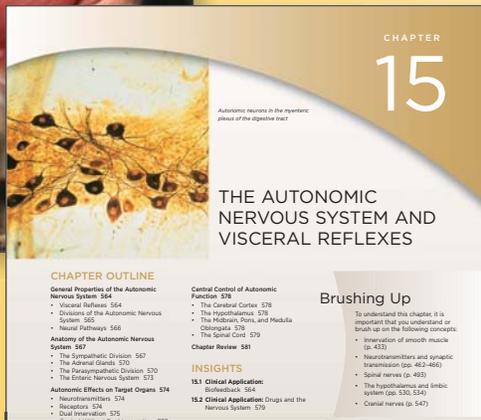
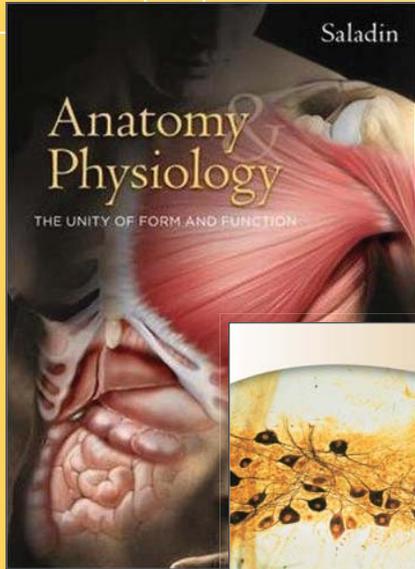


CASE STUDY:

SALADIN ANATOMY & PHYSIOLOGY



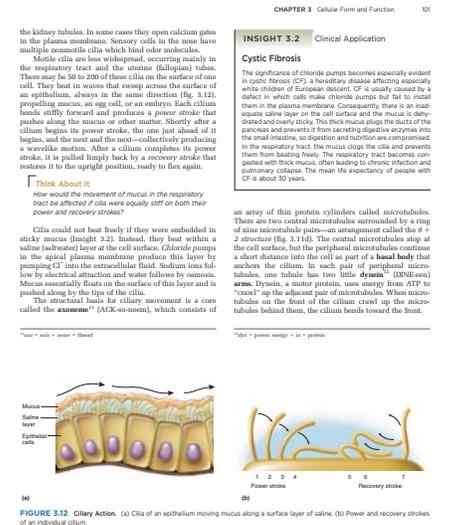
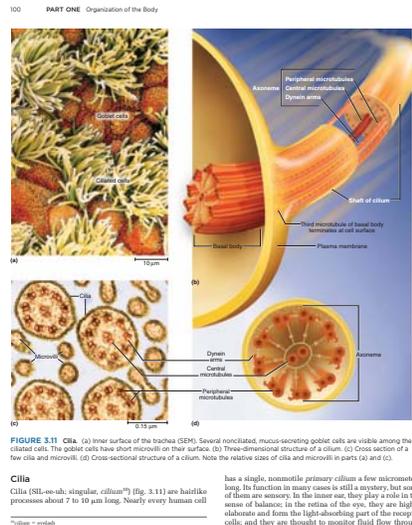
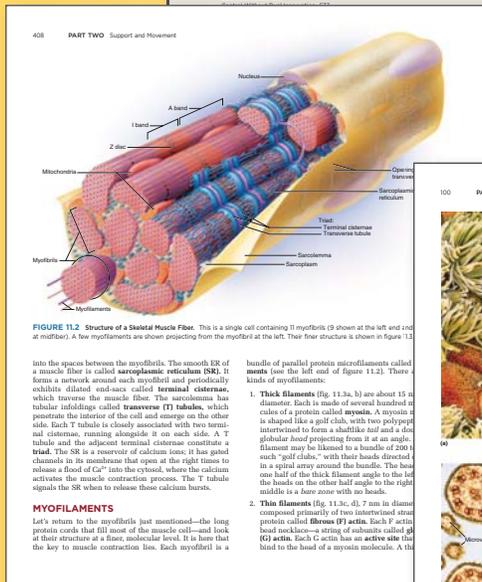
MISSION

Create accurate, high-end anatomy illustrations on a very tight schedule, using strict client guidelines.

THE CHALLENGE

When the publisher of Saladin *Anatomy and Physiology* came to Precision Graphics, they had several clear goals. The existing illustrations had been created and revised over multiple editions, so while their content was accurate, their style was inconsistent. The publisher wanted a new look for the art that surpassed what had been done in previous editions, while maintaining the established standards of accuracy. All 809 complex anatomical illustrations were to be revised, in only 9 months.

In addition to skeletons and other physical models, the art team used live models and photos to make the art as realistic as possible. This meant trying new techniques and breaking some traditional rules in order to take the art to the level the client was looking for. The team also held art critiques in which the entire team reviewed as a group each chapter's illustrations, ensuring that a consistently high-end



PREPARED



PRECISION GRAPHICS

106 South Neil Street
Champaign, Illinois 61820 USA
Phone: 217.359.6655
Fax: 217.398.3037
email: info@precisiongraphics.com

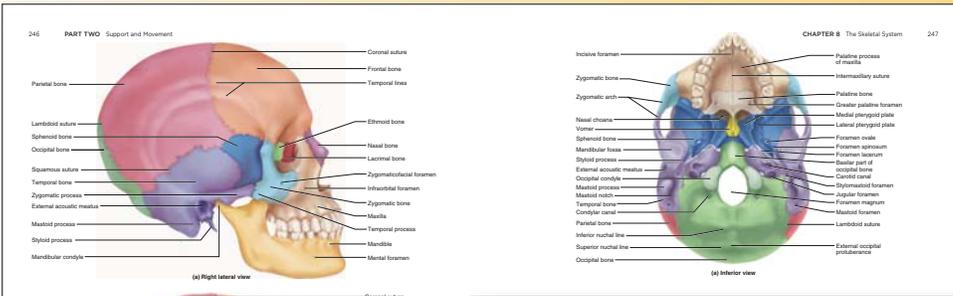


FIGURE 8.4 The Skull, Lateral Views (External and Internal).

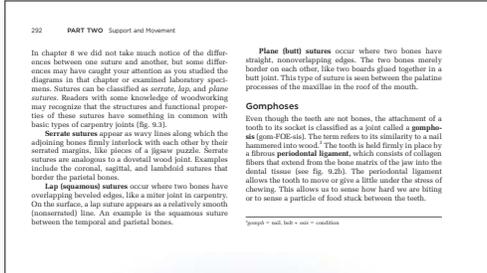


Figure 9.3 Sutures. Serratus, lap, and plane sutures compared to some common wood joints.

Syndesmoses

A syndesmosis (SIN-des-MO-sis) is a fibrous joint at which two bones are bound by longer collagenous fibers than in a suture or gomphosis, giving the bones more mobility. While the range of motion differs greatly among syndesmoses, all of them are more mobile than sutures or gomphoses. One of the less movable syndesmoses is the joint that binds the distal ends of the tibia and fibula together, side by side. A more movable one exists between the shafts of the radius and ulna, which are joined by a broad fibrous sheet called an interosseous membrane that allows for movement such as pronation and supination of the forearm (see Fig. 9.2c).

CARTILAGINOUS JOINTS

A cartilaginous joint is also called an amphiarthrosis (AM-fay-oh-THREY-sis) or amphiarthral joint. In these joints, two bones are linked by cartilage (Fig. 8.4). The two types of cartilaginous joints are synchondroses and symphyses.

Synchondroses

A synchondrosis (SIN-ohn-DROH-sis) is a joint in which the bones are bound by hyaline cartilage. An example is the temporary joint between the epiphysis and diaphysis of a long bone in a child, formed by the cartilage of the epiphyseal plate. Another is the attachment of the first rib to the sternum by a hyaline costal cartilage (Fig. 9.4c).

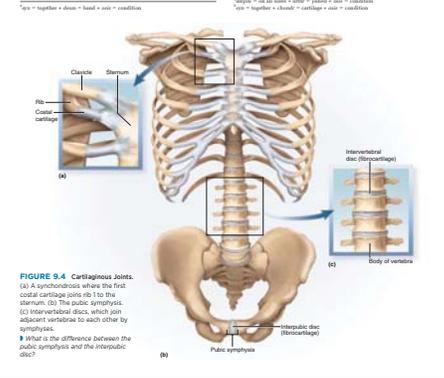


FIGURE 9.4 Cartilaginous Joints.

muscles inside the eyeball, to be considered later. The extrinsic muscles move the eye (Fig. 16.24). They include four rectus ("straight") muscles and two oblique muscles. The superior, inferior, medial, and lateral rectus originate on the posterior wall of the orbit and insert on the anterior region of the eyeball, just beyond the visible "white of the eye." They move the eye up, down, medially, and laterally. The superior oblique travels along the medial wall of the orbit. Its tendon passes through a fibrocartilage ring, the trochlea ("TROCK-leah), and inserts on the superolateral aspect of the eyeball. The inferior oblique extends from the medial wall of the orbit to the inferolateral aspect of the eye. To visualize the function of the oblique muscles, suppose you turn your eyes to the right. The superior oblique muscle will slightly depress your right eye, while the inferior oblique will slightly elevate the left eye. The opposite occurs when you look to the left. This is the primary function of the oblique muscles, but they also slightly rotate the eye, turning the "twelve o'clock pole" of each eye slightly toward or away from the nose. Most of the extrinsic muscles are supplied by the oculomotor nerve (cranial nerve III), but the superior oblique is innervated by the trochlear nerve (IV) and the lateral rectus by the abducens nerve (VI). The eye is surrounded on the sides and back by orbital fat. It cushions the eye, allows it to move freely, and pro-

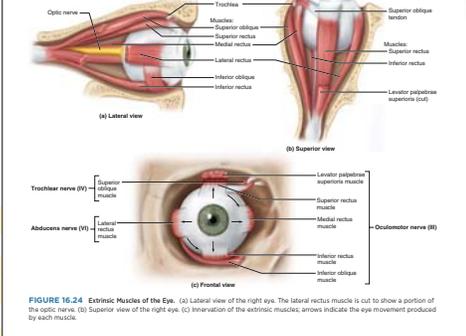


FIGURE 16.24 Extrinsic Muscles of the Eye. (a) Lateral view of the right eye. The lateral rectus muscle is cut to show a portion of the optic nerve. (b) Superior view of the right eye. The superior oblique muscles; arrows indicate the eye movement produced by each muscle. (c) Inversion of the extrinsic muscles; arrows indicate the eye movement produced by each muscle.

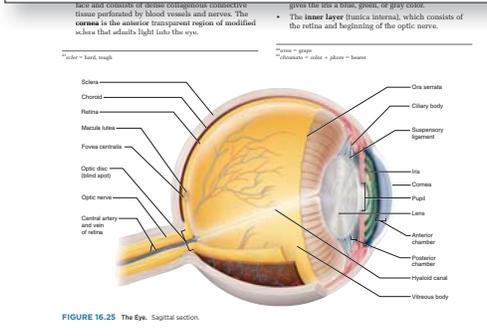


FIGURE 16.25 The Eye. Sagittal section.

“McGraw-Hill engaged a team of talented scientific and medical illustrators at Precision Graphics, in Champaign, Illinois, to enhance, revamp, or replace almost every item of line art. The improvements are too numerous to list more than a few, but users of the previous edition will find conspicuous improvements. . . . The illustrators' flair for human portraiture has greatly humanized and beautified such figures as wound healing, the paranasal sinuses, the hyoid, the facial nerve, and others. . . . Such changes give the art a stronger sense of action and a clearer sense of relationship among the figure elements.”

—Kenneth Saladin, author

look was being achieved. It was a challenging and exciting process, and it became a point of pride for the book team to see how far we could push the boundaries of tradition while still producing quality art that retained its accuracy. In the end, the client agreed that we had risen to the task.

While the path for the art program on Saladin *Anatomy and Physiology* was new, it laid the groundwork for future PG projects. The book became a key fixture in the Precision Graphics portfolio, and this method of working with anatomical illustrations has become our standard.

THE FINAL RESULTS

- An enhanced and improved internal process
- Project delivered on time
- Client reported that this edition surpassed expectations