

Any Questions ?

We publish below a selection of those questions and answers which seem of general interest. It is regretted that it is not possible to supply answers to all questions submitted.

Aetiology of Diabetic Cataract

Q.—What is the metabolic cause of cataract in diabetes ?

A.—The term "cataract in diabetes" is somewhat vague, and might be taken to include any form of cataract which may occur in patients suffering from this disease. The following observations apply only to true diabetic cataracts and are based on experimental work carried out for the most part on rats. It is generally agreed that the time required for cataract formation in the diabetic rat is inversely related to the degree of hyperglycaemia. Factors which tend to reduce the level of hyperglycaemia, such as fasting, high fat diet, and the administration of phlorizin, are beneficial in preventing cataracts. Hyperglycaemia must therefore play a role in the production of diabetic cataracts, but not necessarily a direct one. If a lack of insulin produces cataracts, then cataracts may be a result of an inability to obtain energy by utilizing glucose. Since the lens depends on glucose for a major portion of its energy, the total available energy is lowered beyond the critical point that is necessary for maintaining transparency. A decrease in energy could produce cataracts by stopping the synthesis of glutathione, enzymes, proteins, or other structural compounds, or by blocking the maintenance of a water and electrolyte balance. This hypothesis, put forward by Patterson,¹ is supported by studies on glucose uptake on isolated lenses and by studies with diets that supply energy-yielding substances other than glucose.

REFERENCE

¹ Patterson, J. W., *Diabetes*, 1956, 5, 93.

Alcohol in Moderation

Q.—What are the modern views about the harmfulness or otherwise of alcohol in moderation—for example, a couple of glasses of wine such as sherry and perhaps a cocktail or two, daily ?

A.—The long-term effect of small amounts of alcohol in the form of sherry or cocktails may be said to depend on habits, on age, and on constitution. There are, of course, no scientifically established findings. The effect of alcohol on body organs must depend on the rate at which it is destroyed, and this will be the more rapid when metabolism is vigorous. A vigorous metabolism is promoted by exercise, and it is reasonable to suggest that the harmful effect of alcohol will be less in those who take regular exercise. The man who rode regularly to hounds could take his port without undue hazard to his health.

Similarly it is reasonable to suggest that alcohol has less effect on the young, and that it is when the age of 50 is passed that the long-term effects of alcohol are more serious. The dilated veins on the side of the nose which stand out in some who take alcohol regularly are evidence of the deleterious effect of continual small amounts of alcohol on the vascular system. But the harmful effects of alcohol probably depend most on constitution. Some have a low tolerance and some have a high tolerance. Fat persons probably have an advantage in this respect, because the concentration of alcohol in the blood is kept low by alcohol entering the fat depots. It stays in these depots until the blood concentration is sufficiently low for the depots to release the alcohol once more. In this way fat people do not depend only on their metabolism to give them protection.

However, we know that from the early fifties for the next 10 years metabolism changes in man with the diminution in the sex hormones which occurs. It is in this age that

the risks of coronary disease and of hypertension increase, and it is likely that the slight toxic effects of alcohol have their greatest impact in that period.

Vitamin E and Intermittent Claudication

Q.—Is vitamin E of value in the treatment of intermittent claudication and such conditions ?

A.—Vitamin E is considered by some to be of value in the treatment of the symptom of intermittent claudication and by others to be valueless. Throughout the last 20 years papers stating these two views have appeared regularly. The important fact is that intermittent claudication is a symptom which has a marked but limited tendency to spontaneous improvement and which varies in severity from day to day. The cause is usually an atherosclerotic thrombosis or stenosis of the superficial femoral artery. After this event intermittent claudication is first noticed and then over the next few weeks or months the distance walked before the onset of pain increases as the collateral circulation develops. Improvement ceases when the collateral circulation has fully developed, and, apart from day-to-day variations, the condition now remains stationary until a further thrombosis occurs or the flow through the occluded vessel is restored. Vitamin E, or any other medical or surgical measure, is bound to succeed in apparently producing improvement in many patients if given early in the course of the disease. But controlled trials of this and other preparations have shown that the improvement is not different from that in similar untreated patients. Vitamin E has the advantage that it does not produce unpleasant side-effects as some of the vasodilator drugs do, but this alone is not sufficient to justify the wide use of a most expensive drug, the value of which as a treatment for intermittent claudication is at the best unproved.

D.D.T. in Scabies

Q.—Is D.D.T. powder of use in the treatment of scabies ?

A.—D.D.T. powder is not likely to be of value in the treatment of scabies, but D.D.T. 6% in an ointment base has been used successfully. It is applied following a bath and repeated the following day. Application dicophane (*National Formulary*), though containing only 2%, would probably be effective.

Corrections.—*Public Health Laboratory Service: Diagnosis of Toxoplasmosis*. In the notice published on p. 870 of the *Journal*, March 28, the word "Sheffield" at the end of the first paragraph should be replaced by "Swansea."

The drug "brevilid M" was wrongly spelt "breviled M" in the article "Incidence of 'Muscle Pain' After Short-acting Relaxants" (*Journal*, April 4, p. 904).

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