

1. An electrocardiographic lead does not record accurately the projection on a single line of the cardiac potential, because (a) much of the potential from the heart never reaches the electrodes but goes to distant parts of the body; (b) the electrical resistance of the tissues between the heart and the electrodes is not to be neglected and is a variable quantity. The error thus introduced is not necessarily the same or proportional in the 3 leads, so that it may alter the relations between e_1 , e_2 , e_3 . 2. The line of a lead may not be in the same plane as the line joining the 2 electrodes of the lead. For example, the lead AB (Fig. 2) records the current whose path

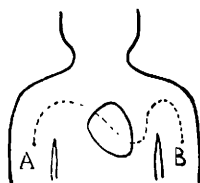


FIG. 2.

is represented by the dotted line, and this path may be largely in a direction not in the same plane as AB. Thus the 3 lines of leads I, II, III may not all be in one plane, so that there may actually not be any Einthoven triangle. 3. Even if there were an Einthoven triangle, it probably would be a changing one because the line of a lead may change slightly as the electrical axis moves; so that if the triangle were equilateral it would not remain so.

These points must make it clear that Einthoven's Law cannot hold exactly. It is enough that it holds approximately, and we should be satisfied with this and with its practical usefulness without claiming for it that which it can not possibly possess.

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Effects of Gonad Stimulating Extracts on Basal Gaseous Metabolism in Rats.

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Reiss and Winter,¹ using extracts containing the sex maturity stimulating principle from the urine of pregnant women, found no

¹ Reiss, M., and Winter, K. A., *Endokrinologie*, 1929, **3**, 174.

constant effects on the oxygen consumption, carbon dioxide production or respiratory quotient in rabbits. They used anesthetized animals, however, gave enormous doses, 200 to 4000 units of the material subcutaneously and followed the metabolism for only a few hours after each injection. We have used what are presumably more physiological doses, without anesthesia, and have followed the metabolic level during and after periods of continued daily administration.

Two sources of the sex maturity or gonad stimulating principle were used. One was an extract of sheep anterior lobe* and the other we prepared from the urine of women in the first half of pregnancy after the method of Biedl.² The potency of the extracts used was assayed by testing on infantile rats. Twelve rats were used, 9 females and 3 males. Twenty determinations made in the first 1 to 4 hours following the subcutaneous administration of the extracts in doses of 2 to 8 units showed no significant changes in the metabolic rates, although the tendency was towards an increase. No effects on the respiratory quotient were found.

These same rats were given doses of 1 to 6 rat units per day for periods of 8 to 24 days. Frequent metabolism determinations made during and after the periods of treatment showed no significant changes from the preliminary average level. The total average of the metabolic rates during the period of administration of the extracts was only 2% higher than the normal average rate. These results would indicate that in rats this material is without any general metabolic effect.

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Effect of Growth Promoting Extracts of the Anterior Pituitary on Basal Gaseous Metabolism in Rats.

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Lee, Teel and Gagnon¹ have previously reported that in giant rats produced by the daily administration of alkaline extracts of beef

* Prepared by Parke, Davis & Co.

² Biedl, A., *Endokrinologie*, 1928, 2, 241.

¹ Lee, M. O., Teel, H. M., and Gagnon, J., *PROC. SOC. EXP. BIOL. AND MED.*, 1929, 27, 23.