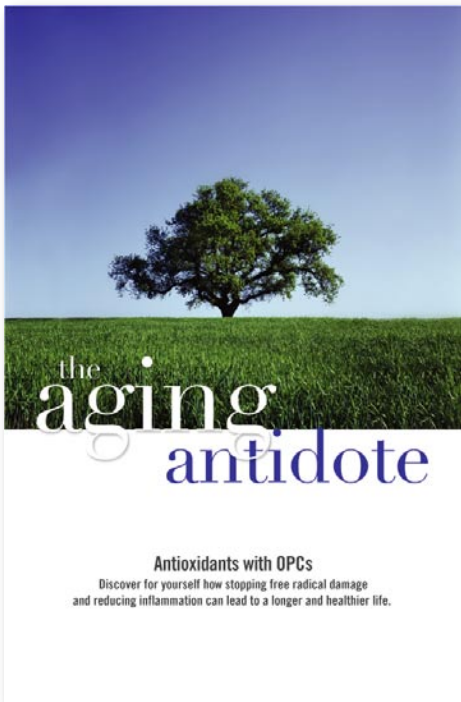


The following excerpt is from The Aging Antidote — Antioxidant and OPCs. The complete book is available free with your first purchase of any Cell Essentials product.



When you open the plastic container that’s been hiding in the back of your fridge, the word “yuk!” rather than “oxidation” may come to mind. Yet your month-old leftovers are a first-rate example of oxidation, what mainstream medical science now regards as a primary cause of degeneration, immune deficiency and aging in all of us.

Oxidation is the slow deterioration of matter as a result of chemical reactions involving oxygen. It’s a familiar phenomenon found throughout nature: metals rust, apples turn brown, oils become rancid, rubber crumbles. All are signs of oxidative stress, destruction caused by something called “free radicals.” Now, imagine what free radicals could do to your body.

What are free radicals?

Think back to that high school physics course. Our bodies are made up of billions of molecules, each with paired electrons orbiting a protein nucleus. When oxidation destroys one of a molecule’s orbiting electrons, a free radical is the result. To give you an idea of just how radical they are, scientists call free radicals the most unstable substance in physics. The free radical’s unpaired electron wreaks havoc as it forces the molecule to hunt for a mate. Think back to high school again. You knew a free radical, didn’t you?

And just like that old classmate prowling the halls, a free radical isn't picky. It will interact with the nearest available molecule of any kind – fats, proteins or even DNA. Scientists have discovered that this interaction damages molecules and even causes cells to die.

Now let's review our high school biology: The building blocks of our body and brain are cells, a collection of finely tuned molecules. Each cell is independent with its own job to do, separated from its neighbors and protected from its environment by its membrane. Membranes also separate different components within a cell; for example, the nuclear membrane surrounds a cell's chromosomes, which contain unique DNA. The genetic blueprint for each cell in your body, DNA determines whether a cell contributes to hair, teeth, fingernails, organ tissue, skin or even brain matter. So what happens if a cell's membrane is damaged? Well, it can't be good.

Membranes, because they are made mostly from fats and proteins, are susceptible to the continued advances of a pesky free radical searching for an electron. A properly functioning cell membrane includes molecules that act as channels and pumps, allowing nutrients to pass into the cell and waste products to pass out. Without a proper membrane, a cell is in real trouble. It may starve or be poisoned by its own waste. Also, its DNA might be damaged, causing its "instructions" to go awry. Thus, free radicals pave the way for cell destruction – and accelerate the body's aging process as the steadily decreasing number of cells causes tissues to weaken and lose their function.

What causes oxidation – and thus the production of free radicals?

Chemicals, pollution, fumes, stress, athletics and food additives are among the substances and activities that accelerate the production of free radicals in our bodies. In the air we breathe and the water we drink, we are exposed to as many as 60,000 different chemical toxins, including cigarette smoke, car exhaust and vapors from cleaning fluids. Some, such as byproducts of chlorine in water, are toxic in quantities almost too small to detect. In addition, food additives such as preservatives, artificial colors and flavors, emulsifiers, lubricants, bleaching agents, flavor enhancers and synthetic sweeteners contribute to oxidative reactions in the body.

Even metabolism – the process by which nutrients are broken down so they can be used by the body for energy, growth and repair – is a culprit. We may think by burning unwanted calories that me-

metabolism is our friend. Yet, like many biological processes, metabolism is a system of tradeoffs. On the one hand, metabolism is essential to life. On the other hand, metabolism generates toxic waste products and gives rise to free radicals.

Left unchecked, free radicals accelerate tissue damage and are a major contributing factor to the rate and severity of aging. Free radicals are also implicated in the progression of degenerative diseases, including adult respiratory distress, atherosclerosis, cancer, cardiovascular disease, cataracts, Crohn's disease, cystic fibrosis, diabetes, Down's syndrome, hepatitis, inflammation, motor-neuron disease, organic brain diseases, renal failure, rheumatoid arthritis, and neuro-degenerative conditions including Alzheimer's and Parkinson's diseases.

Ready to put up a fight?

Nutritional science has turned a major corner in the past decade as scientific researchers and physicians alike have acknowledged oxidation as a primary cause of disease and bodily deterioration and endorsed the preventive benefits of antioxidants. This is good news indeed, for now we are better informed and equipped than ever before to protect our health.

Antioxidants in our diet can help fight the formation of free radicals. What's more, these nutritional agents can help to repair damage that has already occurred. Antioxidants include vitamins E and C, as well as numerous other elements found in common foods. Fruits and vegetables are the primary sources of antioxidants, though some occur in grains, beans, meats, seafood and dairy products.

Although a healthful diet contains antioxidants, it's difficult to get enough of them from food alone to fend off those dogged free radicals. And, while all antioxidants help to prevent or minimize damage from oxidation, all antioxidants are not created equal. Their protective properties vary based on their structures and biological activities. Some antioxidants help prevent cancer (such as polyphenols in green tea), some protect the heart (such as vitamin F), some enhance immune function (such as vitamin C) and others increase microvascular circulation (such as anthocyanins in bilberry).

What are OPCs and what makes them so super?

OPCs are oligomeric proanthocyanidins – don't worry, we'll just call them OPCs. When it comes to

antioxidants, OPCs are the super heroes, more powerful against free radicals than even vitamins C and E. Because they are rapidly absorbed and quickly distributed throughout the body, OPCs come to the aid of the body more quickly than other antioxidants. They also neutralize free radicals faster.

In addition to being free radical fighters, OPCs protect connective tissue – collagen, in particular – and prevent damage to cellular membranes caused by oxidation. Vascular membranes, the linings of the stomach and intestines, sinus and respiratory cavities, and joints and vertebral spaces all enjoy OPC protection. Nontoxic and readily bioavailable, OPCs thus prevent or reverse diseases and degeneration.

OPCs also give a boost to vitamin C by blocking the action of an enzyme that destroys vitamin C. These vitamin C-enhancing effects were noted in a significant study of guinea pigs deprived of vitamin C. The addition of OPCs to vitamin C provided more protection more quickly against scurvy – and with improved survival time – compared with twice the amount of vitamin C by itself.

OPCs have undergone extensive plant and animal testing and have successfully demonstrated unsurpassed antioxidant activity. With such highly optimistic results, it's time to put the product to work for the fitness and well-being of today's healthcare consumers. That's just what Aliven Labs is doing with the introduction of Cell Essentials.

Receive the complete Aging Antidote book absolutely free with your first order of any Cell Essentials product. [Order now!](#)