

## PREFACE TO THE EIGHTH EDITION

IN the midst of arms the *laboratories* are silent, and if the book has not been quite so extensively revised in this as in the previous edition there is only too valid an excuse in the withering influence of the war upon the output of new work. Nevertheless, considerable changes and additions have been made, especially in the portions dealing with the chemical phenomena of respiration, the functions of the endocrine organs and metabolism. Some of the newer calorimetric work has been more adequately taken account of. The filtration-reabsorption theory of urine formation, as recently formulated by Professor Cushny, is discussed, although necessarily in less detail than its importance merits. Some of the more recent results of the examination of the mechanics of the circulation by optical methods of recording have been noticed. Several of the old illustrations have been omitted and a considerable number of new ones added. In deference to the opinion of a number of teachers a bibliography has been inserted in the form of an appendix. Most of the references are to papers written in English, as these will necessarily be of the most general use, and in any case will usually contain references to the most important papers in other languages. An exception is made in favour of monographs which are themselves provided with extensive bibliographies. Recent communications are often cited in preference to older ones on the same subject, not because the new work is necessarily better or more important than the old, but because recent papers will, as a matter of course, refer to previous publications.

Despite suggestions made from time to time by critical friends and friendly critics (it is curious how little there is of cross division here), the Practical Exercises have been retained in their original place at the end of the related chapters. The author has been asked more than once whether it would not be better to collect them into a separate small volume, for greater convenience of use in the laboratory. Apart from the fact that this would entail a not inconsiderable duplication of material, including illustrations, the exercises in their present form and position being supplemented freely by cross-references to the text, the suggested change would run counter to all the ideas of the author as to the relation between text-book and practical work in the study of a science like physiology. But for the exigencies of curricula, which necessarily, having to reckon