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*Research shows that poor sleep can result in blood sugar abnormalities and may be linked to an increased risk of type 2 diabetes.*

## POOR SLEEP MAY DECREASE GLUCOSE SENSITIVITY

Sleep is an essential part of life, and poor sleep habits have been associated with a number health problems such as obesity, decreased immune function, and cardiovascular disease. Recently researchers have investigated to see what other health problems could be linked to poor sleep habits. The evidence shows that poor sleep habits may also increase the risk of developing type 2 diabetes. Type 2 diabetes is the most common type of diabetes and it occurs most frequently in middle-aged adults. Type 2 diabetes occurs when the cells of the body do not respond properly to insulin, and rather than storing sugar for later, high levels of sugar build up in the blood.

One study compared the sleep habits of 1,455 individuals over a six year period. Individuals in the study who slept on average less than six hours a night were five times more likely to have impaired fasting glucose levels than those who slept six to eight hours a night. Having impaired fasting glucose levels is a condition that can precede type 2 diabetes, and is therefore a condition that should be monitored carefully, and prevented if possible.

Another study used nine healthy volunteers and had them spend five nights in a sleep laboratory. During the first two nights, the subjects were allowed to sleep normally in an undisturbed environment. They were monitored and information was recorded to create a control group. The same subjects were then studied for three more nights of sleep. In these three nights, the subjects were disturbed with loud sounds every time they were about to enter slow-wave sleep, the most restorative stage of sleep. The results show that during the nights when the subjects were disturbed they each were less sensitive to insulin. The decreased insulin sensitivity was comparable to that caused by gaining 20 to 30 pounds, indicating a much less healthy state to be living in.

This information confirms the fact that adequate sleep is an important factor in overall health, and may be an important factor in normal blood glucose regulation. Diabetes can lead to various health problems including infections and poor wound healing, blurred vision and blindness, pain or numbness in the feet or hands, and hypertension and cardiovascular disease.

*American Heart Association. "Short-sleepers" May Develop Blood Sugar Abnormality That Can Lead To Diabetes. March 17, 2009.*

*Tasali, E., Leproult, R., Ehrmann, D., Van Cauter, E. Slow-wave sleep and the risk of type 2 diabetes in humans. Proceedings of the National Academy of Science, January 22, 2008, Vol. 105, Num. 3:1044-1049.*