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## **Cyclo-ssage Pro-Personal Therapy System (PPTS)**

### **In the management of stress**

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### **Introduction**

Stress is the end result of disruption of the body's equilibrium by a chemical, mechanical or psychological stimulus with an impacting outcome that maybe positive or negative.

Positive impact stress constructively keeps the subject motivated, encouraging productivity and improved performance in all aspects of daily activities.

The vast majority of references to stress are considered for its negative impact outcome. It is an established fact that negatively impacting stress predisposes to ill health, physical inactivity, heart disease and loss of income.

A review of the literature confirms that individuals in high stress states are more prone to infections, obesity, back pain, stomach ulcers, memory loss and heart disease.

The consequence of a negative outcome stressful episode are unique and have no boundaries, hence the urgency to disrupt progression of such presentation at the earliest stage by an appropriate referral to the specialist.

Current evidence in the literature suggests that relaxation therapies as provided by Cyclo-ssage PPTS are effective for augmenting stress adaptation and management.

### **Stress pathophysiology**

Negative outcome stress manifests detrimental effects on all of the body systems, in particular the Immune system, cellular immunity, hormonal system, central and peripheral nervous systems.

In the majority of cases, the recognition of the brain is the initiation for compensatory action to be taken to protect the body systems and organs against the stressful event. The increased production of cortisol, the stress hormone from the adrenal gland enhances the immediate reaction of the body to the stressful episode. This hormone in conjugation with others attempts to reverse the physical effects of stress on the body. These include inflammation; elevate muscle aches; cramps and spasms. By increasing the breakdown of glucose and other energy sources the cortisol release in response to stress enables the initiation of the adaptation syndrome.

### **Response of the body to stress**

Adaptation syndrome the earliest response of the body to stress and it is a complex multi-facet reaction that displays the close inter-relations of our body systems and organs.

The response of the brain and spinal cord to a negative outcome stressful event is mostly manifested through the effect on cells in the blood. The white blood cells are stimulated to release chemicals that will encourage and divert the flow of blood to the stressed body part. The increased blood flow brings with it nutrients that are essential to resolution of the stressed state.

Adaptation to the stressful event is the mechanism that the body systems utilise to combat stress. Initially an increase in the function of nerve systems that ensure blood pressure and heart rate are maintained constitutes the first stage of that response. Failure of the systems to adapt to the stressor result in impending failure that is, briefly compensated for by a transitory coping period. Such coping periods are at great expense for the body's reserve.

### **Symptom and signs of stress**

Patients presenting to the clinician may complain of constant worrying, inability to concentrate or focus on task, perception of loneliness, tendency to isolate from family and friends. Pain in such patients may be generalised or localised. Forgetfulness, loss of appetite, headaches, nervousness and loss of motivation are also common presentations in this group of patients. Some patients may present with a history of drugs and alcohol abuse secondary to negative outcome stress. Patients presenting late to the specialist may have developed multi-organ complications including urinary system involvement; manifesting as bed-wetting, urinary urgency and retention. There has recently been evidence of a strong correlation between negative outcome stress and irritable bowel syndrome. Patients with these conditions may present with constipation, diarrhoea, altered bowel habits and recurrent abdominal pain.

### **Cyclo-ssage PPTS to treat negative outcome stress**

Early recognition of the failure to adapt to negative outcome stress is key to a successful invention.

PPTS therapy programs can increase blood flow mechanics whilst allowing the individual the additional benefits of a relaxation therapy.

PPTS therapy initiated in the early phase of the stress episode will enhance the individual's ability to adapt to the stressor. Modes of action of the PPTS for negative outcome stress patients include; Inflammation reversal; increased lymph drainage, both contributing to restoration of limb size and flow mechanics. The increase in muscle blood flow during PPTS therapy will also reduce stress induced muscle cramps and spasms; the most apparent physical manifestation of negative outcome stress. The increases in muscle blood flow persist for up to 48hours post PPTS therapy.

Further optimisation of the patient requires removal from the offending stressor, engagement in a relaxation therapy, uptake of a balanced diet complimented by education and regular exercise.

Exercises prescribed in our protocol at Heaton Health and sports are performed during PPTS therapy sessions. These have excellent effect on the associated incidence of back pain, thought clouding and lethargy that commonly manifest in these cohorts of patients.

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