# Integrated ANATOMY AND PHYSIOLOGY

FRANCIS AND FARRELL

# Integrated ANATOMY AND PHYSIOLOGY

by

#### CARL C FRANCIS, A.B., M.D.

Associate Professor of Anatomy, Department of Anatomy Western Reserve University, Cleveland, Ohio

and

### GORDON L. FARRELL, M.D.

Assistant Professor of Physiology, Department of Physiology Western Reserve University, Cleveland, Ohio

With 367 Text Illustrations and 31 Color Plates

THIRD EDITION

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#### PREFACE

The third edition of this combined textbook of anatomy and physiology has been so extensively revised that the change in title to *Integrated Anatomy and Physiology* is, we feel, quite necessary. We are convinced that structure cannot be understood without a knowledge of function, and that it is impossible to discuss function without a basis of structure.

The sections on physiology have been rewritten. Much of the material has been rearranged, and the number of chapters has been increased to twenty-five. Some illustrations have been replaced and new ones added. We have considered the various organ systems and in turn have presented the anatomy and physiology of each. In some areas it has been possible to discuss both within a single portion of one chapter. In other areas it has been necessary to devote several chapters to a single system.

From the vast amount of available information on our disciplines we have selected the material which, in our opinion, will be of the most general value. Of necessity, a great deal of factual information has been omitted. In physiology we have deliberately omitted certain controversial topics. Many physiologic processes are still incompletely understood, but we have endeavored to present mechanisms upon which there is general agreement.

The book has been designed as a textbook for the student who requires a basic knowledge of the human body and a general concept of its functions.

We have continued to use the B.N.A. or its English equivalent as a basis for terminology, but have indicated a number of changes proposed by an international committee on nomenclature (1955). For the physiology we have selected terms currently in use.

We wish to acknowledge our indebtedness to colleagues in the Departments of Anatomy and Physiology of Western Reserve University, who gave freely of their time and wisdom. Space does not permit us to mention by name each person who read sections bearing on his particular field of interest and who made valuable suggestions.

C. CF.

G. L. F.



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