associated with Diazepam (commonly prescribed for anxiety) [Kuribara 1998].

In an open-label, in-home-use trial, 50 adult users of dietary supplements took 2-3 doses a day of Relora® for two weeks. At the end of the study, 82% agreed with the statement that “Relora® helps control occasional mild anxiety or mild depression and the associated symptoms: irritability, emotional ups and downs, restlessness, tense muscles, poor sleep, fatigue and concentration difficulties.” Only 6% found it unpleasant to take or harsh on the stomach. There were no adverse side effects noted during the trial.

Another unpublished trial studied the effect of Relora® on salivary dehydroepiandrosterone (DHEA) and cortisol levels in 12 subjects undergoing mild to moderate stress. DHEA levels are lower in the presence of stress, depression or chronic fatigue. [Michael 2000, McCraty 1998, Kuratsune 1998] Morning salivary cortisol levels are correspondingly elevated in stressed patients. [Ockenfels 1995, Schulz 1998, Bauer 2000] Two weeks of Relora® increased salivary DHEA by 227% and decreased total salivary cortisol by 37%, providing a direct connection between Relora® and the origins of the metabolic syndrome. A larger clinical trial studying the effects of Relora® is scheduled for winter, 2002. No adverse side effects were reported from the use of Relora® in this study.
Stress-Related Eating

Summary
By focusing on mood disorders with a synergistic combination of traditional remedies, Relora® tackles a fundamental mechanism underlying the most pervasive problem in developed countries, the associated disorders of obesity, type 2 diabetes, dyslipidemia, hypertension and atherosclerosis. As well, Relora® may address the very cause of overeating among many women, offering doctors and consumers a new paradigm from which to treat obesity – relieving the stress.

Sophisticated refinements of safe, time tested, traditional herbal remedies has brought forth a unique herbal complex, that promises to improve the management of a leading cause of obesity among women.

References
