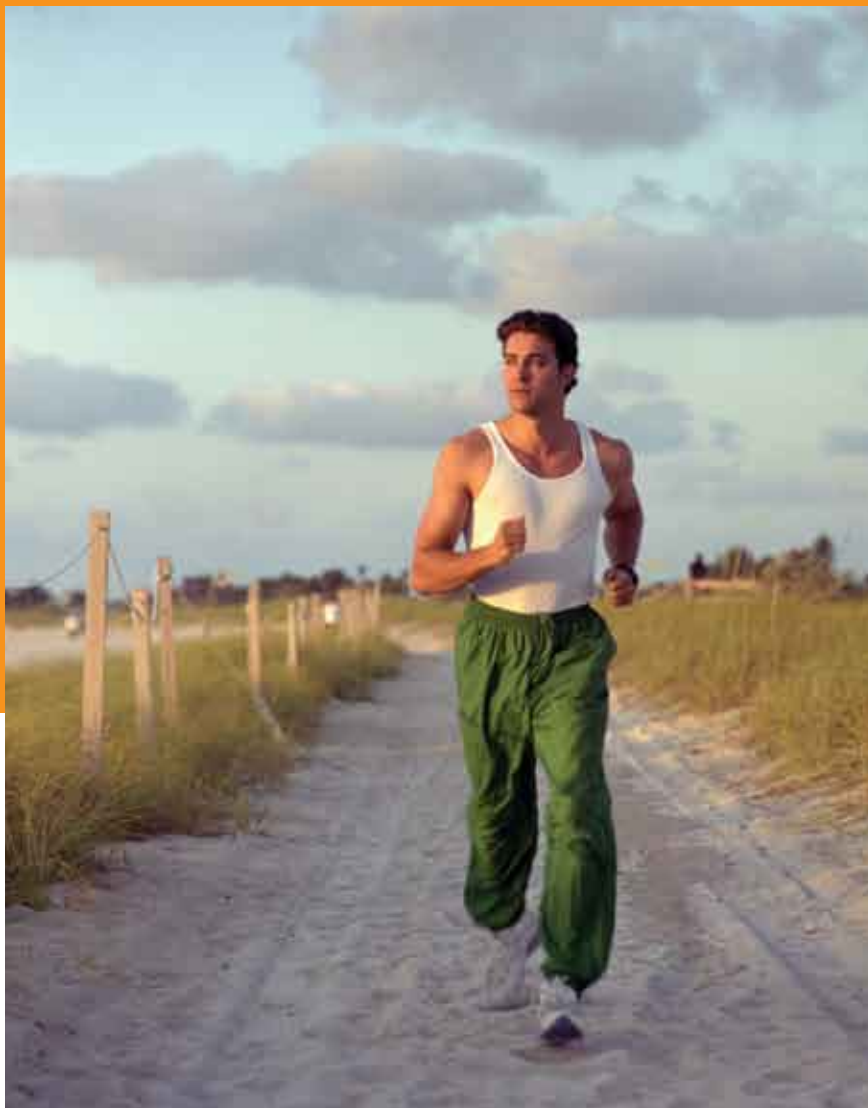


THE ZONE

“THE HORMONAL THEORY”

- part 1 -



This diet has been developed by the American, Barry Sears, doctor in biochemistry, who has studied and written a thesis in the field of lipids. His father and three uncles died between the ages of 50 and 53 due to heart complaints; fearing that the same might occur to him, he worked on the study of phospholipids and the role that they play in the absorption of cholesterol, which is the cause of damage to the arteries.

He concentrated his efforts on one category of hormones known as EICOSANOIDS, which was the basis of research that won him the Nobel Prize for Physiology in 1982, and in which he also investigated the effect of Aspirin on these hormones.

There are hundreds of eicosanoids, controlling nearly all the functions in the human body, the cardiovascular system, the immune system and also the metabolism of fats.

Barry Sears, focused his work on eicosanoids, controlling them and using them as the new image for health and illness at a molecular level. He finally reached the conclusion that a balance in eicosanoids could help to prevent many illnesses ranging from cardiovascular ailments to cancer, but at the same time allowing us to live almost in a permanent state of euphoria, meaning we would achieve a maximum physical, mental and psychological performance, which is the condition that American athletes call being "in the Zone".

To be able to achieve this condition, elite sportsmen, aided by their psychologists and trainers, use techniques such as meditation, breathing exercises, visualization and relaxation, techniques adopted from Asian religions and the martial arts, but always with results that are difficult to control and repeat at will.

As in the sports field, to enter the Zone is something short-lived and difficult to attain. Barry Sears searched for the way to maintain it on a permanent basis. And in spite of being an excellent researcher in pharmacology and the development of medicines using lipids, he was unable to find another way of manipulating eicosanoids other than in diet.

Amongst his conclusions, is the one that says that "diets that are high in carbohydrate can be quite dangerous".

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To understand the Zone Diet, you have to think in terms of hormones and be aware of the effects that diet, as well as insulin and glucagon, have on them.

INSULIN

Insulin is the hormone produced in the pancreas when the sugar level rises in the blood, and allows glucose to enter the cells of the muscles and the liver to be used as an immediate source of energy or to be stored. The brain also uses large amounts of sugar.

If the insulin level is high due to an increased sugar intake (fast-acting such as in desserts, sweetened drinks, etc, or slow, such as in pasta), then hypoglycemia can take place. This "low" in the sugar level, that is first felt in the brain, brings about a sensation of mental fatigue and consequently the need to sleep.

Insulin forms part of the endocrine hormones that have a long term action and act far from the place where they are secreted.

There are also paracrine hormones that are faster acting and act locally on nearby cells, and autocrine hormones that are also of short-term action within the same cell. These play a more deciding role for understanding the Zone Diet.

GLUCAGON

It is widely considered that the majority of hormones act in antagonist pairs (or axis) : amongst the endocrine hormones the Insulin-Glucagon axis is very important in the Zone Diet. As you probably know, glucagon raises the sugar level in the blood, while insulin, on the other hand, lowers it. The brain is always the organ that is most sensitive to variations in blood sugar.

There is a condition that is described further on, called hyperinsulinism in which the cells cease to respond to the insulin accumulated and do not allow sugar to enter into the cells, so it accumulates, causing at the same time an accumulation of fat, diabetes and heart disease.

A normal person has 100,000 calories stored in the form of fat, which would be the equivalent to 7,000 pancakes to achieve the same amount of energy in the form of carbohydrates.