

MEDICINE

Strict Lenten Observance Prevents Arterial Hardening

German Doctor Says Arteriosclerosis Is Defensive; Has Worked Out "Biblical Diet" for Its Correction

HARDENING of the arteries, called arteriosclerosis by medical men, is really not a disease but a device for mechanical protection of the arteries. It is not a condition due to old age nor is it necessarily incurable.

This unorthodox theory together with a new method of treating the condition has been proposed by Dr. J. Plesch, professor of internal medicine in the University of Berlin. In his report to *The Lancet*, Dr. Plesch described one feature of his treatment for the condition as a "Biblical diet" because, like certain fasting or dietary rituals of various religions, it introduces a "dietary day" once a week and a three or four week period of dieting once a year.

His method of treatment consists in first removing the causes as far as possible. Next efforts are directed toward relieving the overtaxed circulation. This should not be done, however, by the direct use of drugs which lower blood pressure through paralyzing the blood vessels, as these do more harm than good, Dr. Plesch thinks. Instead he prescribes frequent rests in the recumbent position during the treatment. Finally there is the dietary regimen which consists chiefly in living on a diet free from nitrogen (protein) and salt (sodium chloride) for one day a week regularly and for every day during a three or four week period once a year. Fresh air and complete mental relaxation are other features of Dr. Plesch's treatment.

At Every Age

"Arteriosclerosis is a disease that sets in at every age, that can be arrested and that can be cured in the early stages and beneficially influenced in the later stages; it is not an ailment of old age which must of necessity be progressive and incurable," Dr. Plesch declared. "It is often found in youthful people and often absent in the aged; and when it does make its appearance in old age it rarely has any serious consequences."

Arteriosclerosis is only one feature of a constitutional disease resulting in a lack of tone which chiefly affects the

smooth muscles of the blood vessels, Dr. Plesch thinks. The actual hardening of the arteries he takes to be a protective process rather than a disease.

"The primary cause of arteriosclerosis is the weakening both of the muscular and of the elastic elements of the walls of the blood vessels."

If the weakened walls of the blood vessels are not able to offer enough resistance to the blood pressure they become stretched and dilated, he explained. At points especially exposed to high blood pressure, changes occur which are solely for the purpose of increasing the resistance of the walls. These changes, among them the hardening which gives the condition its popular name and which consists of deposits of lime, offer protection against breaks in the artery walls.

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PHYSIOLOGY

Milk Sugar Found to Aid Bone Growth in Chicks

MILK SUGAR or lactose helps to build up a strong, bony structure in the growing chick, E. B. Hart and his associates at the University of Wisconsin have found. Lactose is an important part of the milk produced by

animals, making up nearly two-thirds of all the solids in human milk and from four-fifths to one-half of those in whole cow's milk. In skim milk or buttermilk, lactose makes up one-half of the total solids. The Wisconsin investigators found that lactose fed as from 10 to 40 per cent. of the chick ration gave a partial control of rickets and was one-half as effective as artificial sunlight in producing strong bones. The milk sugar also helped the chicks to make better use of the lime in their feed.

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PLANT PHYSIOLOGY

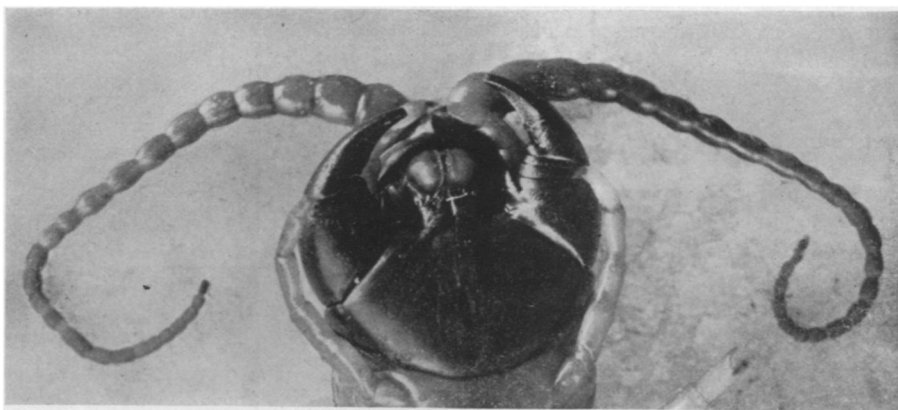
Sun's Unseen Radiation Speeds Growth of Plants

INDICATIONS that the invisible radiations of the sun influence the growth of plants by favoring the formation of lipides, compounds small in bulk but large in effect, are reported in *Science* by Prof. W. E. Tottingham of the University of Wisconsin.

Prof. Tottingham grew tomato plants under a special glass that transmits both ultraviolet and infra-red light. Chemical analyses of their leaves showed increase in percentage of lipides, as compared with the leaves of other plants grown under common glass. Plants of the test group exceeded those of the "control" group in earliness and size of crop when transplanted out of doors.

It is not yet known whether ultraviolet, or infra-red, or both, are responsible for the increase in the lipides and the more rapid growth and maturing of fruit. The next experiment will involve the use of a filter to take out the infra-red, to see how much of the effect may be attributed to the ultraviolet.

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BLACK CRESCENT OF DEATH

—is the aspect presented by the formidable curved fangs and jaws of the centipede to many a luckless insect or other creeping thing. This striking enlarged photograph was taken by Cornelia Clarke.