Beyond Sport

By Dr Xanya Sofra

A number of clinical and experimental studies have concluded that inflammation is vital in the young in fighting off disease. However, in the old, mild chronic inflammation caused by heat exposure or compromised immunity leads to a number of physical disorders including Cardiovascular Disease, Diabetes, Autoimmune Disorders, Metabolic Disorders, Bone and joint Disease, Pulmonary disease, Neurological Diseases and Cancer. Additionally, the decline of metabolic hormones in ageing causes a reduced resting metabolic rate (calories burned when the body is at rest), leading to weight gain and low-grade inflammation in older age. Blood carrying visceral fat cells that are stuffed with excess triglycerides takes free fatty acids into the liver, pancreas and other organs. Over time, this causes the organs (fatty liver, fatty heart, etc.) to dysfunction, leading to impaired regulation of insulin, blood sugar and cholesterol. Toxicity interferes with all fat burning hormones, such as Insulin (lowers blood sugar by storing glucose in adipocytes), Leptin (stimulates satiety and fat burning), Grehlin (stimulates hunger and fat storage) and Adiponectin (Lowers blood sugar and burns fat). The resulting hormonal imbalance increases hunger. Therefore, the more toxic you are the hungrier you are and the more food you consume the greater the weight gain and your visceral fat deposits especially after the age of 40.

William Joel Meggs, MD, PhD, author of *The Inflammation Cure*, believes FITNESS may fool the body into thinking it's younger than it is.

The American Heart Association, researchers at the Cooper Institute Dallas, recruited 722 men to observe how fitness affects inflammation. The men's fitness levels were measured by how long they could walk on a treadmill at gradually rising inclines. Inflammation levels were calculated by performing blood tests for C-Reactive Protein tests. The study revealed a clear trend toward lower CRP levels among the highest fitness group of men who aced the treadmill test and higher CRP levels among the lowest fitness group who struggled. Among the men in the lowest fitness group, 49 percent had dangerously high CRP scores. Conversely, only 16 percent of those in the highest fitness group had elevated CRP levels.

However, the inverse relationship between Cortisol and Testosterone makes strenuous exercise that is necessary to reduce visceral fat problematic. Cortisol increases with overtraining while Testosterone decreases with overtraining. When the body is producing the stress hormone Cortisol, it is not producing the androgen Testosterone. This is a double edged sword because on one end of the spectrum of no exercise, accumulated toxicity, chronic inflammation, stress can cause adrenal resistance elevating cortisol. Increased cortisol leads to weight gain, higher susceptibility to infections, fatigue, puffy flushed face, high blood pressure, acne, muscle aches and pains, increased urination, mood swings and changes in libido. On the other end of the spectrum where overtraining is necessary to reach and eliminate the visceral fat deposits, stressing the body increases cortisol while decreasing testosterone leading to the exact same symptoms enumerated above. Additionally, sustained physical activity leads to a near inflection lactate production. Lactic acidosis that can upset the body's PH balance.

Additionally, some people cannot exercise due to medical conditions or are unwilling to exercise due to time restraints and /or career demands. Over the age of 50, bones are more fragile and strenuous or excessive exercise can lead to body injuries. Strenuous exercise is necessary to utilize visceral fat deposits as an energy source to build muscle. Without strenuous exercise that requires time, dedication and high energy levels, the body will utilize the subcutaneous fat layers leaving unresolved the visceral fat problem that represents the main threat to our overall health. With ageing, hormonal decline and reduced resting metabolic rate become additional obstacles to working out visceral fat.

A number of clinical studies conducted in London University by the co-inventor of the first pacemaker, Gerry Pollock and internationally by Nuris Lampe, MD, Sheetal Badami, MDDS, DA, Michael Hytros, MD, Xanya Sofra, Ph.D, Thomas Barnard, MD, have introduced an alternative to sports and gym workout that is comparable to physical exercise yet effortless and significantly more intense. Clinical Experimental studies (Pollock 1994 (24 subjects 12 treatments; Weiss 2012. 19 subjects 12 treatments) reported statistically significant reduction of visceral fat, muscle mass increase, and increased concentrations of T3, Testosterone and DHEA while showing that the technology is not stressful and does not increase cortisol levels. Subjects reported a boost of energy and enhanced wellbeing. Goldspink et al (1991) found that the London University Signalling technology later to be presented as effortless exercise produces rapid hypertrophy, reflecting changes in gene expression (detected by analysing the RNA). Gene expression involved skeletal genes that are associated with overload, stretch and physical exercise implying a kinship between effortless exercise and physical activity. A study utilizing effortless exercise for incontinence of 6 women receiving 10 sessions revealed a significant improvement in incontinence without any additional physical exercise, diuretics, or other life change methods or any other intrusive interventions.

In conclusion studies conducted in London University and internationally have shown a solution for the problematic side effects of strenuous exercise that includes lactic acidosis as well as reduced testosterone and increased cortisol. This is a possible solution for those who cannot exercise due to neurological or other medical conditions or simply due to increased fragility with age, as well as those who are unwilling to exercise due to carreer demands and time restrictions. This London University solution offers benefits equivalent to exercise such as hormonal balance, visceral and subcutaneous fat reduction, muscle growth and detoxification but without increasing cortisol or upsetting the body's PH.