

## **Reducing the side-effects of radiation and chemotherapy**

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Although I have been very critical of standard cancer treatments - and have argued that surgery, radiation and chemotherapy are forms of treatment to be avoided, I have to recognise that some, perhaps many, patients have undergone these therapies, their tumours have disappeared and they appear to be living comfortable lives. In America it has been estimated that there are 8 million people who have apparently recovered having gone through some form of orthodox treatment. The therapeutic conveyor belt will continue to channel patients to these therapies in large numbers and many patients will feel happy that their cancer is in the hands of experts who know what they are doing. For these and other reasons, radiation and chemotherapy will continue to be performed in large numbers for the foreseeable future. However, since these forms of treatment are hazardous, anyone deciding to undergo radiation therapy or chemotherapy should consider the advice of a number of complementary therapists and take the following precautions before, during and after treatment.

### **Aloe Vera**

Some people recommend drinking aloe vera juice regularly for its healing properties. We have already noted the terrible impact of radiation on the intestines. It is also recommended that aloe vera gel should be rubbed into skin areas affected by radiation half an hour before exposure.

### **Chlorophyll**

Foods rich in chlorophyll such as green cabbage, broccoli and alfalfa have been shown to reduce radiation damage by 50% in studies on guinea pigs. Chlorophyll is very similar in its molecular composition to haemoglobin.

### **DMSO**

DMSO, dimethyl sulphoxide, an organic sulphur compound of great therapeutic value which should be available on prescription, has shown itself to be valuable both in alleviating the side-effects of radiation and being an anti-cancer therapy in its own right. There is evidence that, when combined with low doses of chemotherapeutic agents, it is also highly effective against cancer.

### **Garlic**

This contains two powerful substances: allicin oil and organic germanium. It also contains a substance that Russian scientists have called vitamin X because its functions are not yet fully understood.

### **Herbs**

A number of herbs are useful as protective agents: Siberian Ginseng, Panax Ginseng and chaparral. In the case of panax ginseng, a Korean study found that a normally fatal dose of radiation would leave 5% of mice alive in the control group compared with 82.5% in the group given the herb. Chinese herbs - especially blood strengtheners and kidney tonics have shown great ability to support the body.

## **Ice-pack**

Some people have suggested that keeping an ice-pack on the head during the chemotherapy sessions and for an hour or so after may prevent hair loss.

## **Immune-system Boosting Drugs**

Isoprinosine®: This is marketed under the trade names Methisoprinol and Inosiplex. It is used for anyone with a compromised immune system - AIDS and cancer patients - as it has demonstrated a strong anti-viral activity and is valuable for restoring and strengthening the immune system. It is often used post-operatively and with radiation and chemotherapy.

## **Iodine**

Iodine deficiency can also occur as a result of radiotherapy and some form of supplementation should be considered.. Iodine in particular affects a large number of the body's metabolic processes. For this reason, it is recommended that seaweed products such as kelp or dulce, available at any adequate health store, should become a regular part of the diet - also green vegetables, and egg yolks. A tincture of iodine can be made up at any chemist shop - ask for Lugol's solution.

## **Iron and copper**

Radiation - and even ultra-violet light - causes problems for the absorption of these two minerals. Iron supplementation is therefore recommended with vitamin C to aid bioavailability. This will prevent radioactive plutonium replacing it in the body's iron stores: the liver, bone marrow, etc. Optimal levels of iron in the body prevent this uptake.

## **Lactobacillus acidophilus**

These are the friendly bacteria. *L. acidophilus* and *L. bulgaricus* have a noted effect in cleaning out the toxic wastes that result from these therapies. As a result, the toxic impact of the treatments is reduced. Start taking before any treatment is started.

## **Magnesium**

Magnesium deficiency can be caused by drinking too much milk, coffee, alcohol, and fluoridated water. Deficiency can cause a loss of calcium and potassium, kidney disease, muscle cramps, irritability, depression and even heart disease. It is an important mineral and needs to be taken as a supplement unless your diet also includes a lot of sea vegetables, soybean products or nuts.

## **Olive oil**

When this comprises 15% of total calories of a daily diet it provides optimal protection against radiation. In one study with mice which received from zero to 30% of their diet in the form of olive oil, those mice that had no olive oil all suffered radiation damage to liver, kidneys, lungs, skin and hair. Olive oil demonstrated strong protective properties.

## **Potassium**

Radiation causes problems for the sodium-potassium balance of the body. Potassium is a very important mineral which is essential for nerves, muscles, regulation of osmotic pressure, maintenance of the acid-base balance of the body and also for the proper levels of blood sugar. Ocean fish, seaweeds (kelp, dulce etc), beans, whole grains and dried bananas are good sources. 5-6,000 mgs a day is required but it is best to take it in natural rather than supplement form.

## **Reishi Mushrooms**

In Japan, drinking tea made with Reishi mushrooms (Ling zhi) is also often recommended for radiation patients as it protects the white blood cells.

## **Seaweed**

Lots of sea vegetables are recommended. Anecdotal evidence strongly suggests that side effects are much reduced if the patient takes large quantities of seaweed during treatment.

## **Selenium**

This has a protective effect against mercury - as in dental fillings. It also helps protect against radioactivity. 100-200 mg a day.

## **Silica**

One side effect of radiation is the weakening of bones. This would normally indicate that calcium supplementation would be necessary but calcium is potentially very dangerous for cancer patients. However, silica is converted to calcium in the body - and is in any case a superior way of taking in bioavailable calcium. Some nutritionists advise that there is little proof that calcium supplementation is of any value at all. Lots of green leafy vegetables - organic if possible - very lightly cooked, raw or juiced will provide good quantities of calcium and silica. It is one of life's little ironies that vegetarians take in more calcium than meat eaters and milk drinkers. Calcium glucoRate (not the more common glucoNate) is also claimed to be good for reducing side effects.

## **SOD**

Fibrosis is a major debilitating side-effect of radiation treatment. The only substance known to have any beneficial impact on fibroids is SOD (superoxide dismutase) available as Orgotein® from DDI Pharmaceuticals of Mountain View, California. Also available as Lipsod® . It has become increasingly available at specialist health product stores.

"French scientists have also shown that injections with a form of SOD called Lipsod® can be successfully used to treat long established fibrosis caused by radiation therapy. After just three weeks of intramuscular injection, fibrosis was reduced on average by one-third and significant softening occurred in 82 percent of the cases. It did not matter how old the fibrosis was at the time of SOD treatment" (Ralph Moss, 1992)

SOD is also used to pre-treat patients who subsequently receive treatment with Tumour Necrosis Factor (TNF). TNF is toxic but the toxicity is substantially reduced by SOD injections. SOD, as with other enzymes are apparently best injected as stomach enzymes can too easily damage them. SOD

also prevented fibrosis from developing in people undergoing radiation therapy.

### **Sodium alginate**

Sodium alginate is another highly recommended substance as it helps reduce the impact of radiotherapy on the bones and, in small doses, is known to act as a cancer preventative. Brown sea vegetables such as kelp are a good source of sodium alginate.

### **Slippery Elm**

Since damage to the mucous membranes lining all the hollow tubes in the body is inevitable, some complementary therapists recommend that radiation patients should constantly drink Slippery Elm, a herbal compound that should also be available at your local health shop, and olive oil. These are obviously intended to replace the natural mucous material lining the insides of hollow organs and so avoid the worst consequences of radiation treatment. Blackcurrant juice is also recommended for this purpose.

### **Visualisation**

Anyone opting for radiation and chemotherapy should develop a positive attitude to these treatments and visualise how they are working against the cancer. One experiemnt has shown that people with negative attitudes to these treatments do not do well, while those who are positive and gung ho about them do much better.

### **Vitamin A**

The main problem of both radiation and chemotherapy is that it attacks the epithelial cells that line the inside of the intestines and which produce the mucous membrane. Vitamin A is necessary for the growth and maintenance of epithelial tissue and it is therefore necessary to take this vitamin, either as vitamin A or as beta-carotene, in large quantities while undergoing either treatment. Several glasses of fresh carrot juice a day throughout the treatment would be sufficient.

### **Vitamin C**

Previously, chemotherapy patients were urged not to take any anti-oxidant vitamins particularly vitamin C during their chemotherapy, as it was believed these would reduce the effect of the drug. However, the view is now that supporting the system with vitamins may not be a bad thing.

### **Vitamin E**

This helps the body to recover from post-irradiation anaemia and helps to protect red and white blood cells. It has been found to protect the heart against damage and lower skin toxicity from the doxorubicin agents, and protects against lung fibrosis from use of bleomycin. Taking 1,600 iu or more, starting one week before chemotherapy treatment, has a significant impact on hair retention.

### **Yeast**

There is good yeast and bad yeast. One good yeast is *Saccharomyces cerevisiae*. A bad yeast is *Candida albicans*. Nutritional yeasts bond with pollutants and heavy metals. Mixed with brown rice

this has protective value for the liver. **Bio-Strath** is a Swiss product that contains this good yeast and 15 herbs. The production of Bio-Strath requires two months of fermentation. Herbs and other ingredients are added one at a time: malt extract, unrefined honey, unprocessed orange juice and the following herbs: angelica, balm, basil, camomile, cinnamon, caraway, elder, fennel, horseradish, hyssop, lavender, licorice, peppermint, parsley, sage and thyme. In one study, a group of radiation patients who took Bio-Strath suffered no weight loss, or depression of the haemoglobin. It also helped to enhance the assimilation of nutrients. It also has been shown to retard tumour growth in mice - and mice on a diet of Bio-Strath did not develop as many cancers as a control group.

### **For further reading**

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