



Khan Kinetic Treatment for Alzheimer and Dementia Sufferers

Alzheimer's is a progressive and fatal brain disease affecting as many as five million Americans at any given time. Destroying brain cells, Alzheimer's causes problems with memory and behaviour, affecting both work and family. Today, it is the sixth-leading cause of death in the United States.

Alzheimer's has multiple risk factors that include age, family history and heredity, which are all risk factors we cannot currently change. However, recent research is beginning to reveal other risk factors that we may be able to influence. For example, evidence suggests that strategies for overall healthy aging may help keep the brain healthy and may offer some protection against developing Alzheimer's. As for a therapy, some of the strongest evidence links brain health to the quality of its nutrition and oxygen flow. Therefore, it reasons that a treatment able to increase blood flow to the brain, increase neural conduction velocity, increase motor unit recruitment and muscle firing pattern coordination would be useful in people suffering from Alzheimer's. While it could be argued that exercise induces these benefits, often the elderly or sick, such as those who have had a stroke, are unable to move vigorously enough or with enough coordination to cause these benefits. There are also many experts in this field who believe that due to compromises in the cervical spine, this factor in itself causes many of the concerns listed above resulting in damage associated with Alzheimer's disease.

There is hope. A new non-invasive treatment based on tissue stimulation frequencies is emerging as a surprisingly effective treatment capable of inducing all of the above stated benefits.

Khan Kinetic Treatment (KKT) is a medical procedure used typically for the treatment of spinal injury leading to chronic pain. The associated device is placed on the spine and induces a small amplitude, but high-frequency sine wave into the tissues of the entire spine and cranium. New research shows that this technology is likely to help in Alzheimer's patients as well. However, the effects of this stimulation are dependent upon the frequency, amplitude and duration of the stimulus. Thus, research is required to perfect the treatment for an Alzheimer's application of KKT and is the sole reason of this brief collaboration proposal.

It has been shown that specific frequencies cause enhanced recruitment of motor units which give rise to greater strength and may lead to greater mobility allowing the patient to become more active (Blottner et al., 2006). Other researchers have shown increases in conduction velocity of nerves when exposed to 1g amplitude and specific frequency vibration (Floyd et al., 1973). Increases in conduction velocity could affect reaction times preventing falls but more importantly allowing the patient to become increasingly vigorous with activity levels. Several minutes of other specified frequencies improved skeletal muscle blood volume and perfusion, but it is unknown if these effects were seen in the brain (Kersch-Schindl et al., 2001). Increasing blood flow and nutrients in the brain have already been shown to have a protective effect. Imaging techniques used to measure blood flow in the brain could be used to detect these changes in Alzheimer's patients treated with KKT. Prisby et al., 2008, summarizes the effects of vibration on physiological systems and the potential interplay among systems. While research is scarce, KKT like stimulation seems to modulate the (A) skeletal, (B) muscular, (C) endocrine, (D) nervous, and (E) vascular systems, which in turn may elicit secondary responses through various system interactions. We believe this to be important in patients with Alzheimer's, so that they can function maximally and we see optimization research being conducted through the KKT Treatment as being instrumental in leading the way.