



RECENT RESEARCH

Evidence from Britain and the US also points to the hazards of microwaving foods.

- 1 In 1991 a patient in a hospital in Tulsa, Oklahoma, died of an allergic reaction after receiving a transfusion of blood that had been warmed in a microwave oven. The irradiation seems to have altered the blood in a way that caused the patient's death.
- 2 US researchers investigating an outbreak of salmonella among a party of picnic-goers in 1992 discovered that all those affected had used a microwave to reheat food from the picnic. None of the persons who used a conventional oven or skillet to re-heat the food became ill. The researchers concluded that, compared with conventional methods of re-heating food, microwave ovens offer no preventative protection from illness.
- 3 Chemicals from packaging have been found to leak into microwaved food.
 - Susceptors in packaging help brown food during microwave cooking to compensate for its lack of taste and colour compared with conventionally cooked food. Some pre-1992 susceptor devices were observed to release small amounts of a toxic chemical called bisphenol-A diglycidyl ether.
 - Benzophenone, a toxic chemical present in certain inks, has been observed to migrate from packaging into microwaved food.
 - Bread and breakfast cereals are often sold in waxed bags for easy heating in microwaves. One recent study found that following the instructions on the packaging resulted in 60 per cent of the wax being transferred to the food.
 - The PVC plastic films that cover food during microwave cooking have been found to release plasticisers into the food. A 1996 study recommended that PVC should not be used in direct contact with food during cooking.

HOW MICROWAVES WORK

Microwaves use a device called a magnetron tube, which causes an electron beam to oscillate at very high frequencies and thus produce microwave radiation.

The molecules in the food align themselves with the very rapidly alternating field and oscillate around their axes. The considerable intermolecular friction caused produces heat.

Microwaves are beamed from the magnetron into the oven compartment, where they heat the food from the inside out – unlike conventional ovens. This process can give rise to cold spots, hence the need to rotate items constantly.

JUNK THE JUNK COOKING

The message seems clear. Don't cook food in microwaves – especially if it is for children. Resist the slick and misleading advertising offering the 'quick fix' for your 'busy life'. Your body requires wholesome food prepared in as wholesome a way possible for optimum functioning. To the degree that you consume less than wholesome food, your body organs and processes will be adversely affected. This will inevitably lead to degeneration and disease.

MICROWAVE OVENS • Eighty per cent of the UK's population use them and yet two comprehensive studies have shown that they damage our health. Isn't it time more research was done into the effects they have on us and the food we put into them? By Kashish Gupta

CASE STUDY 1: THE RUSSIANS

From 1957 up until very recently Russian research into microwaves was mainly carried out at the Institute of Radio Technology at Klinsk in Byelorussia. According to US researcher William Kopp, Russian forensic teams observed the following key effects:

- 1 People who ingested microwaved foods showed a statistically higher incidence of stomach and intestinal cancers, plus a general degeneration of peripheral cellular tissues and a gradual breakdown of the function of the digestive and excretory systems.
- 2 Due to chemical alterations within food substances, malfunctions occurred within the lymphatic system, causing a degeneration in the immune system's ability to protect the body against neoplastic (cancerous) growth.
- 3 Microwave exposure caused significant decreases in the nutritional value of all foods studied, most

significantly in the bio-availability of B-complex vitamins, vitamin C, vitamin E, essential minerals and lipotropics (substances that prevent abnormal accumulation of fat).

- 4 Heating prepared meats in a microwave sufficiently for human consumption creates the cancer-causing agent d-nitrosodiethanolamine.
- 5 Cancer-causing free radicals were formed within certain trace-mineral, molecular formations in plant substances – particularly in raw root vegetables.
- 6 Ingestion of microwaved foods caused a higher percentage of cancerous cells within the blood serum.
- 7 Microwaving foods alters their elemental food substances, leading to disorders in the digestive system.

The use of microwave ovens was banned in Russia in 1976.

**CASE STUDY 2:
DR HANS ULRICH HERTEL**

Food scientist Dr. Hans Ulrich Hertel fought for 10 years to have his findings concerning the dangers of microwave ovens acknowledged. His statement that inspired the microwave manufacturers to use the Swiss courts to silence him was: 'Food cooked or defrosted in a microwave oven causes changes in the blood indicative of a developing pathological process as is also found in a carcinoma.' Put simply, microwaved food causes cancer.

In 1989 Hertel teamed up with professor Bernard Blanc of the Swiss Federal Institute of Technology. They

proposed to the University of Lausanne a research programme to look into the effects of microwaved food on humans. Their application for funding was turned down on the grounds that there was no need for research in this area. Undeterred, the two scientists decided to fund a smaller research programme themselves.

They selected eight individuals and fed them on a range of raw, conventionally cooked and microwaved foods. Blood samples were taken from each volunteer before and after eating. Serious irregularities were found both in the structure of the food microwaved and in the blood of those eating the microwaved samples.

The microwave industry reacted to the research by taking Hertel to court. He was convicted under Swiss unfair competition laws. And such was the pressure put on Blanc (he told Hertel that he feared for the safety of his family) that he publicly dissociated himself from the research.



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