

ABSTRACT

Most diabetic people focus their attention on fasting blood-glucose levels in order to control diabetes, rather than on lowering after-meal glucose levels. Hemoglobin A1c is a parameter that directly reveals the degree of “diabetes control” during the preceding 90 days. Red blood cells live in the bloodstream 60 to 90 days. Every 90 days new red blood cells are born. Hemoglobin is a protein molecule that carries oxygen from the lungs to the body’s cells wherever it is needed. While the blood circulates, depending on how high the blood glucose level is, a certain amount of glucose is attached to the hemoglobin to form A1c. **So, by measuring the hemoglobin A1c level, it is possible to know the average blood glucose level and the degree to which it has been controlled over the preceding 90 days.**

Blood glucose reaches its highest level immediately after the consumption of a major meal. The elevated glucose levels dominate in and largely contribute to establishing the average glucose level over 90 days. After-meal glucose levels therefore must be lowered and brought to normal within 1 or 2 hours of the consumption of every major meal in order to control and bring hemoglobin A1c close to its normal value.

At the same time, the insulin dose must be minimized because too much insulin causes hypoglycemia and constricts arteries, leading to heart attack and coronary heart disease. Too much insulin also stimulates the brain so that a person feels hungry and eats more and causes the liver to manufacture fat in the belly. Too little insulin on the other hand would not be enough to cover the entire meal and to maintain normal glucose levels. **An optimum insulin dose is therefore crucial.** Insulin is synthesized in such a way that it acts more quickly and much more effectively with exercise. After-meal exercise, either treadmill or walking, should be introduced into the diabetes control plan in order to burn fat, lose calories and optimize both the insulin dose and insulin action. After-meal exercise minimizes the insulin dose and maximizes insulin action and prevents after-meal glucose levels from rising too high, thus keeping diabetes under tight control.

The Good News: Consistent, serious and rigorous efforts towards lowering after-meal glucose levels over a period of 3 to 6 months gradually lowers the hemoglobin A1c level of a diabetic person to its normal value, even if the diabetes was poorly controlled in the past. Thereafter, continued efforts with a reasonable attention to **insulin, food and exercise** are necessary to tightly control diabetes.

The author of this book, having been diabetic for 20 years, began to conduct diligent experiments to study the combined influence of insulin dose and after-meal exercise on after-meal blood glucose levels, and successfully lowered after-meal glucose levels continuously and on a daily basis. For a selected major meal (supper), the Humalog insulin dose was cut by 50 to 60% through extensive research and optimization. The hemoglobin A1c level dropped from a very high-risk 12% to a stunning 6.5% (Refer to Table 7.5) and since then has remained normal for more than a year, indicating that the diabetes has been permanently controlled. Refer to the next page for the flow sheet of trial and error procedure for diabetes control.

TRIAL AND ERROR PROCEDURE: DIABETES CONTROL

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The following treatment procedure was successfully used in this case study.

