

KOFINAS PERINATAL

Providing care to the unborn

UPDATES ON PERINATAL ISSUES AND NEWS ABOUT KOFINAS PERINATAL

✘ Medical Fallacies ✘

Why is it that so many times in medicine we use treatments that have been proven by scientific methods to be ineffective and some times harmful ?

Kofinas Perinatal baby of the month

Sweet Baby Rylee, Our Rainbow Baby

She came after the rain and was guided here by the competent hands of so many caring stewards. Sweet baby Rylee, we love you so much! We waited for so long for you and now

our lives are filled with love and happiness! We are forever grateful to all those who cared enough to save her!

The parents



Obesity related fallacies

An epidemic of immense proportions with severe health consequences

Alexander Kofinas, M.D.

Obesity and the concurrent medical conditions (diabetes, cardiovascular disorders, stroke, hypertension) as well as cancer were at some time called the diseases of civilization. Not that such diseases did not exist before, but their frequency has increased dramatically after industrialization made it possible to produce abundant food supplies from refined carbohydrates. The prevalence

of obesity has increased at an alarming rate in the last 50 years to the point where 70% of adults are either overweight (body mass index greater than 25) or obese (body mass index greater than 30). The incidence of diabetes has increased to 10% (one in ten adults) and of course all the complications and associated diseases are becoming more frequent by the day. Non alcoholic fatty necrosis

The important role of insulin in human metabolism

Insulin is considered by most physicians as the primary regulator of glucose metabolism. This is half or may be a 1/4 of the truth. Insulin is a very important regulator of our body's energy management system, not just sugar. Insulin controls not only glucose metabolism but also the utilization of various nutrients by the muscles, liver, brain and adipose tissue. Insulin determines whether nutrients absorbed from the intestine are going to be utilized now or be stored in the

fatty tissue in the form of fatty acids for future use. Carbohydrates stimulate excessive insulin secretion. This leads to hyperinsulinemia and insulin resistance. This is the mother of all causes of the diseases of civilization. Insulin resistance reduces the consumption of carbs by our bodies and increases fat deposition. When refined carbohydrates exceed 20% of our daily caloric intake, insulin production increases. This causes chronic hyperinsulinemia which in the long term leads to a disturbed metabolism. Under a state of hyperinsulinemia, our body is unable to utilize carbohydrates for energy production and instead, it uses carbohydrates for the production of triglycerides and very low density

lipoproteins (the really bad kind that causes our vessels to clog). Triglycerides are transferred by the blood to the adipose (fatty) tissue for storage. For a normal human being this is a very important and life saving function. The problem here is that hyperinsulinemia is a condition whereby our bodies lose their ability to distribute energy in a rational way. This continued storage of our incoming energy puts our bodies in a state of constant starvation which leads to an insatiable appetite. This is one of the most miserable states any human being can endure. It makes us very unhappy and sometimes down right depressed. To brake this misery one has to completely abandon carbs from ones diet for several months.

of the liver (the liver cells die and are replaced by fat cells) from a rare condition in the past is now affecting 30% of Americans. It was only 15% ten years ago. These numbers are alarming. Morbidity and mortality will increase substantially in the next 20-40 years as a result of the increasing numbers of obesity today. The health cost of obesity in the United States is as high as \$147 billion annually, based on a new study from the Centers for Disease Control and Prevention. (<http://www.cdc.gov/media/pressrel/2009/r090727.htm>) In addition, we spend more than \$ 40 billion annually on dieting products and a possibly similar amount on exercise products and services. This comes close to a \$ 0.25 trillion in total. Despite all these expenses and personal effort we keep getting fatter and fatter. We are told what to eat, how much to eat, how much to exercise etc. There are as many diet plans as one can imagine and all promise to cure one's obesity. Many of them are right on the money and many of them are just as worthless as they can be. The reason for the variability and contradictions among various dieting plans is the result of the confusion and differences that exist among researchers on the subject of human metabolism and the causes of human obesity. What is wrong with us? Why can we not control the obesity epidemic? Following are some of the major problems but the one that is the most important is the one that very few talk about. It is one of the greatest paradoxes; for the last 50 years we have fought obesity so intensely and yet obesity grows bigger and bigger. It is like trying to kill a monster and your weapons are actually the most nutritive food for it. How else would one explain the fact that people followed all the official guidelines and reduced the consumption of fat substantially and yet their weights are getting heavier? The only

explanation that would make sense for such a paradox is that the guidelines are definitely wrong. The advise given to people is causing the opposite of what it was expected to cause. People reduced total fat consumption hoping to loose weight and instead, they gained more weight. What is wrong at the core of this advise is the amount of fat and carbohydrate consumption. The official guidelines that were used to create the famous food pyramid were not based on scientific evidence but on a hypothesis. This hypothesis has been rejected over and over again but unfortunately, very powerful interests (political, medical, industrial and agricultural) make it impossible to tear down this pyramid. Like so many times in history, if you repeat a lie enough it becomes the truth. It has been more than 20 years since the dietary fat hypothesis and the cause of heart disease has been flatly proven wrong but pure inertia keeps it still alive. [Every scientist that tried to publish the truth about the fact that it is carbs and not the fat that cause cardiovascular disease, was ostracized and ridiculed. Such scientist were not invited in the national meetings and more so important, they were not invited in the expert panels that created the official guidelines regarding proper nutrition in relation to health.](#) What had started as a fallacy is now achieving proportions of a criminal offense. No ethical scientist would dare recommend the current food pyramid knowing what is known after numerous well designed studies have proven the fat hypothesis to be wrong. This is hard to believe but the food industry and big agricultural corporations have big pockets and kill any attempt to change the fallacious status quo. Let us now review the mechanism by which refined carbohydrates in excess according to the food pyramid lead to the diseases of civilization. It is not really that complicated. Refined carbs even in

limited quantities have a profound impact on insulin levels and cause chronic rise in the insulin levels (hyperinsulinemia).

High levels of insulin have been associated with the following serious medical conditions.

- Insulin resistance: this condition impairs the ability of cells to efficiently utilize glucose as a fuel for energy production; this in turn leads to high blood sugar levels.
- Increased glucose levels in the blood lead to glycosilation of various proteins and forms the so-called “advanced glycosilation end products (AGE)”. The higher the AGE products, the shorter the life expectancy of an individual due to chronic damage to the tissues from glucose binding to the normal elastic fibers, rendering them inelastic. This causes aging of the skin, hardening of the arteries and damage to the inner lining of all vessels.
- High insulin with its effects on muscles (insulin resistance) reduces or even stops the uptake of glucose by the muscles. The muscles are then forced to consume mostly their own protein for energy. This leads to muscle wasting, weakness and inability to be physically active.
- Insulin increases the risk for diabetes with all its consequences.
- Insulin is a known risk factor for cardiovascular disease (heart attack and stroke) due to direct effects on the heart muscle as well as indirect effects due to hardening of the arteries.

- Insulin is a growth hormone and as such it is known to stimulate the growth of most if not all cancers. In other words, if an individual is destined to develop some kind of cancer in the remote future, he will develop this cancer sooner due to the high levels of insulin, which stimulate cancer growth. Overweight and obese people are a lot more likely to develop cancer (all kinds of cancer).
- Hormonal disruption in the pituitary-ovarian axis which can cause unovulatory dysfunction of the ovaries and infertility. Women with elevated insulin levels experience fewer ovulations per year and the quality of the eggs they produce is poor leading to infertility.

Most studies relating to diet and health issues have shown that fat and meat consumption reduce the risk for heart attack. In contrast, it is clear that high insulin levels as a result of consumption of refined carbs and continued consumption of a low fat high carb diet increases the risk for cardiovascular disease. High levels of insulin affect the metabolism in a way that leads to excessive fat deposition in the abdomen, weak muscles, reduced energy, increased incidence of cancer, hypertension and cardiovascular disease. These changes render the individual weak, with less physical activity and reduced energy consumption during resting periods. No wonder then why obese people are less likely to be active and thus appear to be lazy. In reality, it is the weakness of their muscles caused by high insulin levels that makes them appear so. In addition, because insulin pushes most of the incoming energy to be stored in the fatty tissue, such individuals lack any energy and therefore are the least likely to be physically active. The continuous removal of nutrients from

the circulation and into the fatty tissue, makes obese individuals to be in a state of constant starvation. This in turn makes them want to eat more and more. Unless this insulin-induced vicious circle is broken, it is impossible to help such an individual to loose weight.

Insulin can be reduced by dieting with a low carb calorie-restricted diet and small frequent meals, each no more than 100-150 calories. This reduces insulin secretion and over a period of several weeks restores normal insulin levels and reverses the above mentioned adverse effects of hyperinsulinemia. Metformin is a medication that can help restore insulin sensitivity and thus reduce insulin secretion.

In animal studies rats that were bred to develop cancer, were treated with calorie restriction and the cancer tumors either shrunk or disappeared completely. Calorie restriction leads to reduced secretion of insulin and this in turn to reduced tumor growth. In humans, reducing insulin levels may reduce blood sugar levels in most individuals. This in turn reduces the risk for hypertension, heart disease, stroke, cancer etc..

Obesity is a complex problem and it is the result of the above mentioned metabolic abnormality, reduced physical activity, consumption of food in excess of our daily needs and high levels of refined carbohydrates in the typical western diet. It takes a concerted effort to restrict calories, increase physical activity, increase the amount of protein and fat in our daily diets and reduce the content of carbohydrates. If we avoid refined carbohydrates (glucose, fructose syrup, pasta, deserts made from carbs and all beverages that contain high fructose corn syrup) it will be the single most important step towards normalization of insulin levels. It has been estimated that if a lean person maintains his/her diet and adds one

soda a day, in a period of 12 months will add at least 8-10 lb. of weight considering that one carbonated soda drink provides additional calories in excess of 100. The average American consumes approximately 220 liters of soda per year. This translates to at least two sodas a day or an additional 200-300 calories. Many drink sugarless beverages sweetened with artificial sweeteners instead of sugar (equal, splenda etc.) Such sugar substitutes are known to be endocrine disruptors and they affect our endocrine system in ways that cause hormonal abnormalities with a number of different clinical expressions. One of them is obesity. So, drinking diet sodas is at least as bad as regular sodas if not worse. No wonder then why

70% of Americans are overweight or obese and the numbers are increasing. What is worse is the finding of a recent



medical study that projects that at the present rate, by the year 2030 obesity will affect 96% of Americans. This is a scary projection. What should we do to brake this vicious circle?

Managing Obesity

The total solution

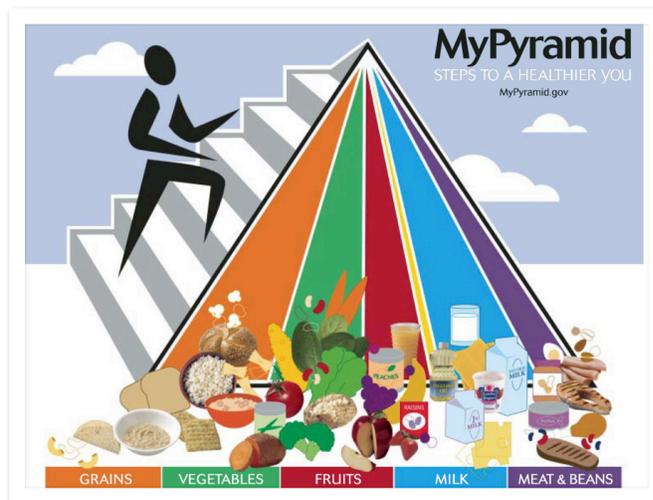
What should then be the solution for this epidemic? Due to the complexity of the contributing factors and more so due to our modern lifestyle demands, the solution requires more than just going on a diet. One of the

correlations that has never been explored or even discussed in the obesity literature is the correlation of increasing obesity along with the breakdown of the American family. Since the early sixties, it became increasingly more necessary for mothers to go to work in order to sustain their standards of living. This forced new adjustments in the dietary habits of the house-hold whereby highly refined ready-made foods became the norm as well as take-out fast foods. The image of a wife staying at home, keeping a clean environment and cooking while spending quality time with her children has vanished. We are a society of frantically running individuals who are chronically behind schedule. This creates a state of permanent “lack of time” mentality. Therefore, in our minds we do not have time for the “least important and anachronistic activities” such as cooking a healthy family meal or preparing a healthy lunchbox meal for our children. It will take a significant paradigm change in our society and families in order to change our poor dietary and physical activity habits. Because the problem threatens the well being and the lives of our children whose life is still ahead of them, any effort to change this paradigm should start from young children. It is alarming that 20% of children less than 19 years old are obese. It is much more difficult for adults to change old unhealthy habits than young children. How could a parent teach a child healthy lifestyle when the parent is doing the opposite? Children are like shiny flat surfaces reflecting all our spoken advise but they are like sponges absorbing all of our actions. Therefore, to implement any corrective plan the whole family must get on board. There are a few things that are absolutely necessary in order to have a successful plan that will last more than a few days or months.

Family participation and conformity on a healthy dietary plan should be the basic rule.

Discipline in the distribution of meals - breakfast, lunch and dinner- should be exercised always if possible.

Adherence to proper dietary guidelines and complete avoidance of the official food pyramid



designed by agencies whose purpose is to serve powerful food industry interests. Look at the pyramid above. If you were to follow the advise it will be a home run for the food manufacturers and a poison for your body. More than 60% of the calories would come from carbohydrates. This is a crime against humanity!

Our genes have evolved over thousands of years to expect 80% of our calories from animal fat and protein. Wild animals are lean so most of the calories were from protein. The rest of the calories are expected to be from complex natural whole foods (nuts, vegetables and fruits). This is in contrast to the American food pyramid which advocates low fat, low protein and high carbohydrate diet. Therefore, our diet should be rich in protein, moderate in fat and low in carbohydrates.

The overall caloric intake should be appropriate for the age and size of the individual

family members according to their ideal body weight and age. Young people need to have a positive balance since they use a lot of energy to grow. Adults should maintain a balanced intake and output. There is no need to count calories to achieve this effect. A low carb diet satisfies and makes it almost impossible to overeat because it prevents the “yo-yo” effects of abrupt and large



insulin swings that provoke severe hunger symptoms.

✓ Avoidance of any refined carbohydrates to the maximum extent possible. The only carbohydrates to be consumed should be in their original natural state. Green vegetables, nuts, whole cereals and fruits should comprise the entirety of the carbohydrate intake.

✓ To the extent possible, all meals should be prepared by the family (not just the mother). Shopping at the market for the ingredients should be a family activity as well as the preparation of the meals.

✓ Meal preparation can become an exciting and entertaining activity if children participate in the design and execution of new innovative recipes. Children are inherently curious and love to

discover new things. Having the ability to contribute to the preparation of the meals with new ideas of their own can only help them love the product.

✓ Physical activity should be promoted all the time. The nemesis of TV watching is not only bad for the brain but also for the body as a whole. The more time a child spends in front of the TV the less physical activity he/she has. Family walks, biking, kayaking and all sorts of physical activities a family can have are welcome. Organized sports of course are another way to provide physical activity.

✓ The society as a whole must participate in such an endeavor. It will be impossible for any given family to adhere to the above principles alone when families of all peers remain stuck in the old paradigm. At the minimum, a concerted effort should be underway involving as many members of the society as possible in adapting the new paradigm and moving on to a new healthy life style.

I know what you are thinking right now in your mind. “This is impossible to do because we are too busy with our daily lives that there is no time to implement such a plan”. You may go on and even say, “we cannot afford fresh quality food because it is expensive”. I hear you. I understand your difficulties. Just think for a second; our ancestors spent all their lives searching for food so our species can survive. They achieved their goal and we are the proof. We instead spend all our time trying to make money and buy “things” we do not need, with money we do not have. In the process, we deprive ourselves of the valuable time to take care of our bodies in a healthy way. This is equivalent to a slow and painful death. Our ancestors would be terrified if they could see us. What a waste of effort on their part! Shame on us.