



A Photographic Atlas

**Anatomy &**  
*for the*  
**Physiology**  
LABORATORY

*Kent M. Van De Graaff*  
*David A. Morton*  
*& John L. Crawley*  
**SEVENTH EDITION**



# **A Photographic Atlas for the Anatomy and Physiology Laboratory**

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**To Kent, a teacher, mentor, colleague, and friend.**

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## Preface

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Human anatomy is the scientific discipline that investigates the structure of the body and human physiology is the scientific discipline that investigates how body structures function. These subjects may be taught independent of each other in separate courses, or they may be taught together in integrated anatomy and physiology courses. Regardless of whether or not anatomy is taught independently from physiology or if the two disciplines are integrated as a single course, it is necessary for a student to have a conceptualized visualization of body structure and a knowledge of its basic descriptive anatomical terminology in order to understand how the body functions.

A Photographic Atlas for the Anatomy and Physiology Laboratory is designed for all students taking separate or integrated courses in human anatomy and physiology. This atlas can accompany and will augment any human anatomy, human physiology, or combined human anatomy and physiology textbook. It is designed to be of particular value to students in a laboratory situation and could either accompany a laboratory manual or in certain courses, serve as the laboratory manual.

Anatomy and physiology are visually oriented sciences. Great care has gone into the preparation of this photographic atlas to provide students with a complete set of photographs for each of the human body systems. Human cadavers have been carefully dissected and photographs taken that clearly depict each of the principal organs from each of the body systems. Cat dissection, fetal pig dissection, and rat dissection are also included for those students who have the opportunity to do similar dissection as part of their laboratory requirement. In addition, photographs of a sheep heart dissection are also included.

A visual balance is achieved in this atlas between the various levels available to observe the structure of the body. Microscopic anatomy is presented by photomicrographs at the light microscope level and electron micrography from scanning and transmission electron microscopy. Carefully selected photographs are used throughout the atlas to provide a balanced perspective of the gross anatomy. At the request of several professors who used previous editions of the atlas, the muscular and circulatory sections have been expanded and improved with new photographs, illustrations, and tables. The section on articulations has been improved with the inclusion of photographs of joint dissections. Selected X-rays, CT scans, and MR images depict structures from living persons and thus provide an applied dimension to the atlas. Great care has been taken to construct completely labeled, informative figures that are depicted clearly and accurately. The terminology used in this atlas are those that are approved and recommended by the Basle Nomina Anatomica (BNA).

## Preface to seventh Edition

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New editions are desirable for authors because it presents an opportunity to improve upon a successful product. Revision, such as is presented in the seventh edition of A Photographic Atlas for the Human Anatomy and Physiology Laboratory, requires an inordinate amount of planning, organization, and work. As authors we have the opportunity and obligation to listen to the critiques and suggestions from students and faculty who have used this atlas. This constructive input has resulted in a product that is greatly improved. We appreciate those who have taken the time to provide suggestions and indicate corrections.

One of the objectives in preparing this atlas was to create an inviting pedagogy. The page layout has been improved by careful selection of photographs, and when necessary, provide accompanying line art which has been completely updated and several new illustrations added. Each image in this atlas has been carefully evaluated for its quality, effectiveness, and accuracy. Black backgrounds for the depicted specimens enhance the clarity of the images. Many photographs have been improved or replaced by better photographs and the leader lines are better sized to aid in the identification of structures. Major changes were made in chapters devoted to the circulatory system and specimen dissections.

## Acknowledgments

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