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Is daily use of irradiated food safe?

The claim

It is repeatedly claimed by the proponents of food irradiation that irradiated food is safe.

The reality

The irradiation process bombards food with high energy photons (ionising radiation). As a result the food becomes loaded with free radicals, which are very harmful chemicals. These chemicals have been associated with the onset of cancer and early aging.



Free radicals are formed in many normal life processes and our natural defenses are the anti-oxidants in our food. Anti-oxidants neutralise free radicals and are also called free radical absorbers. Some well known anti-oxidants are beta carotene and the vitamins A, C and E.

It is obvious that when you start to eat food high in free radicals that you deplete your natural levels of anti-oxidants. So, you become more prone to free radical damage, whatever form it takes. To keep in balance you would have to ingest much higher levels of anti-oxidants.

Supplement or die

Supplementation with extra ant-oxidants is precisely what the proponents of food irradiation have been doing in their animal trials. At first they used anti-oxidant vitamins in excessive quantities. Later they used less well known food components and chemicals with strong ant-oxidant working.

Wrong claim

Invariably they claim that their research shows that irradiated foods are safe. But this is misunderstanding the results of their own research. So, what does their research show?

Correct claim

Their research shows that a wide variety of anti-oxidants fed in large quantities is highly effective in protecting experimental animals from the ravages of free radicals.

Scientific research

Genuine research aimed at finding out what really happens, used standard animal house diets. They were mixed with irradiated foods. Normally, standard animal house diets contain also anti-oxidants, but in modest quantities. Just as in any other healthy diet.

In this kind of research the free radical overload in irradiated foods became very visible through the many adverse effects that showed up.

Adverse effects

lowered immune resistance (1,2,3)

upsurge in abnormal lymph cells (4,5,6,7 and 8)

decreased fertility (7, 9, 10, 11, 12, 13, 14, 15, 16)

damage to kidneys (17)

depressed growth rates (12, 18, 19)

vitamin A and B deficiencies (9)

vitamin C deficiency (20)

vitamin E deficiency (10)

vitamin K deficiency (21)

Scientific comment

One research examining the testes of rats fed for 20 months a standard animal house diet containing irradiated products noted:

“It is noteworthy that the structural changes observed were similar in many respects to those arising in the testes during prolonged exposure to radiation...It can therefore be suggested that prolonged entry of such substances into the body in the composition of irradiated food may give rise to changes in the testes, as also in other organs, similar to the after effects of chronic irradiation. This hypothesis is confirmed by the direct dose dependence established between the severity of the structural changes in the testes and the dose of radiation of the foods consumed.”(14)

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