

Novel prize winner James Watson, discoverer of the DNA double helix, in [Oxidants, antioxidants and the current incurability of metastatic cancers](#) proposed commonly consumed free-radical-destroying antioxidative nutritional supplements may have caused more cancers than they have prevented. This view is supported by [metastudies](#) e.g. analyzing 68 randomized trials with 232,606 participants (385 publications) and reviews showing the [unfulfilled promises of antioxidant agents](#).

His hypothesis was that much of late-stage cancer's untreatability may arise from its possession of too many antioxidants, and the time has come to seriously ask whether antioxidant use much more likely causes than prevents cancer. In 2014 James Watson came up with a [radical theory](#) for diabetes, dementia, heart disease and cancer where he wrote:

The fundamental cause, I suggest, is a lack of biological oxidants, not an excess.

*Lancet*

This also explains why metformin—the most commonly used drug to treat type 2 diabetes and physical exercise seems to be beneficial for several of the same diseases, including cancer, Alzheimer's disease, and cardiovascular disease.

Watson believes that rather than being wholly bad, oxidizing molecules, such as hydrogen peroxide, are crucial for the body's health. In particular, he points out that hydrogen peroxide goes to work in a cellular organ called the endoplasmic reticulum, where it ensures proteins are stable. If the REDOX level is disturbed, and levels of oxidants are too low, he suggests, the proteins become misshapen and cause the inflammation that damages the pancreas. And a raft of other diseases.

All in all, this opens the door to manipulating levels of reactive oxidizing molecules (ROS) for treating a host of chronic diseases that have thus far eluded medical science. Different ROS levels produce different outcomes with deleterious or beneficial effects. While there is still considerable controversy as to whether ROS modulation by either antioxidant supplementation or inhibition is clinically beneficial or detrimental for cancer treatment, supplementation with REDOX signaling molecules using products such as [ASEA](#) with an aim to restore optimal levels of ROS may potentially be a promising adjunctive strategy in anticancer therapies.