

Smoking and Hypoglycemia

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The purpose of this study is to show the relationship between craving a cigarette and periods of hypoglycemia. I have chosen to demonstrate this association by checking the blood sugar at various times throughout a regular working day. This method will reduce the effects of the artificial laboratory environment on the emotional stability of the subjects.

I observed that smokers who completed the Glucose Tolerance Test could get an immediate rise in blood sugar levels when they took a cigarette. My experience has shown the blood sugar will rise approximately 0.8 mmol/L in 15 minutes following the start of a cigarette. The subjects got a corresponding increase in "feeling well" and a decrease in hypoglycemic symptoms. The hypothesis is that the body soon learns to crave a cigarette when the blood sugar drops, to regain the "well" feeling. Dr. Gyland reported in 1951 that all of his alcoholic patients suffered from hypoglycemia. Treatment for hypoglycemia helped resolve the addiction problem. Several therapists such as Barbara Reed have found that hypoglycemia is associated with many different addiction problems ranging from caffeine to cocaine.

Dr. Roger Williams showed with his experiments with rats in the 1940's that a craving for alcohol could be created by feeding his rats a poor diet. Dr. Williams could increase the alcohol consumption of the rats by feeding a diet high in simple carbohydrates such as white sugar and white flour and low in B-vitamins. The consumption of alcohol could be reversed by replacing the sugar and white flour with whole grains and adequate levels of B-Vitamins.

The subjects were of average education but had been unable to quit smoking by "will power" alone. Mr. C. is an energetic 39 year old white male, owner of an insurance agency. Ms. D. is a white female,

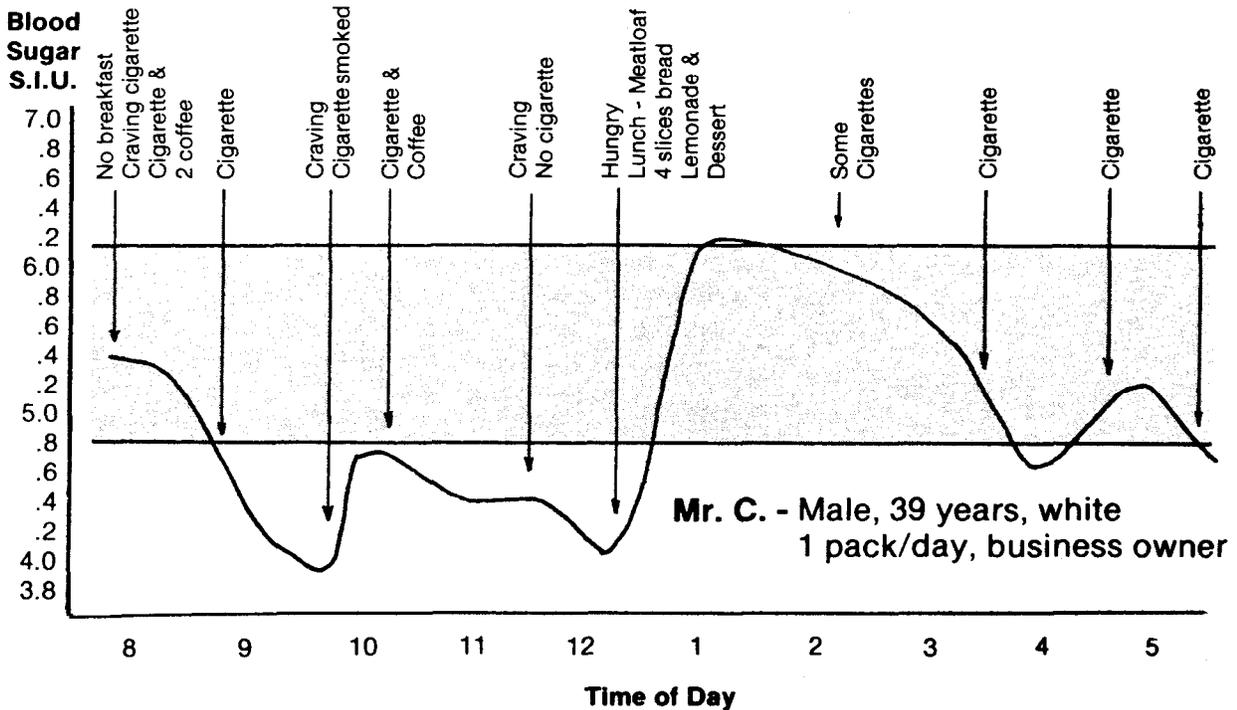
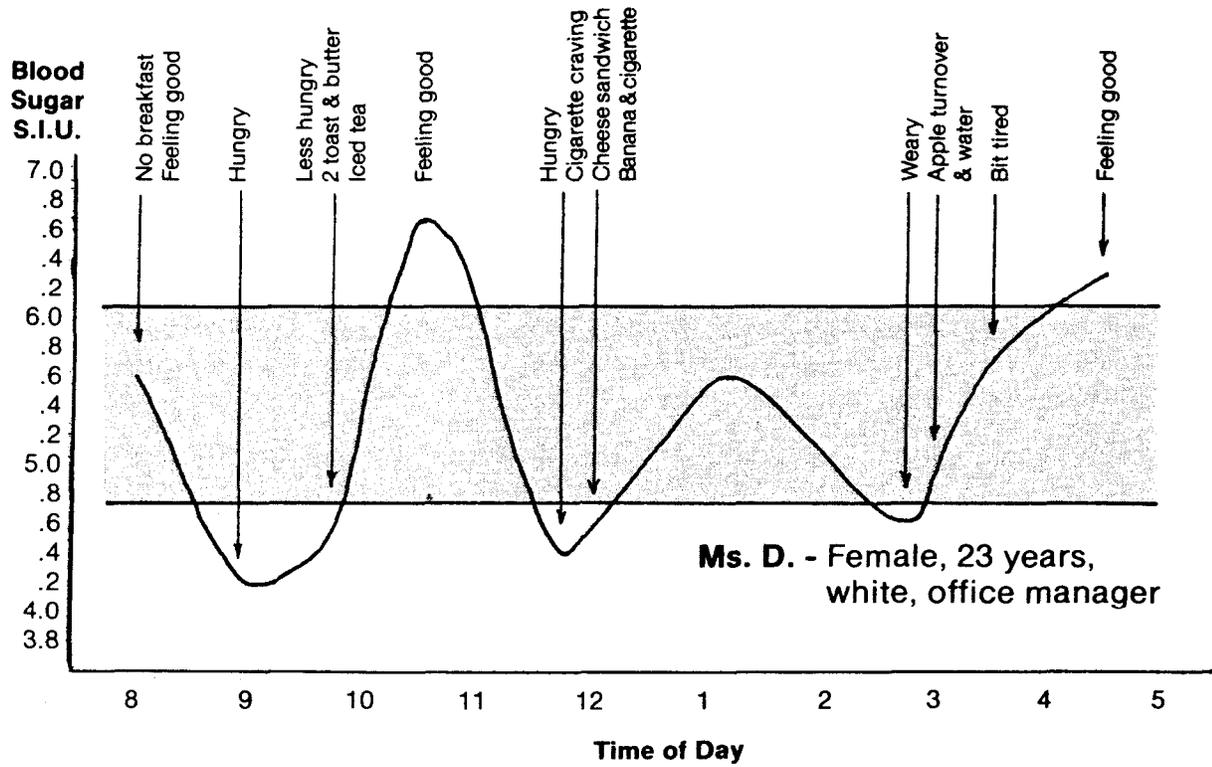
23 years old, office manager. She is active in sports and is concerned about weight and wants to quit smoking. In fact, Ms. D. stopped smoking ten days before tests but is still having "craving" problems.

The subjects were asked not to smoke before coming to work and since neither ate breakfast food consumption was not altered from normal so we basically got a fasting blood sugar at eight in the morning. The subjects were asked to record how they felt and what they ate at different times. Neither subject had any experience with experimental trials so when they were feeling well no comment is usually made. The blood sugar test was done by a Registered Nurse moving from one office to the other using a Glucoscan Blood Sugar monitor.

The shaded area on the graphs represents the blood sugar level at which most people can function with a reasonable level of energy, mental alertness and emotional stability. The fasting blood sugar in normal range at 8 a.m. indicates that both subjects still had the ability to stabilize the blood sugar overnight. The dots along the line indicate the blood sugar level at the test times. We have no way of knowing whether it was above or below the line during the time interval between the tests. Both graphs show what happens to the blood sugar during the morning for those who do not eat breakfast. The blood sugar falls rapidly below the optimal functioning level. We can only speculate where it would go if Mr. C. had not kept boosting his with nicotine and Ms. D. had not boosted hers with the white bread and iced tea. This shows why some factory owners supply breakfast for their employees and stop for "coffee" breaks.

Mr. C. demonstrated the effect a cigarette can have on the blood sugar at 9:45. He had gone without a cigarette for one hour and got an immediate response of 0.8 mmol/L rise. At 11:35 a cigarette was resisted which resulted in quite a rapid

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drop in blood sugar. The afternoon "coffee" break was missed due to the number of clients coming into the office and the cigarettes were not able to keep the blood sugar regulated. Mr. C. was often unsure of how many cigarettes he had had between blood tests. It appears that Mr. C. can function satisfactorily at a blood sugar level lower than many people.

Ms. D. also had the craving for a cigarette when the blood sugar was low. The lunch was inadequate to carry her till "coffee" break. The response that Ms. D. showed to the two snacks with white flour and sugar is similar to reactive hypoglycemia. Her symptoms show that she requires a higher blood sugar level than does Mr. C. to maintain the desired level of mental alert-

ness.

The energy output by Mr. C. was not recorded. After studying the graph there appears to be some other factors such as habit, business stress or chemical dependency that creates a need for a cigarette over and above the need to raise the blood sugar.

A person can not make any great announcements from two cases but these graphs can help people to understand one reason they feel a craving for substances like cigarettes. I hope this brief description and trial will encourage practitioners to investigate this approach to assisting their patients to reduce and stop smoking.