

AGE-less™

Bringing Health and Aging Into Harmony

THE NUMBERS

- ❑ The population of Americans 65 and older numbered 35.6 million in 2002, an increase of 3.3 million since 1992
- ❑ Marketing research estimates the US anti-aging products industry at \$17 billion annually and predicts an 11% yearly growth rate over the next several years
- ❑ According to the 2000 Census, an estimated 4.5 million Americans have Alzheimer's disease
- ❑ Increasing age is the greatest risk factor for Alzheimer's. One in 10 people over 65 and nearly half of those over 85 are affected

LOOKING FOR THE FOUNTAIN OF YOUTH

Explorers of the past, like Ponce de Leon, sailed halfway around the globe seeking a magic elixir -- the Fountain of Youth -- that would keep people from growing old. Literature and mythology are full of stories of people who were willing to sacrifice everything to maintain their youth and vitality, from Peter Pan to Dorian Gray. Few of us relish the prospect of aging and the inevitable physical decline that comes with it.

Yet the fact remains: we're all getting older every day. And even though American average lifespans are on the rise, we still have a limited amount of time here on

earth. There are a number of factors that affect the aging process, from the way we live our lives in terms of diet, exercise, and healthy (or not-so-healthy) habits, to factors beyond our control in the very environment in which we live, like toxins that cause free radical damage. But aging is a natural life process that begins at the most basic level -- our cells.

CELL DIVISION -- REACHING THE LIMIT

We all learned in grade school science that cells reproduce by dividing. It is in this manner that a single cell in the womb can grow into an entire human being. Each cell in our bodies has a limited number of times it can divide. It differs from cell type to cell type, but the principle is the same. Biologists have a name for this cap on the number of possible divisions for a cell during a person's lifetime. It's called the Hayflick Limit, and it essentially determines human lifespan at the cellular level.

With each cell division, a cell becomes less likely to divide again. By mid-life, only about a third of those possible divisions remain. When a cell finally stops dividing altogether, it becomes what we call senescent. Senescent cells are still alive and

metabolically active, but they're no longer capable of dividing. They begin to exhibit physical and functional changes that are associated with aging at the cellular level. Cellular senescence is one of the major factors in the aging process.

WHEN PROTEIN TURNS AGAINST US

We all know protein is our friend. It is the very building block of life, forming muscle and other lean tissue, giving us energy and strength, and making it possible to move, think, and breathe. Our bodies are largely made up of proteins. But what happens when the protein in our bodies is altered and turns against us? Our tissues literally start to break down. Our skin becomes wrinkly, cataracts form in our eyes, and even our brains and nervous systems start to deteriorate.

This destructive process of protein modification -- another of the major factors in aging -- is called glycation. Glycation is the damaging attachment of sugars to proteins. In effect, the sugars in the body basically caramelize the proteins, destroying their natural form and function. The effects of glycation are cumulative and become pronounced as we age. They are particularly troublesome

in the most dangerous form of sugar excess, diabetes, where they can present as neuropathy, retinopathy, and destructive vascular changes.

IT'S ALL IN OUR MINDS

Well, at least that's a big part of it. One of the most terrifying prospects of aging is literally losing our minds. Dementia, senility, and Alzheimer's all threaten the very essence of who we are -- our minds. And for many of us, the loss of brain function due to aging and aging related disease and deterioration is much more frightening than wrinkles, vision problems, or even reduction in mobility.

IF WE COULD TURN BACK TIME

But what if there were some way to stop the clock, so to speak? What if we could actually live out our lifespan staying as young looking, acting, and feeling as possible? Wouldn't everyone want to get in on the action?

Well, it may not be the famed Fountain of Youth, but it appears to come mighty close. Age-Less from Healing America contains two of the most potent weapons in the anti-aging arsenal: L-carnosine and DMAE. Age-Less battles the aging process at the cellular level, increasing cell lifespan as well as tissue vitality and function. Both L-carnosine and DMAE directly address problems related to the development of Alzheimer's disease and other forms of brain deterioration and loss of normal

function. Let's look at each of them in more detail:

L-Carnosine

L-carnosine is a dipeptide containing two amino acids -- alanine and histidine. It's a broad-spectrum antioxidant, interacting with several types of free radicals, and putting a stop to a lot of free radical damage. It promotes wound healing by rejuvenating connective tissue. L-carnosine even stimulates healthier immune system functioning.

Cells in our bodies that live long, like nerve and muscle cells, contain high levels of L-carnosine. So it makes sense that there is a link between longer cell life and L-carnosine. In fact, recent studies show that L-carnosine actually rejuvenates cells approaching senescence. Additionally, L-carnosine has been shown to provide a remarkably broad-spectrum defense against a number of types of detrimental protein modification, particularly glycation. It also appears to bind and modify damaged proteins so they can be effectively removed and replaced by the body.

A number of studies show that L-carnosine actually appears to chelate (literally, bind up) copper and zinc in the brain, the overabundance of which is closely tied to Alzheimer's disease. It also inhibits the deterioration of brain proteins which can lead to the formation of beta amyloid, the substance of amyloid plaques which characterize Alzheimer's.

DMAE

DMAE (dimethyl-amino-ethanol) is chemically similar to choline. It has been used for many years in Europe and around the world to help improve mental alertness and clarity of thinking. It was first thoroughly investigated in the 1970s when studies showed it to reduce hyperactivity and improve concentration in kids with learning disabilities and behavior problems.

DMAE's ability to increase production of brain chemicals needed for short-term memory and concentration have more recently led researchers to study its potential in helping reduce some of the negative effects of Alzheimer's and dementia. The severe, progressive memory loss characteristic of Alzheimer's disease is due in part to the loss of brain cells that produce acetylcholine, which acts as a chemical messenger in brain cells. The cholinergic -- or acetylcholine increasing -- effects of DMAE certainly hold promise for their potential in increasing short-term memory in people struggling with Alzheimer's and other memory related illnesses.

Additionally, DMAE appears to serve a sort of garbage collector role for cells. As our cells age, they accumulate a biochemical waste residue called lipofuscin. Lipofuscin is also a spinoff of the blockage or reversal of protein modification by L-carnosine. The more lipofuscin a cell or tissue contains -- and it can reach up to 30 percent in aged tissues -- the less functional it becomes. DMAE helps remove lipofuscin

from cells and tissues, returning them to a cleaner and healthier state.

PUTTING IT ALL TOGETHER

Sadly, we know there is no real Fountain of Youth. Our bodies age as surely as time continues its endless forward march. But there is a way to get some of the benefits a Fountain of Youth might provide if it did indeed exist. We can have a better quality of life as we age. We can maintain youthful appearance and body function further into our lifespan. We can keep our skin more supple, our minds and vision clearer, and our overall health stronger.

Healing America's Age-Less works with our bodies to lessen the negative effects of aging. 2 to 3 capsules per day will impact cellular senescence and reduce the damaging effects of protein modification in everyone. People with specific challenges may find as many as 4 to 6 capsules per day helpful.

It is possible to increase the human lifespan -- statistics show we are doing it every year. And it is possible - even probable -- to have a high quality of life, with health and vitality, even into an advanced age. Increasingly, retiring at age 65 for many Americans is merely the end of one career and the start of another. No, we're not truly ageless. But yes, we can live agelessly.

CAUTIONS

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease, but rather is a dietary supplement intended solely for nutritional support.

SOURCES

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