

## BOOK REVIEWS

*Life and Disease Patterns*

**Coronary Heart Disease in Seven Countries.** Ed. Ancel Keys, Ph.D. (Pp. 211; \$5.) American Heart Association. 1970.

Ancel Keys has played a vital role in the development of international epidemiological studies on coronary heart disease, and this monograph is the five-year progress report on one of his most significant collaborative ventures.

Epidemiological studies alone rarely if ever produce final proof of causation, particularly in conditions where several major influences may promote or retard the development of the disease. However, identification of some of the major influences can indicate the direction in which aetiological research and preventive measures should proceed. The high degree of homogeneity in culture and habits of the middle-class American has made it important to study the disease in subjects living in countries where the life patterns are very different from the United States.

The international co-operative epidemiological study described in this monograph concerns careful prospective studies in small communities from countries known to have widely differing frequencies of coronary heart disease and suspected of having different risk factors. Although a variety of risks are examined, this study is probably the best attempt thus far to assess dietary habits in

several unrelated countries. International teams examined 12,770 men aged 40-59 years in Japan, Finland, Greece, Italy, the Netherlands, the United States, and Yugoslavia, using strictly standardized methods and criteria. The examination included questionnaires on work, personal habits and medical history; anthropometry; clinical examination; 12-lead E.C.G. (including an exercise test); blood samples; and urinalysis. Average diets of all cohorts were estimated from seven-day weighed surveys on random samples of the cohorts. After entry into the study the men were followed, with reviews of mortality and morbidity several times a year, and were then fully reassessed after five years.

The monograph reviews in detail the findings in each of the 14 cohorts in the seven countries with an abundance of tables and diagrams. Since the incidence of coronary heart disease is influenced by a number of characteristics of the subjects at risk, multivariate analyses are indicated for several purposes and are presented in a separate chapter. The role of the E.C.G. in prediction of coronary heart disease incidence is fully discussed by Blackburn, Taylor, and Keys. The dietary studies are dealt with in considerable detail and this aspect of the monograph has been critically reviewed in *Nutrition Reviews* (1970, 28, 281).

The summary of this study has ten key

diagrams which, together with the text of the summary, constitute a most fascinating view of coronary heart disease. International comparisons (between-group differences) show that the group mean blood cholesterol most closely parallels the coronary heart disease incidence, and there was a high correlation between coronary heart disease incidence and the percentage of calorie provided by saturated fat. Hypertension tended to be more common in groups with a high coronary heart disease incidence, but with striking exceptions—for example, Japan. The prevalence of obesity, sedentary habits, and smoking were not relevant to coronary heart disease incidence. At the national level (that is within-group differences) blood cholesterol and blood pressure consistently predicted the individual risk of coronary heart disease. Smoking was an important predictor in the U.S.A. (as it is in U.K.) but not in Europe. Body weight and sedentary habits were not predictive for individuals.

This monograph provides strong support for the view that dietary-induced hypercholesterolaemia is the essential background against which a wide range of other factors may operate to increase the risk of coronary heart disease. It also supports the view that the "normal" levels of blood cholesterol in economically advanced countries are atherogenic.

A. G. SHAPER

*Detection of Cerebral Disorder*

**Fundamentals of Electroencephalography.** Kenneth A. Kooi, M.D. (Pp. 260; \$12.95.) Harper & Row. 1971.

This book has an ambitious title, and the author in the first phrase of his preface says he intends it to be "a source of information about human electrocerebral phenomenology and the basic concepts, principles, and clinical relationships underlying the evaluation of these complex potentials for the detection of cerebral disorder." This introductory phrase sets the general tone and is a sample of the intricate language of this book. Some chapters may be read reasonably easily, but others are full of odd phrases; one wonders what particular concepts the author wishes to convey with a phrase such as "the key interpretive formulation of a level of function in a complex neural system is stressed."

The first three chapters of the book try

to cover all aspects of electricity, including electron theory and electrical fields and their sampling, as well as instrumentation. However, there is an excess of technical language which will discourage many medical readers and the topics are only patchily explained in their relevance to E.E.G. The brief survey on the physiology of neurones, and the discussions on the synchronization and regulation of cerebral activity are presented without a clear distinction between hypotheses, interpretations of the quoted literature, and personal experience.

In general, although the approach is meant to be a clinical one, this book follows old-fashioned ideas. For example, the emphasis is on the grading of the severity of E.E.G. abnormality. In the differential diagnosis of brain disorders, however, it is the particular type or quality of the abnormal E.E.G. phenomena and their distribution at scalp level that matter, not the grading of global

abnormality. As an analogy, we no longer describe the relevant aspects of a chest x-ray in terms of either normal or more or less abnormal, but rather in terms of particular features, shape, and distribution in relation to the chest; such features are to be interpreted in the context of the patient's history and other physical signs. The chapters on epilepsies, on brain tumours, and on cerebrovascular disorders are clinically orientated and fairly well written. Other chapters, however, and particularly that on developmental, degenerative, and other neurological disorders and that on cranio-cerebral trauma, are less satisfactory. The discussion on metabolic and endocrine disorders seems to be a list of possibilities with very few illustrations. Probably the author attempted to cover too large a field for the size of the book.

G. PAMPIGLIONE

*Atlas of Nervous Ultrastructure*

**Ultrastructure of the Peripheral Nervous System and Sense Organs.** Jean Babel, Albert Bischoff, and Heinrich Spöndlin. (Pp. 452; £15.) J. & A. Churchill, 1970.

The application of the electron microscope to the study of the morphology and pathology of the nervous system about two decades ago completely revived a subject that was

fast beginning to stagnate. The degree of success that has been achieved is very beautifully illustrated in this atlas on the ultrastructure of the peripheral nervous