

ALBERT CILIA-VINCENTI

THE SERIES

# Healing & Disease Reversal

This series reviews Dean Ornish's evidence-based claims of healing & disease reversal by dietary and lifestyle changes. He is a California University Professor of Medicine in San Francisco. This instalment discusses anti-inflammatory dietary and lifestyle changes.

Chronic inflammation may be an important underlying factor in a number of chronic diseases, including atherosclerosis, diabetes, arthritis, dementia, autoimmune diseases and many others.

Acute inflammation, like stress, may be beneficial and is a normal part of the body's defence system. But if this defence system runs out of control and is

chronically activated and systemic, the body mistakes its own tissues for enemy invaders and attacks its own tissues and organs. An endless cycle may be established wherein one part of the body's chemistry is trying to regenerate damaged tissues while another part of its chemistry is tearing them down.

As chronic inflammation starts rebuilding and tearing tissues apart, inflammatory activity escalates, as the immune system is desperately using the only means it knows to protect the body against a foreign invader that isn't foreign at all. Tissues become more inflamed and the cycle starts spinning out of control.

Such chronic inflammation doesn't have the same outward signs of acute inflammation, so

individuals may not realise they have an inflammation problem. A study of an apparently healthy elderly population found that those with the highest levels of C-reactive protein and interleukin-6 (two systemic inflammation markers) were 260% more likely to die during the next 4 years than those with lower levels of these markers.<sup>1</sup> The increase in deaths was due to cardiovascular disease and other causes.<sup>2</sup> We may feel healthy, but if inflammation is smouldering inside us, we may be in significant trouble.

One way chronic inflammation can be set off is when part of the genetic code controlling inflammation is upregulated. The genes controlling the inflammatory response can be "turned on" by a number of environmental factors, and the inflammatory response won't slow down until these genes are "turned off".

Anti-inflammatory drugs, though often useful for acute problems, interfere with the body's own immune response and may lead to serious side-effects. On the other hand, the benefits of statin cholesterol-lowering drugs may be due as much to their anti-inflammatory effects as to their cholesterol-lowering ones. Low-dose aspirin may help reduce myocardial infarction and colon cancer risk for the same reason.

A number of dietary and lifestyle factors may play a significant role in initiating and maintaining chronic inflammation.

These include unhealthy dietary choices, lack





of exercise, obesity, metabolic syndrome, chronic stress, smoking, environmental toxins and pollution, and chronic infections.

In the Harvard Nurses' Health Study, for example, higher intakes of red and processed meats, sweets, desserts and refined grains increased blood inflammatory markers, whereas higher consumption of fruit, vegetables, legumes, fish, poultry and whole grains decreased blood inflammation markers.<sup>3,4,5,6</sup> Foods low in calories and saturated fats and high in plant sterols, soluble fibre, soy protein, nuts and omega-3 fatty acids also decrease inflammation. Healthy dietary choices, moderate exercise and stress-management techniques decrease risk of chronic inflammation. This is a powerful step towards healing organ systems, losing weight and feeling healthy. Inflammation is at the root of so many different diseases that reducing its impact may have a profound effect on one's life.

Foods that are dense in nutrients have the highest nutritional value. Nutrient density is the amount of nutrients a food contains divided by the number of calories. Foods are nutrient-dense when they have a lot of nutrients and few calories. Many people try to make up in quantity what they don't have in quality. When you eat high-quality delicious foods you don't need as much to feel satisfied as when you gobble down loads of junk food. Ideally,

high quality foods are organic and less processed. This might not be possible or affordable for many people, but it's a goal worthwhile striving for.

As explained earlier, smaller portions of good foods are usually more satisfying than larger portions of junk foods, especially if you pay attention to what you're eating. For example, the "French paradox" (why they have lower heart disease rate than one would expect from their diet) is often attributed to red wine, but other factors may play a more important role. A meal in France may include some high-fat items, but generally in small portions and usually freshly prepared and savoured with a group of friends in a dinner that may last several hours. The social support and community of these meals also have a protective effect.<sup>7</sup> When food is that good, one can have more pleasure and fewer calories.

There is growing awareness that foods often have benefits that are not seen when isolated nutrients in these foods are studied. Researchers found that people who ate a lot of fruits and vegetables were at lower risk for cancer and heart disease. It presumed that this protective effect was due to beta-carotene but, one study involving 22,071 physicians, found no statistically significant benefit from beta-carotene tablets after 12 years.<sup>8</sup> Another study tested whether beta-carotene protected against skin cancer among 1,621

adults – no benefit was found after 4.5 years of treatment.<sup>9</sup>

A Finnish study, testing the effect of beta-carotene among people with high cancer risk, found an 18% increase in lung cancer among smokers taking the nutrient compared to smokers who did not.<sup>10</sup> A similar US study found a 28% increase in lung cancer among men at high risk of the disease who regularly took beta-carotene.<sup>11</sup> A Harvard Medical School placebo-controlled beta-carotene randomised trial involving 40,000 women, found the same incidence of heart disease and cancer in both groups,<sup>12</sup> but women smokers who ate 5 or more carrots per week had a substantially lower risk of lung cancer.<sup>13</sup> Another study showed increasing intake of vitamin E-rich foods reduced Alzheimer's disease risk, but vitamin E supplements were not significantly associated with Alzheimer's disease.<sup>14</sup> Since there are at least 100,000 protective substances in fruits and vegetables and other unrefined foods, it may be that beta-carotene is not the right one to study. It is more likely that the interaction among these protective substances, in their natural forms, may be what is most beneficial.

Our bodies have evolved to derive optimal benefits from natural, whole, unrefined foods. Unfortunately although food technology has now extracted certain nutrients from foods and processed or altered them in new ways, we may not always be able to predict their outcomes. §

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