

lar filtration rate, and presumably in urate clearance as well, occurs predominantly in the first two decades after puberty, following which the rate of decline in function appears to be slowed. The major decrease in these renal functions thus appears to occur in a period which approximately coincides with the period during which the male carriers of inherited hyperuricemia develop elevated plasma urate levels. Such findings suggest that the decrease in glomerular filtration rate, which is a usual observation in the gouty, may in fact be largely genetically determined, rather than a complication of gout, as is usually assumed (Wolfson, *et al.*).

(9) It is suggested that normal standards for the upper limits of plasma urate concentration be revised to take cognizance of the normal sex differential in plasma urate level.

The complete data on which the foregoing statements are based will be published in detail elsewhere.

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Book Reviews

Atomic energy: being the Norman Wait Harris lectures delivered at Northwestern University. Karl K. Darrow. New York: John Wiley; London: Chapman & Hall, 1948. Pp. 80. (Illustrated.) \$2.00.

This brief absorbing treatment of the physics of nuclear energy retains the informal language of Dr. Darrow's lectures at Northwestern University. It is a contribution to the growing list of publications whose admirable objective is to explain the physics of nuclear energy to the layman and to scientists in other fields. Within its 80 pages the reader who seeks to obtain a general review of the field will find a surprising amount of sound information woven into an interesting story.

Starting with introductory information about the atomic structure of matter and an ingenious explanation of physical units in everyday language, the story proceeds with the aid of simple but effective diagrams to a brief description of nuclear forces and a careful cataloguing of the masses of simple nuclei. This leads to the apparent contradiction that in nuclear physics the whole is not equal to the sum of its parts, a problem which is solved by the explanation of the equivalence of mass and energy and a statement of Einstein's equation.

Following a more detailed discussion of energy units, the specific nature of nuclear forces and the inappropriate use of the term "atom smashing," the possibility of transmutation is examined and found to require giant machines of which the Van de Graaf generator is described as a typical case. With the aid of cloud chamber photographs, simple transmutations are explained and the verification of Einstein's equation noted.

A brief eulogy of Rutherford's phenomenal contributions leads to a discussion of the stability of heavy nuclei, radioactivity, and the peculiar advantages of the free neutron as an atomic projectile. The discovery of atomic fission with its excess production of neutrons leads to the awesome implications of the chain reaction with disturbing questions about the stability of our immediate surroundings. These are allayed with an explanation of brakes on the process provided by nature and the story of the removal of such brakes one by one to yield, on one

hand, the uncontrolled reaction or bomb and, on the other, the controlled reaction or pile with its singularly appropriate name. The story ends on the hopeful note that the controlled reaction can aid humanity in many ways if man can avoid further use of the uncontrolled reaction.

Dr. Darrow's book is distinguished among its kind by its brevity and the clarity of presentation. He gives enough, but just enough, information for the nonscientist to follow the essential ideas without becoming lost in extraneous details.

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Hemostatic agents: with particular reference to thrombin, fibrinogen and absorbable cellulose. Walter H. Seegers and Elwood A. Sharp. Springfield, Ill.: Charles C. Thomas, 1948. Pp. xii + 131. (Illustrated.) \$4.50.

Recent rapid developments in the field of blood clotting have made available for the first time highly potent agents for stopping hemorrhage and bleeding. These substances have many possible applications. Associated with this development are important points of technique, descriptions of which are scattered through the literature or have not been published. Hence, there is a definite need for a simple description of these materials and their uses. This small book appears to meet this need admirably. The authors have been actively identified with many of the developments in this field.

The substances described are: thrombin, fibrinogen, oxidized cellulose, fibrin foam, and gelatin sponge. The chemical and biological properties of each substance are discussed, followed by a review of clinical uses found to date. In an introductory chapter the current views on the clotting of blood are sufficiently presented to give an understanding of the basis for the techniques described and their application. Evidently the authors have purposely avoided recent theoretical complexities in favor of providing information of immediate practical use.

This book will be of greatest value to those with surgical interests, with its immediate applications to neurosurgery, plastic surgery, gastroenterology, rhinology, urol-