

ROENTGENOLOGY

Disputes X-Ray Scare

➤ ARE DIAGNOSTIC X-RAY examinations dangerous? They are not, according to a Canadian physician.

Roentgen, or X-ray, diagnosis entails only a minute hazard, a risk so small as to be negligible in comparison with the benefits derived, Dr. J. G. Stapleton of Hamilton, Ontario, reports in the *Canadian Medical Association Journal* (July 15).

Admitting there is definitely an element of risk and some statistics establishing X-ray as a cause of leukemia, Dr. Stapleton advises the following steps be heeded:

1. Use added filtration for all fluoroscopic and radiographic tubes to cut the skin dosage received by the patient.
2. Limit the radiation beam to the area in question by means of cones and diaphragms.
3. Use high voltages to boost the dosage while actually using less radiation.
4. Restrict the use of fluoroscopy. Fluoroscopic procedures for the treatment of fractures are hazardous both to the patient and the operator and should be abandoned.
5. Abbreviate examinations of children, particularly with cases that require a follow-up.
6. Shield the gonads of males, particularly those under age 40.
7. Restrict X-ray examination during pregnancy.
8. Abandon the "mass survey" X-ray

examinations of large, healthy population groups.

9. Use the fastest available films and fluorescent screens and active chemicals.

10. Require that all X-ray examinations be done by well-trained technicians under adequate radiological supervision.

Dr. Stapleton re-emphasizes the opinion that X-ray examination can be harmless, depending upon the acceptance by medical science of all the practicable precautionary measures listed.

Science News Letter, August 9, 1958

TECHNOLOGY

New Light Concrete Saves Building Time and Money

➤ A NEW concrete building material can be sawed, chopped and chiseled without losing its strength, and weighs only one-third as much as ordinary concrete.

The material is expected to enable builders to erect houses 40% faster and at 20% lower cost than with ordinary materials, Gerald Gidwitz, chairman of Continental Materials Corp., Chicago, said.

The light cellular concrete, called Calsi-Crete, is said to be easier and cheaper to ship and handle than ordinary concrete.

It is made by blasting air through a wet mixture of concrete, silica, wood and asbestos fibers. After the material "rises," much like bread, it is molded, baked, sawed to size and polished.

Science News Letter, August 9, 1958

AGRICULTURE

Weeds May Not Grow Without Hoeing

See Front Cover

➤ SOME MINOR experiments conducted at the U. S. Department of Agriculture's plant physiology laboratory at Beltsville, Md., point to the importance of cultivation in getting plants to grow.

Weed seeds were planted in six small flower pots. They were covered with a very thin layer of soil and watered from the bottom so as to leave the surface undisturbed. In some of the pots scientists cut through the soil with a knife. Wherever the knife marks were made, weeds began to grow.

The photograph on the cover of this week's SCIENCE NEWS LETTER shows the pots and the weeds growing along the cut lines. Seeds in pots left untouched remained dormant.

By cutting through the soil, the scientists explain, the seeds were exposed to the light. Without light and darkness in the right proportions, seeds will not germinate.

These experiments with weeds are a small part of the laboratory's extensive basic research program centered around the importance of light to plants. The staff, headed by Dr. H. A. Borthwick, is investigating the reversible photochemical reactions involved in seed germination, flowering and related processes.

Science News Letter, August 9, 1958

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