dealing with the wrong metabolism which stands at the root of diabetes.

Is it to reversed enzyme action that the conversion of glycogen into sugar is due? Everyone admits that the building up of glycogen from sugar constitutes an important function of the liver. We look to enzyme action as the agency effecting the process, and it is now recognised that, by altered surrounding conditions, the line of action that has been in operation may be changed into one of a reverse nature. I see nothing inconsistent with the building-up enzyme in the cells of the liver being influenced by its environment in such a manner as to lead to the occurrence of a reversal of action, and thus to give rise to a breaking down of the previously built-up glycogen into sugar.

It is interesting to note the analogous behaviour that is traceable between carbohydrate and fat in their connexion with bioplasm, and to this point I will now proceed to direct attention. We have seen that carbohydrate becomes incorporated in the bioplasmic complex, and that, if not consumed when there brought into relation with oxygen, another component of the complex, it may, under circumstances of redundancy, be cleaved off as storage material.

The effect of modern research is to give to fat a place in the bioplasmic molecule, and thus to put it into the same position as carbohydrate. I need not, I consider, here enter into the details of this matter. It will suffice to state that there is evidence to show that fat may exist in a locked-up state in a protein compound in like manner to what occurs with carbohydrate. In these circumstances, the fat is in an outof-sight state, but is susceptible of being brought into view by the disruptive agency of peptic digestion. It is only recently that this subject has fallen under consideration, but already it has made its way into prominent notice.

With the point reached, the position of things stands as follows: the bioplasmic molecular complex, which may be regarded as the representative of a living unit and thereby as the seat of the metabolic changes which give rise to the phenomena of life, contains both carbohydrate and fat incorporated within it. Through intramolecular action, set in motion by agencies of an enzymic nature, the various occurrences noticed to ensue may be conceived to be brought about. In the molecule, oxygen also enters as a constituent, and thus circumstanced, it is brought into close relationship with the carbohydrate and fat components with which the interactions occur that give rise to the development of energy. The play that takes place is not considered to consist of straight off or unbroken oxidation, but of oxidation, step by step, of the components of the