

MEDICINE

Radiation Effects Vary

► THE SUCCESS of radiation treatment for cancer may depend on exactly what stage of growth the cancer cells are in at the moment the radiation hits them.

This was reported by Dr. William R. Eyler, Detroit, Mich., to the Radiological Society of North America meeting in Chicago.

Experiments with mice appear to bear out the earlier theory that cancer cells are much more affected by radiation if they are in the process of cell division, or mitosis, he reported.

This theory was explored by two English doctors who took biopsies of skin cancers before each treatment and only gave radiation doses at the times they found the cells in the process of dividing.

If the cells were not dividing, but lying dormant, the radiation treatment was postponed. In this way they obtained good results with lower doses than they had used with daily treatments.

The same theory was used on the mice, although instead of taking biopsies each time, Dr. Eyler used different radiation treatment intervals for different groups of mice.

Admitting the research had little clinical application at the present time, Dr. Eyler did advance certain cautious suggestions.

He concluded that the response to radiation can depend not only on the total doses and overall time of the radiation, but also on the number of individual radiation treatments in a given amount of time.

A complete description of radiation treatment should contain information on all three points.

Watch Drugs' Action

► MONKEYS with windows in their heads are being used to study the effects of anti-coagulant drugs, Dr. John S. Meyer, Boston, Mass., reported to the meeting.

The small windows have allowed scientists to watch anticoagulant or "blood thinning" drugs in the brain and to study how they help ward off the stoppages of circulation that cause strokes and brain disease.

Long-term use of anticoagulants in persons with hardening of the arteries is becoming more and more common. The drugs are able to prevent blood stoppages in vessels that have become narrow and constricted and in this way prevent attacks from happening, Dr. Meyer reported.

But how the drugs help once an artery has been blocked, has not been completely understood. The original theory was that anticoagulant treatment could "re-canal" the blocked vessel, that is, form a new channel for blood to flow through.

Another possibility is that the drugs in some way improve the collateral circulation supplied by tiny new artery connections that link the two sides of the artery that has been blocked.

This theory was borne out by the monkey

experiments in which drugs and dyes were introduced into the circulation and watched as the dyes tinted the blood and body fluid.

Rather than re-canalizing the blocked vessel, the anticoagulants prevent stickiness of red cells, white cells and platelets in the blood, Dr. Meyer reported.

In this way they prevent increasing resistance to blood flow and improve the collateral circulation.

Science News Letter, December 7, 1957

MEDICINE

Drive Opens Against Childhood Killer

► MORE THAN 50,000 supermarkets have become headquarters for a nationwide campaign against muscular dystrophy (MD), the childhood disease that attacks muscles and always kills.

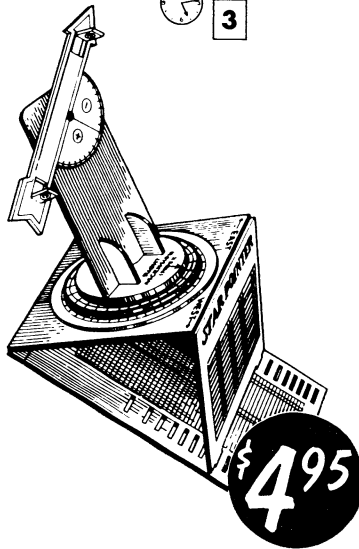
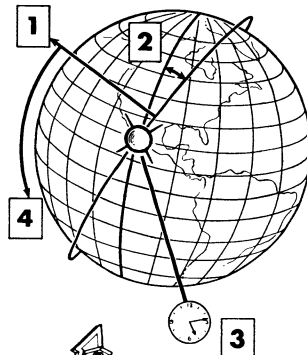
What causes MD is not now known, although research indicates that the muscular deterioration may come from the inability of the muscles to use some needed form of vitamin E.

Science News Letter, December 7, 1957

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