Studies Repeatedly Show:

## Exercise: Little help for Type II Diabetics

Don't get me wrong, we are huge fans of exercise and the many benefits it has on the human mind and body. Modern research has detailed its benefits for decades, and that's why many doctors today recommend exercise to help prevent many illnesses. Yet, even with this awareness:

- Type II diabetes (T2D) and pre-diabetes, also known as metabolic disease, affects 116 million Americans.
- Treatment costs exceed \$322 billion per year.
- 20% of ALL healthcare dollars are spent on metabolic disease.

What's surprising is that cardiovascular and weight training, either together or separately, actually have little effect on helping people with Type II diabetes.

An in-depth analysis which isolated variables on metabolic dysfunction was published in the Journal of the American Medical Association (JAMA) showing a meta-analysis looking at the uses of strength and cardio training taken between 12 weeks to one year, and these studies averaged between .38 and .51 reductions in A1C (Long term indicator of blood glucose levels) respectively

(http://jama.jamanetwork.com/article.aspx?articleid=899553). These results are good, but many that suffer from metabolic disease have the need for a more aggressive reduction, which is why multiple therapies are often used in conjunction.

People with Type II diabetes have difficulty metabolizing glucose (Lowering A1C shows the effects of a long-term glucose lowering strategy) in their bloodstream. Conventional exercise, both strength and cardio helps, but there is a need for muscle to process glucose at a more rapid rate. A long-term approach would likely be to induce the creation of greater density of muscle, thereby increasing the muscle's glucose processing ability. Researchers have attempted to identify exercises that would increase muscle density but the therapies have limitations and have not been able to trigger the muscle density increases they were hoping for. It was discovered that extremely heavy weight or high loads were needed to develop any significant muscle density. It goes without saying, that this approach is impractical for most people. Typically increases in muscle density are only seen in athletes who absorb extremely high forces in impact activity, like gymnasts, or power-lifters.

A concept called Osteogenic Loading (OL) was suggested by inventor, John Jaquish, PhD that almost anyone, at any age could build more muscle strength and density using his invention. His Osteogenic Loading (OL) device made the required level of OL needed to build muscle density possible. After thousands had used his devices over several years in sessions that only take about 7-minutes, once a week, Jaquish went further to suggest that by using his invention, people should be able to lower blood glucose levels far better than weight training based on the strength increases he was seeing in the data. This suggestion raised many eyebrows in the scientific and medical communities, but a recent study vindicated the theory and is likely going to make huge waves in the Type II Diabetic community.



https://79471b720a5838746911-

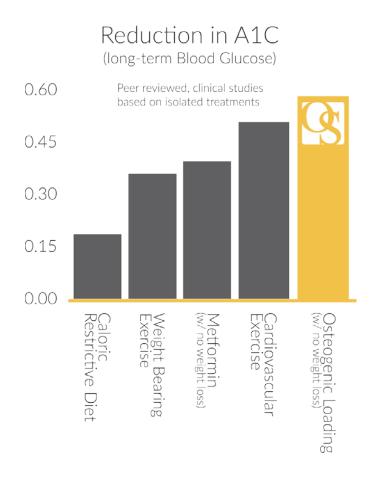
88d50621e0f8da6d50792584fec156ec.ssl.cf5.rackcdn.com/hunte-and-jaquish-2015-hba1c-with-osteogenic-loading.pdf

It is important to note that subjects in the study were pre-type II diabetics and were specifically instructed not to alter their diets during the study. This approach lends a lot of credibility to the results since people can greatly influence their blood glucose levels with healthy, low-sugar eating habits. The researchers wanted the most

pure outcome possible. The study included 21 adult subjects, all with pre-Type II diabetes, who engaged in one, 7-minute Osteogenic Loading session per week for 24 weeks. The results were far better than that of the other studies reviewed on exercise and medication and their impact on A1C levels.

Participants in the study successfully reduced their A1C by 10% more when compared to all other studies reviewed. Osteogenic Loading showed to be the most effective solution.

The following chart illustrates the results from the various studies:



Many now speculate that the longer someone engages in weekly osteogenic loading sessions, the more they will lower their A1C. For the people that suffer from Type II Diabetes, this is a potential game changer. The results from the study are seriously good, but what makes it even more exciting, is that the subjects only had to engage in one 7-minute Osteogenic Loading session per week. No lifestyle change required. Dr. Jaquish believes that most people will embrace this as a solution going forward for several reasons:

- OL Sessions are sweat-free, don't require any special exercise clothes and usually take less than 7-minutes a week.
- OL is very safe, especially compared to the long list of known and unknown side effects that accompany many drugs treatments.
- OL produces fast and measurable improvements.

One challenge researchers had with other studies involving traditional exercise options was the high drop-out rate of participants. The reported reason was that exercising regularly is both strenuous and time-consuming. OL is practically a non-event in someone's week, and the OL study had 80% of the participants complete the study. The only reason cited for participant drop-out was over-seas travel. This approach gives so many who

have trouble finding the time for exercise, a more effective, safe, and convenient option.

Umpierre D, Ribeiro PB, Kramer CK, et al. Physical Activity Advice Only or Structured Exercise Training and Association With HbA1c Levels in Type 2 Diabetes: A Systematic Review and Meta-analysis. JAMA. 2011;305(17):1790-1799. doi:10.1001/jama.2011.576.

AHMAD, M. A., HEIDAR, H. M. H., AL-SHESHTAWY, H. F., FOUDA, N. M. T., BADRE, N. M., & YOUSSOF, N. EFFECT OF PROGRESSIVE RESISTANCE TRAINING ON GLYCEMIC CONTROL IN ELDERLY TYPE II DIABETIC PATIENTS.

DeFronzo, R. A., & Goodman, A. M. (1995). Efficacy of metformin in patients with non-insulin-dependent diabetes mellitus. New England Journal of Medicine, 333(9), 541-549.

Yamada, Y., Uchida, J., Izumi, H., Tsukamoto, Y., Inoue, G., Watanabe, Y., ... & Yamada, S. (2014). A non-calorie-restricted low-carbohydrate diet is effective as an alternative therapy for patients with type 2 diabetes. Internal Medicine, 53(1), 13-19.

Hunte, B., & Jaquish, J. (2015). The Effects of Axial Bone Osteogenic Loading-Type Resistance Exercise on Adults with Risk of Moderate-Metabolic Dysfunction: A Pilot Study. Journal of Diabetes Metabolism, 6(539), 2.