One may read a textbook and gain a primary level of understanding of its subject; but to master the subject thoroughly active, ‘hands-on’ engagement with the subject matter is essential. In other words self-expression is vital. One may think one knows the subject, but there is nothing like verbalising and answering questions to promote learning. To this end, learning objectives are given at the start of each chapter, and five clinical cases, with questions and answers, are included at the end of the book. The new website also provides a short selection of self-assessment questions with illustrated answers, taken from a new companion volume, Cardiovascular Physiology: Questions for Self-Assessment.

Using the learning objectives

Active learning is traditionally promoted by essay writing and question-and-answer tutorials. The Learning Objectives at the start of each chapter can be used as short-notes questions (e.g. ‘Draw and explain a delayed after-depolarization’, Chapter 3). The sections containing the answers are cited after each learning objective. Another excellent way to learn actively is to write brief notes on each learning objective. The notes will prove invaluable when revising for examinations.

Problem-based learning

To encourage active learning and clinical relevance, medical schools increasingly base teaching on clinical cases – although this has serious drawbacks, as well as advantages, in the early years. Clinical cases are challenging, because they bring together many different topics and cut across many different chapters of the book. For example, heart failure (Case 1) involves altered cardiac excitation–contraction coupling (Chapters 3 and 18), Starling’s law of the heart (Chapter 6), haemodynamics (Chapter 8), microvascular fluid exchange (Chapter 11) and extrinsic control of the circulation (Chapter 14). Clinical cases are therefore presented at the end of the book, with questions and answers linked to the main text.