

## Lifestyle Enhancement Program

Lifestyle in this context incorporates three components:

1. Diet
2. Exercise
3. Mind states

### 1. Diet

- A balanced diet should include the full spectrum of essential nutrients. These include:
- a. **Proteins** comprising 10 essential amino acids (the building blocks of proteins). These are derived primarily from animal flesh, eggs, milk and beans.
  - b. **Fats**. Saturated (hard fats) originate from animal products and unsaturated fats from plant products (high in nuts).
  - c. **Carbohydrates**. These include complex starches (potato, rice, some breads) as well as short chain carbohydrates (high glycaemic index) such as sugar and high sugar containing products. The absorption of complex starches into the blood stream is slower and more gradual than short chain sugars.
  - d. **Vitamins**. These include the fat soluble and water soluble vitamins. Fat soluble vitamins include A, D, E and K. The rest of the vitamins are water soluble. Fat soluble vitamins can accumulate in the fat-containing areas of the body and can therefore become toxic over time. A balanced diet generally incorporates all the required vitamins and unless there exists an illness which affects vitamin absorption and utilization, there is no evidence to show that vitamin supplementation has any advantages.
  - e. **Minerals**. These include sodium chloride (table salt), potassium, calcium, magnesium, iron and some other trace elements.
  - f. **Water**. This is derived from water itself, mixed fluids and from nutrients.

### Guidelines

Dietary intake takes the form of two or three meals per day together with 'fillers' (snacks) which are nutrients which sustain us between meals. Each meal should consist of a mix of proteins, carbohydrates and fats together with fruits and/or vegetables. Evidence indicates that the central nutrient in all the meals should be protein in any of its forms. This should comprise up to thirty five percent of the meal. The balance should comprise fats, complex carbohydrates, fruits and vegetables. The complexity of carbohydrates can be enhanced (supported) by mixing them with protein (gravy) and/or fat (butter). The last meal of the day should be completed by 7.00pm and no further nutrients should be eaten thereafter. The reason for this is that metabolic activity diminishes significantly in the evening and thus excess nutrients, not required for immediate metabolic energy, contribute to stored fat.

Fillers should be more in the protein spectrum of nutrients. Fruit in moderation is also acceptable. High glycaemic index carbohydrates should be avoided as they may contribute over time to the **metabolic syndrome**.

### **The Metabolic Syndrome**

This syndrome comprises several components: high serum glucose (sugar) with insulin resistance, high cholesterol and fatty acids, obesity and hypertension (high blood pressure). It predisposes to diabetes (type 2) and cardiovascular disease (heart disease, strokes and circulatory problems). The most important cause of this syndrome has been identified as being due to excessive, unsupported high glycaemic index carbohydrate intake (short chain sugars and sugar containing foodstuffs). The mechanism is based on the rapid and repeated sharp rise in insulin levels in response to long term ingestion of rapidly absorbed short chain sugars. Eventually the cells fatigue and are no longer responsive to the insulin. This results in raised serum insulin and glucose. It is also associated with raised serum fats (free fatty acids) which contributes to the obesity. There is also evidence that a diet high in short chain sugars is associated with higher levels of inflammation as measured by serum inflammatory indices. Inflammation is recognized as the initiating factor underlying many illnesses (heart disease, cancer, chronic inflammatory conditions and Alzheimers disease). It also predisposes to negative mind states (hopeless-helpless). More recently, adiposity (obesity) of menopause has been shown to predispose to the development of inflammation, heart disease and Alzheimers.

Another important cause of the obesity in this syndrome is the concept of **satiety**. This is the feeling of fullness-fulfilment that we experience after eating. If the satiety is low, as in high glycaemic index sugars, we tend to get hungrier sooner and therefore eat more, more frequently. Satiety is maximal following a high protein meal, significant following a high fat-containing meal and moderate following a meal high in complex, enhanced starches.

Hydration in the form of fluids is essential for health. Generally, the thirst mechanism is inefficient, with the result that if relied upon, we would be chronically dehydrated. Blood circulation, metabolism and robust urination depend on adequate hydration. Hydration requirements increase with increasing environmental temperature as well as in exercise. As a rule of thumb, hydration is adequate when urine is clear. Dark urine is indicative of significant dehydration. One should however be aware of the dangers of over-hydration (water intoxication). Sedentary activity in an environment where the ambient temperature is 21 degrees and no excessive physical activity is engaged, the total twenty four hour fluid requirements for males is three litres and two litres for females.

## **2. Exercise**

There are different types of exercises. Broadly, exercises can be classified into two basic types:

- a. Cardiovascular – includes aerobics and fitness-enhancing activities
- b. Muscle toning and strengthening – includes isotonic and isometric programs

In the context of this program, the cardiovascular type exercises are promoted for the following reasons:

- a. It enhances cardio-respiratory function
- b. It has been shown to decrease blood pressure
- c. It stimulates the production of adrenaline, serotonin and dopamine, all of which predispose to neuropsychological wellness
- d. It promotes general metabolic wellness

To be effective, it is recommended that cardiovascular exercises be performed in sessions lasting at least a half hour, three to five times per week. During each session the pulse rate should be maintained above 130 for at least twenty minutes.

### 3. Mind states

Mind states that have been identified as being conducive to wellness (and performance) have been identified and distilled into **five core elements**. These can be summarized as follows:

- a. Meaning and purpose
- b. Self-esteem and self-efficacy
- c. Personal gratification
  - Sensory gratification
  - Task engagement gratification
  - Task mastery gratification
  - Reward gratification
- d. Achievement
  - Anticipated achievement
  - Achievement experienced, greater than anticipated
- e. Value contribution
  - To self
  - To personal environment
  - To the extended environment

These elements are associated with increased production of dopamine, serotonin and adrenaline which enhance neuropsychological function. They are also associated with decreased inflammation.

Mind state enhancement requires professional neuromodulation intervention (neuro-coaching). This specialized coaching modality is designed to establish authentic meaning and purpose for the client at the outset. The cornerstone of this intervention is the establishment of a personal mission statement. Thereafter, self-esteem and self-efficacy are enhanced through processes designed to diminish limiting beliefs (disputation). Once these two core elements are established it is a relatively simple task to move towards the enhancement of gratification, achievement and value contribution. The personal fulfilment and personal gratification derived from meaningful engagement further serves to drive and enhance the core elements.