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Normal Blood Sugar Level

Dr. Melvin Page, who has treated over 20,000 patients in relation to their body chemistry, gives a case history in his book, *Body Chemistry in Health and Disease*, page 52, in which he states: "Normal Blood Sugar- The blood sugar in this patient is now a perfect 100. In this approach this is normal and anything above or below is abnormal, although medical textbooks quote normal blood sugar at anywhere from 80 to 12. Probably this is true of the *average* person on the usual American diet; nevertheless, in a person eating a corrected diet, and with efficient body chemistry, the mechanism controlling carbohydrate metabolism should function with such perfection that the blood sugar remains at 100.

Approach Questioned

This is a very interesting statement for Dr. Page to make, because it presents the idea that the blood does not radically fluctuate in a physiological orbit like our earth satellites with their apogees, and perigees, but is stable, held in equilibrium by the human mechanisms which maintain *normal* blood sugar levels closely. We can understand how the average diet would produce gyrations from normal which would lead to a confusing conclusion. The average diet is loaded with synthetic glucose which has a very rapid rate of absorption that tends to disturb the body mechanisms, whereas natural sugars- particularly fructose (fruit sugar)- have slower rates of absorption. The slower the rate of absorption the less stress put on the sugar regulating mechanisms and the closer we come to a stabilized level.

Fall Important

One of the factors which has confused the issue in evaluating blood sugar levels is that the actual blood sugar level itself may not be so important as the rate at which it changes levels. Dr. Benjamin P. Sandler, who is outstanding in his work with blood sugar, states: "A rapid fall in blood sugar from 200 mg. to 150 mg. in a diabetic will cause symptoms exactly like those occurring in a non-diabetic who experiences a fall from 100 mg. to 50 mg."
This also is an interesting statement, for it helps us to understand that so-called hypoglycemic (low blood sugar) symptoms can occur even when the blood sugar may be within limits considered normal. Here again we can understand how this is likely to occur under the stimulus of abnormal absorption rates which call upon normal mechanisms to become overactive in face of the overload.

Sugar Storage

Sugar is stored in the body primarily in the liver and in muscle tissue and is released from these depots or consumed by them largely under the influence of insulin. The key point in the action of insulin may be its influence on the permeability of the cell (Drury and Wick). Thus it may act to

accelerate the transfer of sugar across the cell membrane. When this transfer does not occur, sugar may accumulate in excess in the blood and we have diabetes. Or when the transfer occurs too rapidly or there is an insufficient supply, we may have the condition called hypoglycemia (low blood sugar). It would then seem reasonable to take all unnecessary work from the insulin available so that it can do its work most efficiently. This cannot be done if highly refined or synthetic sugars are in the diet; the body being put to produce its utmost when this added stress is placed upon it.

Potassium and Sugar

We know that potassium, the dynamic element in nutrition found in organic form in raw vegetables, is closely associated with sugar metabolism. Just how important is potassium in the sugar pattern? Here is some recent evidence, printed in *Nutrition Reviews* (October, 1957, page 298), on how potassium deficiency causes paralysis. The acute attack is brought on by refined sugar. “Often a child who has this disorder may induce an attack of paralysis by overeating candy.” It would obviously be impossible to cause such an attack of paralysis by eating natural raw sugar or molasses with its high potassium concentration. Just how often is such paralysis is misinterpreted as polio, and just how much polio is brought on by reason of refined carbohydrates? Dr. Sandler, in his book *Diet Prevents Polio*, states his belief that there would be no polio if we had no excess of refined carbohydrates. This new report certainly confirms Dr. Sandler’s hypothesis.

It is a paradox that to avoid abnormal fluctuations in blood sugar- that is, to prevent it from becoming too high or too low- the best way is to avoid the excessive use of sugar, particularly the synthetic and refined varieties. That is why starches are better than sugars as energy foods. They are assimilated more slowly than the sugars, and thereby fail to overload our pancreatic function of supplying insulin. Glucose is a cheap, fraudulent synthetic and can have no possible nutritional value to people already overloaded with calories, for it carries no trace of vitamins or minerals.

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