

**STUDIES IN BLOOD-
PRESSURE:
PHYSIOLOGICAL
AND CLINICAL**

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Studies in blood-pressure: physiological and clinical by George Oliver

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PREFACE TO THE SECOND EDITION.

THIS brochure in its second edition has undergone considerable enlargement by the incorporation of new material, the result of further work and experience on the part of other observers as well as myself in the field of clinical sphygmomanometry. I trust that this additional matter will render this little manual more efficient in fulfilling the aims of the original edition—namely, to encourage the practice of blood-pressure measurement, and to furnish some hints and guidance to those who may embark on it.

Having not infrequently obtained some unaccountably irregular results, many

of which were clinically inconsistent, from the application of the armlet to the arm and forearm on one or both sides of the same subject, I began to doubt whether this method is in certain cases as satisfactory in practice as the observations with it on normal subjects had led us to expect. I therefore tried to obtain some light on this matter; and to this end I applied the armlet in a large number of my cases to the arm and forearm of each patient, and employed other modes of reading the arterial pressure as well as the armlet method — noting in each case the agreements, disagreements, and their relation to the collateral clinical evidence (cardiac). The reader will find in the following pages the results of these numerous clinical observations, which seem to me to indicate that different degrees of thickening of the arterial wall suffice to account for the irregularities in the armlet readings which I had

observed.¹ The want of uniformity in reading the systolic pressure by the armlet method in subjects of arterio-sclerosis has also been recorded by other observers.²

As a practical outcome of this work, I am led to suggest the use of a supplementary method, founded on a different principle from that of the armlet, and, according to my observation, unaffected by arterio-sclerosis. And I must say, that since adopting the conjoint use of both methods, my clinical observations on the circulation have been more in accord with each other; and have been more instructive in affording a clearer conception of the state of the arterial wall and of the blood-pressure.

¹ That thickening of the arterial wall may vitiate the reading of the blood-pressure obtained by counter pressure outside the vessel, was forcibly suggested by the demonstration of Dr. William Russell at the first meeting of the Association of Physicians of Great Britain and Ireland, held in London last May.

² See O. K. Williamson, M.D., etc., in *The Lancet*, vol. II., 1907, p. 1516.

It may seem to be an elementary precaution to suggest—though it is, I think, quite a necessary one—that in studying the blood-pressure clinically, the observer should, above all things, take a comprehensive view of the whole circulation; and in particular he should compare the condition of the heart with his record of pressure. Moreover, when that record is furnished by a method the determinations of which are not disturbed by arteriosclerosis, the observer should try to educate his tactile sense of pulse-resistance (I fear a vanishing art) by aid of the pressure measurements. My long experience in pulse-feeling and pulse-pressure measuring has shown me the clinical advantages to be derived from combining both methods; and the observer who adopts the instrumental method of measuring the arterial pressure, will do well to be on his guard lest he should allow his tactile skill

in examining the pulse to become impaired by neglect.

As the measurement of blood-pressure is becoming a somewhat leading method of clinical observation, it is to be hoped that its rapid recognition may not engender an overestimation of its importance. It is true, blood-pressure plays its part—and that an important one—in the pathological drama; but it is not the only actor. Therefore the observer, however zealous he may be in prosecuting the study and observation of blood-pressure, should endeavour to strictly estimate the *role* it plays and accept its teaching with well-balanced appreciation of its limits.

It will doubtless interest my readers to know that Case E, in the series of senile pressure readings recorded on pp. 119–20, is that of Sir Henry Pitman, Emeritus Registrar of the Royal College of Physicians of London, the *doyen* of our profession. To Sir Henry I owe