## Diabetic Summit/ Dr.Osborn. 50 mins

Another of my favorite speakers is Dr.Osborn, he talked about glucose metabolism. He states that many vitamins like group B are very helpful in the treatment of diabetes because glucose uptake by adipose tissue and muscle tissues is enhanced by Niacin. If the Niacin level is low, a high carbohydrate diet over time will lead to insulin resistance. Also, he stated that vitamin Bs are important in energy production by glucose breakdown of glucose and generating energy as ATP. Glycolysis and Kreb cycle steps need many vitamins, otherwise, glucose will not be properly oxidized, and as a result, one will experience fatigue and a low energy state. As a response, glucose levels in the blood will be elevated, insulin will be produced more.

He also says that many medications such as metformin depletes vitamin B12 and folic acid content in the body. Vitamin D deficiency is linked to diabetes. Minerals also play an important role in glucose metabolism, for instance, insulin contains zinc, which is essential for its proper production. And insulin receptors on the surface of the cells made out of chromium. So, diabetic patients develop a nutritional loss and a sufficient amount of vitamins and minerals will help better manage diabetes.

Dr. Osborn's approaches are good to apply to the practice. His suggestions are holistic and at the same time on evidence-based literature. Many clinicians can apply this to their practices, and many doctors while prescribing medications should also take care of side effects or medications' long-term health effects. In the future, as RDN I would use it in my practice. Whether it is a clinical practice or public health practice, integrating holistic concepts into traditional medical treatment would result in better outcomes.