Further confusing the association between diet and cancer, a food researcher said today that a substance in fatty meats and cheeses protects mice against cancer.

The substance, conjugated linoleic acid or C.L.A., is a potent anticarcinogen, said Dr. Michael W. Pariza, director of the Food Research Institute at the University of Wisconsin.

The result, which Dr. Pariza attributed to the substance's counteracting the damaging effects of rare forms of oxygen in cells, "came as a complete surprise to us." It might lead to new anticancer drugs able to work in each cell in the body, he said.

Dr. Pariza, who described his findings at an American Cancer Society seminar for science writers here, emphasized that the work was basic research and that it was far too early to make dietary recommendations based on the findings. The amount of the substance fed to experimental animals was so high that it would be impractical for people to eat enough meat and cheese to obtain any benefit. On the contrary, he said, they could harm themselves. No Reason to Change Diet

The new finding illustrates how difficult it is to make simple pronouncements about diet and cancer, said Dr. John Laszlo, senior vice president of research for the American Cancer Society. Researchers have found cancer-preventing substances in vegetables and fibers, he said, "and here are some in meat and cheeses."

"We hope that Americans don’t get a mixed message," said Howard Lewis, a spokesman for the American Heart Association, "and go off their regular diets to use foods high in saturated fats as a way to prevent cancer. That would be ridiculous."

Dr. Pariza said he and his colleagues discovered C.L.A. in grilled ground beef about three years ago, although it had been found in milk about 20 years ago. C.L.A. is a variant of linoleic acid, an essential fatty acid taken up by all cells in the body. Dr. Pariza said the first extracts of C.L.A. were not purified but were still found to prevent skin cancer in mice.

More recently, the Wisconsin researchers purified the substance and found it has a molecular structure that tends to attract and immobilize free oxygen radicals, rare forms of oxygen molecules found in blood and tissue that have been strongly implicated in the initiation of cancers and in degenerative conditions like arthritis, heart disease and aging.

New Substance Is Unique

Conjugated linoleic acid is unique among substances that neutralize free oxygen radicals, Dr. Pariza said, because as a fatty acid it is incorporated directly into every cell in the body. Such substances derived from plants, he noted, do not become an integral part of cells.
This special property of C.L.A. may make it possible, he said, to develop new anticancer drugs that are absorbed into cell membranes.

Dr. Pariza went on to describe more recent experiments in which mice were given the new substance by stomach tube four and two days before administration of a carcinogen. The treatment was repeated each week for four weeks. After 20 weeks, the mice were killed to evaluate the results.

In each experiment, Dr. Pariza said, the mice treated with conjugated linoleic acid developed significantly fewer cancers than animals that received the carcinogen but no C.L.A. In the most recent experiment each mouse not treated with the substance developed five cancers whereas each mouse treated with C.L.A. developed fewer than two cancers.

The total amount of the substance administered to each mouse was equivalent to that in about two pounds of cooked beef, Dr. Pariza said.

He said the National Cancer Institute and the Wisconsin Milk Marketing Board financed his research.

"I want to emphasize this is basic research," Dr. Pariza said. "We have isolated an anticarcinogen from unexpected sources. I don't advise people to go out and chow down on hamburger and cheese to increase their C.L.A. There is reason to eat a balanced diet."

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