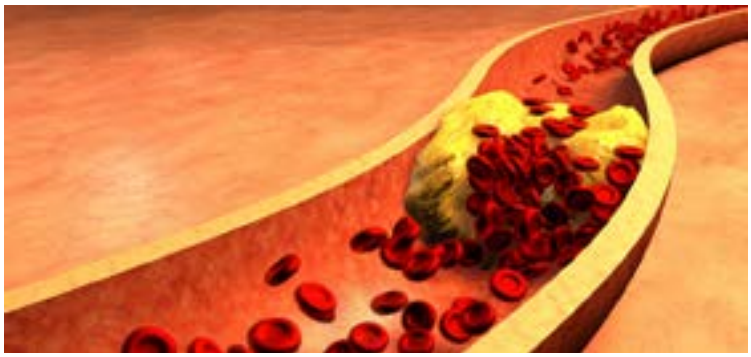
The Surprising Link Between **High Blood Sugar** and **Dementia**

New research findings are making the association of high blood sugar with an increased risk of cognitive dysfunction and dementia. The increased risk of dementia concerns several types of neurological decline.[1] Scientists are looking at several mechanisms that could be responsible.

- A number of risk factors are predictors of cerebrovascular problems, accelerated cognitive decline and dementia, including high levels of fats and cholesterol in the blood.
- High blood sugar (hyperglycemia) may cause adverse effects of potentially "toxic" glucose byproducts in the brain and its blood vessels.
- Insulin itself may be involved, as it can directly modulate nerve function, memory and learning.[1] Disturbances in insulin can alter pathways in and around the brain and has recently been implicated in dementia, brain aging and memory loss.[1]



HOW DOES HIGH BLOOD SUGAR AFFECT HEALTH?

Blood sugar regulation is very important to the body. Each cell of the body has receptor sites to allow glucose into the cell via the hormone (insulin) that was created during digestion. After eating a meal, the pancreas secretes insulin into the body to prepare the cells to absorb sugar. Insulin triggers the "doors" of the cells to allow a certain amount of sugar into the cells. Cells can only take in a certain amount of glucose or they will be destroyed. The body has a feedback mechanism to release insulin to open the cells to absorb the glucose but also "closes the doors" when enough has entered. If too much carbohydrate (glucose and similar sugars) is eaten, the cells of the body shut their doors completely. The excess glucose circulates until it can be removed. A high concentration of circulating glucose causes side reactions, some of which bombard vascular tissues and blood vessels. Excess glucose reacts with molecules it is not suppose to, creating new substances called glycation products which are indeed very damaging. All of this begins to take its toll on the body.

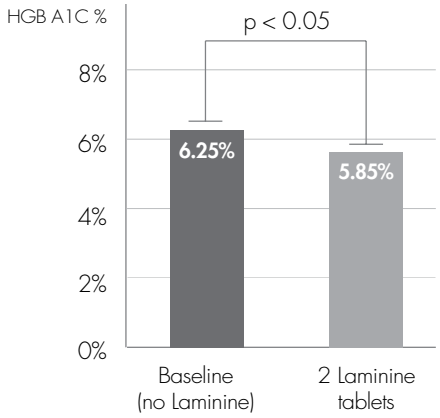
WHY DOES HIGH BLOOD SUGAR AFFECT THE BRAIN?

The brain is an organ that needs sugar as fuel for its energy source. But if the sugar is too highly concentrated, it affects the brain tissue. Side reactions occur and plaque starts to build up in the vessels as well as in between the nerve cells. Since nerve cells in the brain need to "fire" to activate the current between one nerve cell to the next, clogging up this pathway with too much glucose, toxic glycation byproducts and oxidative damage results in plaque formation in the brain tissue. These are not a normal occurrence in brain tissue, but they are found in persons with increasing and severe dementia.

HOW DOES LAMININE AFFECT SLIGHTLY HIGH - NORMAL SUGAR LEVELS?

The results showed that subjects had down-regulated blood sugar levels after 12 weeks of taking Laminine. Although this was a very preliminary, small pilot study and larger studies are underway, the results indicated that taking Laminine might be supportive to those who were beginning to show signs of slightly elevated normal blood sugar.[3] The subjects selected had blood sugar levels within the high-normal range.* A professional statistician evaluated the differences before and after supplementation, and determined that the differences were "statistically significant," which means that the effect was attributable to the Laminine products.[3]

Participants with slightly high blood sugar within the normal range took two Laminine capsules twice daily for 12 weeks showed statistical significance in blood sugar down-regulation (n=4)



* Standards for Hgb A1c Levels

	HGB A1C LEVELS
NORMAL/HEALTHY	5.6% or below
INCREASED RISK OF UNHEALTHY BLOOD SUGAR LEVELS	5.7% to 6.4%
SLIGHTLY HIGH-NORMAL BLOOD SUGAR LEVELS	6.5% or above

Laminine may help in supporting the maintenance of normal blood sugar levels

Traditional Asian cultures have been aware of the health supporting qualities of fertilized avian egg and utilized it as a dietary supplement for many years, almost like a tonic. Recent science has shown that the fertilized avian egg goes through stages where it has various cell stimulating factors, proteins, peptides and amino acids among many other nutrients that may support healthy cells. Although this is very limited and preliminary scientific research, there is an indication that Laminine may help in supporting the maintenance of normal blood sugar levels. This may be another of its attributes or something we can test. The results of this research are very promising as we obtained an indicator that the active ingredients of the Laminine formulation are preserved and active. Many people have given endorsements of their personal experiences with Laminine, from helping to improve sleep to supporting a positive outlook.

For those who have been taking Laminine for its nutritional qualities, it appears that there is one more indicator, although inconclusive, that it may have benefits at the cellular level whereby it supports this type of metabolism. Remember to see a doctor if you think that you may have high blood sugar levels and have your blood sugar and blood pressure tested often to help ascertain your health. This product is not intended to diagnose, treat, cure or prevent any disease.

REFERENCE

1. Biessels GJ, Kappelle LJ, Utrecht Diabetic Encephalopathy Study Group. Increased risk of Alzheimer's disease in Type II diabetes: insulin resistance of the brain or insulin induced amyloid pathology? Biochem Soc Trans Nov;33 (Pt 5): 1041-4.
2. Elin Ekblom-Bak, Annika Rosengren, Mattias Hallsten, Göran Bergström, and Mats Börjesson. Cardiorespiratory Fitness, Sedentary Behaviour and Physical Activity Are Independently Associated with the Metabolic Syndrome, Results from the SCAPIS Pilot Study. PLoS One. 2015; 10(6): e0131586.
3. Dr. Andujar, Physicians' Desk Reference, Jan. 2016: 2220-2222.