

# Statement on Hypoglycemia

Ad Hoc Committee on Hypoglycemia

Recent publicity in the popular press has led the public to believe that there is a widespread and unrecognized occurrence of hypoglycemia in this country. Furthermore, it has been suggested repeatedly that the condition is causing many of the common symptoms that affect the American population. These claims are not supported by medical evidence. Because of the possible widespread misunderstanding about the matter, three organizations of physicians and scientists (the American Diabetes Association, The Endocrine Society, and the American Medical Association) have issued the following statement concerning the diagnosis and treatment of hypoglycemia:

Hypoglycemia means a low level of blood sugar. When it occurs, it is often attended by symptoms of sweating, shakiness, trembling, anxiety, fast heart action, headache, hunger sensations, brief feelings of weakness, and, occasionally, seizures and coma. However, the majority of people with these kinds of symptoms do not have hypoglycemia; a great many patients with anxiety reactions present with similar symptoms. Furthermore, there is no good evidence that hypoglycemia causes depression, chronic fatigue, allergies, nervous breakdowns, alcoholism, juvenile delinquency, childhood behavior problems, drug addiction, or inadequate sexual performance.

There are many causes of hypoglycemia. Before any patient receives treatment for this condition, it is necessary that all of the following be

present: that the occurrence of a low level of blood sugar be documented, that the particular symptoms of which the patient complains be shown to be due to hypoglycemia, that the symptoms be relieved by ingestion of food or sugar, and that the particular kind of hypoglycemia that is producing the symptoms be established. Some types of hypoglycemia may occur several hours after a meal (termed reactive or fed hypoglycemia). Treatment depends on which pattern is observed and on the particular cause of the hypoglycemia which exists.

A temporary low blood sugar level after a meal is the most common pattern, and can be seen in patients who have had an operation on the stomach, in some people with mild diabetes mellitus, and in a rather large group of individuals who are often nervous, thin women. However, there is no good evidence that the chronic nervousness of these women is caused by low blood sugar levels. In fact, after young or middle-aged people (men and women) ingest glucose (a sugar for a glucose tolerance test) or a high-carbohydrate meal, it is not uncommon that the blood sugar decreases to levels below normal without the occurrence of any symptoms of hypoglycemia. Even when a low blood sugar level can be demonstrated under these circumstances, it does not require treatment unless symptoms of hypoglycemia occur on a day-to-day basis when the patient ingests his usual diet. If these recurring symptoms can be relieved by food and a diagnosis of one of the common kinds of reactive hypoglycemia is made, the treatment is usually dietary, ie, a low-carbohydrate, high-protein diet, often with multiple feed-

ings. Some physicians are using certain orally given medications or tablets in those patients who do not respond adequately to diet therapy alone. However, there is no place for injections in the treatment of the common reactive types of low blood sugar content. In normal infants and children, hypoglycemia after meals occurs only rarely and, therefore, reactive hypoglycemia is not considered a common cause of low blood sugar level in that age group.

Fasting hypoglycemia (occurring at night or before breakfast in children or adults) is caused by conditions that are potentially more serious. If fasting hypoglycemia is documented, an extensive investigation is required, usually in the hospital. Treatment depends on which particular cause is found.

Adrenal insufficiency is the inability of the adrenal gland to respond to certain bodily needs, especially in times of stress. The diagnosis of this condition requires sophisticated measurements of adrenal hormones in blood or urine. Although hypoglycemia can be one symptom of adrenal insufficiency, adrenal insufficiency, itself an uncommon condition, is a rare cause of hypoglycemia. The treatment of adrenal insufficiency has been clarified and made routine by the discovery of cortisone and similar hormones more than 25 years ago. Prior to this, the treatment of adrenal insufficiency was difficult and inadequate. One of the earliest substances tested was adrenal cortical extract, a preparation of beef or pork adrenal glands. This material proved to be relatively useless since the necessary adrenal hormones are present only in minimal amounts. Since highly purified individual adrenal hormones are now available to take by mouth, adrenal cortical extract is of historical interest only and there is no known medical use for it. In fact, the few drug companies still manufacturing this preparation do not list treatment of hypoglycemia as one of its uses. Thus, it should be stressed that administration of adrenal cortical extract is not an appropriate treatment for any cause of hypoglycemia.

Received for publication Dec 7, 1972; accepted Dec 12.

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