roles of carbohydrates, proteins and fats in organisms. The last half of the book considers the various individual vitamins, ending with a reasoned statement on the megavitamin question.

To add interest, the author has included a number of anecdotes. One relates how the Indians of Newfoundland in 1535 showed Jacques Cartier the use of spruce needle tea to cure scurvy. Elsewhere he relates how Eijkman's helper stole hulled rice from the officers' mess and inadvertently speeded the discovery that rice hulls contained a cure for beriberi.

The study of vitamins is a "natural" for relating history and the scientific method. His discussions on discovery of individual vitamins repeatedly show that time and thought, hypotheses, experiments and controlled observations are all parts of scientific advances.

A few deficiencies should be remedied in a second edition. I feel the metric system should have been used throughout—possibly with the English equivalents related occasionally in parentheses. A more serious problem is occasional statements which may be misleading. For example, a sentence (pp. 15-16) repeats the now discredited idea that "glucose molecules react with oxygen." At another point (p. 31) the cone cells of the retina "respond to *colors* in bright light and send color images to the vision centers of the brain." And "the rod cells cannot pick up color at all. They respond only to black, white and shades of gray." Colors, of course, are psychological phenomena that develop in the brain in response to balances in nerve impulses from the cone cells, each type of which is activated by a restricted range of wave lengths of light. Rod cells are activated by a somewhat narrower range of wave lengths and impulses from them are not experienced as color but rather as white or a range of grays. At another point (p. 24) "One enzyme . . . needs the help of two enzyme helpers, or coenzymes, known simply as Coenzyme I and Coenzyme II." No single enzyme requires *two* coenzymes for its activity.

With many dietary fads flourishing, it is good to find a book on one aspect of nutrition that can be recommended for use by junior or senior high school students. They need a balanced presentation on the subject to help them in developing scientifically based concepts of dietary needs. They need warnings against over-dosing on the false basis that if a little is good surely more is better. Dr. Nourse has provided us with such a book as far as vitamins are concerned.

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Physiology and Anatomy

A LABORATORY MANUAL: ANATOMY AND PHYSIOLOGY
by James E. Crouch, and Micheline H. Carr. 1977. Mayfield Publishing Company (285 Hamilton Avenue, Palo Alto, California 94301). 369 p. $8.95.

This laboratory manual is suitable for health science students beginning the study of anatomy and physiology. Dissection studies for the cat are accompanied by numerous illustrations. Cat and human illustrations are line drawings that are accurate, detailed, and attractive. These are supplemented with photomicrographs. The total number of figures in the book exceeds 200. The book is organized in an understandable and easy-to-follow outline form. Spaces are left for student responses. It contains more than enough topics for a one semester course. Experiments range from traditional blood examinations to a variety of electrophysiological studies. Included are frog muscle physiology, human electrocardiogram, and human basal metabolic rate determinations. Other investigations include microscopic examination of tissues and cells as well as the various dissections.

The student should benefit from the review questions following each topic, the excellent glossary with pronunciation at the end of the manual, the list of references, and the list of prefixes and suffixes. The instructor will find a very limited appendix to guide in the preparation of the experiments, but the materials needed and some guidance to experimental procedures are given in the text.

The illustrations and the identifiable sections within each of the 15 topics are two of the strengths of the manual. Overall this is an attractive laboratory manual that rates high. It should more than adequately serve a variety of beginning students in the paramedical fields as they study anatomy and physiology.

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Zoology

THE VERTEBRATE BODY
by Alfred S. Romer and Thomas S. Parsons. 5th ed., 1977. W.B. Saunders Company (West Washington Square, Philadelphia 19105). 624 p. $14.95.

A full understanding of the vertebrate body requires a consideration of both form and function to be complete. This textbook strives to meet this objective