



# *Destiny Management*

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

## **NUTRITION RESEARCH AND THEORY**

By

**Barry Sears, PH.D**

The following is a brief summary of the New York Times Bestseller book Enter The Zone by Dr. Barry Sears. This summary will provide some key points to “Living in the Zone.” It is recommended that you read the book for the full benefits of what accessing the Zone through dietary technology really means.

### **PREFACE**

Dr. Sears began his research behind “The Zone” in the 1970’s with his postdoctoral work in how the molecular structure of lipids (the class of compounds that includes cholesterol and the lipoproteins: HDL, LDL, and VLDL) contribute to heart disease.

His passion behind the research was due to programmed genes that were killing all the men in his family of heart disease by their early fifties. His grandfather, father, and every one of his three uncles all died of heart attack before they reached fifty-four.

His original focus was to develop a patentable phospholipids (a natural substance) as a treatment for heart disease. Dr. Sear’s patentable phospholipids technology evolved into a drug-delivery technology for intravenous cancer-drug delivery. He now holds 12 patents for cancer treatments and dietary control of hormonal responses.

In 1982, Nobel Prize research was released about a powerful class of hormones called **Eicosanoids**. Eicosanoids are among the most powerful and important substances in the body. They act as “master switches” that control virtually all human body functions- including the cardiovascular system, the immune system, and the systems that govern how much fat we store. Eicosanoids are the molecular glue that holds the human body together and if eicosanoids could be controlled, we would be able to control virtually every aspect of human physiology. By maintaining a proper balance of eicosanoids we could help prevent or become the primary treatment for the disease states of heart disease, diabetes, arthritis, and cancer to name a few. It would help maintain a state of perpetual good health: a molecular definition of “wellness” that would lead to a better quality of life.

Dr. Sear’s approach to eicosanoids is from a different perspective - at the level of the individual cell, where the eicosanoids are manufactured. His goal was to learn how to tip the balance of the molecular building blocks of eicosanoids in the cell membranes, so that the cells would manufacture the right types of eicosanoids to reach the Zone.

© 2006 Destiny Management

Page 1

For further assistance, or if you have any questions, contact us at 206-799-8650, or e-mail: [terry.linde@gmail.com](mailto:terry.linde@gmail.com)

[www.destinymgmt.com](http://www.destinymgmt.com)



# *Destiny Management*

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

His idea was to apply the drug-delivery principles he was already using for cancer drugs to the ideal oral drug-delivery system for eicosanoids: food.

He has spent the last six years developing this dietary program. He believes that dietary technology is the most powerful means ever discovered to help people achieve that state of optimal health, physical performance, and mental alertness that's called the Zone.

## **LIFE IN THE ZONE**

The Zone is a real, metabolic state that can be reached by everyone, and maintained indefinitely on a lifelong basis. What is the Zone? It's the metabolic state in which the body works at peak efficiency. You will enjoy optimal body function: freedom from hunger, greater energy, and physical performance, as well as improved mental focus and productivity. Fatigue and listlessness are replaced by feelings of energy and high competence. Weight loss (fat loss) which can be an ongoing and usually frustrating struggle for most people, is automatic in the Zone.

To reach the Zone we use the most powerful drug delivery system we have: food. **Every time you open your mouth, you are applying for a passport to the Zone. To get that passport you must treat food as if it were a drug. You must eat food in a controlled fashion and in the proper proportions-as if it was an intravenous drip.**

Reaching the Zone is a matter of technology. In this program, food is used to maintain a favorable hormonal balance, specifically among insulin, glucagon and the superhormones called eicosanoids.

## **THE FATTENING OF AMERICA**

You fatten cattle by feeding them large amounts of low-fat grain. How do you fatten humans? Same way: you feed them large amounts of low-fat grain.

For the past fifteen years, Americans have been involved in a scientific experiment to reduce excess body fat. The message from top scientists, nutritionists, and the government, was simple: eat less fat and more carbohydrates. However, despite the cutback on the amount of fat consumed, the country has experienced an epidemic rise in obesity. Americans are getting fatter. Between 1980 and 1991 there was a 32 percent increase in obesity. If we are eating supposedly "healthy" diets that supply less fat and less cholesterol, why are we gaining weight? We are getting fatter because many of our dietary "laws" are wrong. Also, many of the dietary recommendations are confusing with little agreement even among the scientific experts-as to precise definitions for "low-fat," "high-carbohydrate diet plans. So, people are eating less fat and getting fatter! The alarming conclusion reached is a high-carbohydrate, low-fat diet may be dangerous to your health.

To understand why that is, we need a new perspective on food. We need to understand the relationship between the food we eat and our potential to live in the Zone. Here is some information you need to know.

© 2006 Destiny Management

Page 2

For further assistance, or if you have any questions, contact us at 206-799-8650, or e-mail: [terry.linde@gmail.com](mailto:terry.linde@gmail.com)

[www.destinymgmt.com](http://www.destinymgmt.com)



# Destiny Management

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

- ♦ *Eating fat does not make you fat.* It's your body's response to excess carbohydrates in your diet that makes you fat. Your body has a limited capacity to store excess carbohydrates, but can easily convert those excess carbohydrates into excess body fat.
- ♦ *It's hard to lose weight simply by restricting calories.* Eating less and losing excess fat do not automatically go hand in hand. Low-calorie, high-carbohydrate diets generate a series of biochemical signals in your body that will take you out of the Zone, making it more difficult to access stored body fat for energy. Result: you'll reach a weight-loss plateau, beyond which you simply cannot lose any more weight.
- ♦ *Diets based on choice restriction and calorie limits usually fail.* People on restrictive diets become tired of feeling hungry and deprived. They go off their diets and put the weight back on (primarily as increased body fat).
- ♦ *Weight loss has little to do with will power.* You need information, not will power. If you change what you eat, you do not have to be excessively concerned about how much you eat. Adhering to a diet of Zone-favorable meals, you can eat enough to feel satisfied and still wind up losing fat-without obsessively counting calories or fat grams.
- ♦ *Food can be good or bad.* The ratio of macronutrients-protein, carbohydrates, and fat-in the meals you eat are the key to permanent weight loss and optimal health. Unless you understand the rules that control the powerful biochemical responses generated by food, you will never reach the Zone.
- ♦ *The biochemical effects of food have been constant for the last forty million years.* All mammals, including man, have essentially the same responses to food. These responses have been genetically conserved throughout evolution, and are unlikely to change in the near future.

The average American man has 23 percent body fat, while the average American woman has 32 percent body fat. The ideal healthy body fat for a male is 15 percent and for females is 22 percent. This means the average male in this country is 53 percent fatter than his ideal, and the average female 50 percent fatter than hers. Why are our body fat percentages so high? Because, the experts who are telling us what to eat do not really understand the relationship between diet and fat loss. Specifically, the experts do not understand how body fat is influenced by the macronutrient content of the food we eat.

The macronutrients of food are protein, carbohydrates, and fat. **Every time you eat, these macronutrients generate complex hormonal responses in your body. These responses ultimately determine how much body fat you will store. With weight loss, knowing how to control these responses is the real power of nutrition, and hence the gateway to the Zone.**

## **CARBOHYDRATES**

Carbohydrates are merely different forms of simple sugars linked in polymers-something like edible plastic. The body requires a continual intake of carbohydrates to feed the brain, which uses glucose (a form of sugar) as its primary



# *Destiny Management*

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

energy source. The brain uses more than two thirds of the circulating carbohydrates in the bloodstream while you are at rest. To feed the brain, the body continually takes carbohydrates and converts them to glucose.

Any carbohydrates not immediately used by the body will be stored in the form of glycogen( a long string of glucose molecules linked together). The body has two storage sites: the liver and the muscles. The glycogen stored in the muscles is inaccessible to the brain. Only the glycogen stored in the liver can be broken down and sent back to the bloodstream to maintain adequate blood sugar levels for proper brain function.

The liver's capacity to store carbohydrates as glycogen is very limited and can be easily depleted. So the liver's glycogen reserves must be maintained on a continual basis. That's why we need carbohydrates.

What happens when you eat too many carbohydrates? The total storage capacity of the body for carbohydrates is quite limited. An average person can store about three to four hundred grams of carbohydrates in your muscles, but you cannot get at that carbohydrate. In the liver, where carbohydrates are accessible for glucose conversion, you can only store only about sixty to ninety grams.

Once the glycogen levels are filled in the liver and muscles, excess carbohydrates have just one fate: to be converted into fat and stored in the adipose(fatty) tissue. Any meal or snack high in carbohydrates will generate a rapid rise in blood glucose. To adjust for this rapid rise, the pancreas secretes the hormone insulin into the bloodstream. Insulin then lowers the levels of blood glucose.

The problem is that insulin is essentially a storage hormone, evolved to put aside excess carbohydrate calories in the form of fat in case of future famine. So the insulin that's stimulated by excess carbohydrates aggressively promotes the accumulation of body fat. In other words, when we eat too much carbohydrate, we are essentially sending a hormonal message, via insulin, to the adipose cells to "Store fat."

Not only do increased insulin levels tell the body to store carbohydrates as fat, they also tell it not to release any stored fat. This makes it impossible for you to use your own stored body fat for energy.

**The real key to all of this is the speed at which carbohydrates enter the bloodstream, because that's what controls the rate of insulin secretion.** The stomach takes all carbohydrates and breaks them down into simple sugars for absorption. What distinguishes one kind of carbohydrate from another is the rate at which the carbohydrate enters the bloodstream.

The entry rate of a carbohydrate into the bloodstream is known as its **Glycemic Index**. The lower the glycemic index, the slower the rate of absorption. What determines the



# *Destiny Management*

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

glycemic index? The primary factors are (1) the structure of the simple sugars in the food, (2) the soluble fiber content, and (3) the fat content.

There are three common sugars that comprise all edible carbohydrates, each one with a different molecular structure, that determines its rate of entry into the bloodstream. Glucose is the most common of these sugars, followed by fructose and galactose. Glucose is found in grains, pasta, bread, cereal, starches, and vegetables. Fructose is primarily found in fruits. Galactose is found in dairy products. While all of these simple sugars are rapidly absorbed by the liver, only glucose can be released directly into the bloodstream. Galactose and fructose, which must first be converted to glucose in the liver, enter the bloodstream at a slower rate.

Fiber acts as a brake to slow the rate of entry and absorption of other carbohydrates into the bloodstream. The higher the fiber content, the slower the rate of entry into the bloodstream. Fiber acts as a control rod to prevent a runaway rate of carbohydrate absorption.

With the recent popularity of juicing, in which fiber is removed from the fruit, this control rod is removed and the carbohydrate enters the bloodstream too fast. It is preferable to add as much whole fruit as possible and to combine a protein source with or in the juice. Essential fats will need to be added to every meal. There will be further explanation on this later.

When a carbohydrate enters the bloodstream too fast, the pancreas responds by secreting high levels of insulin. Insulin brings the blood-sugar level down, **but it also tells the body to store fat and keeps it stored.** A listing of the glycemic index of carbohydrates is provided. Use this reference guide to determine whether a carbohydrate's glycemic is high or low.

## **PROTEIN**

Proteins are the basis for all life. In our bodies, protein is more plentiful than any other substance but water. As much as one -half of your dry body weight (including most of your muscle mass, skin, hair, eyes, and nails) is made up of protein. Protein is the main structural ingredient of our cells, and the enzymes that keep them running. Even our immune systems are composed of protein.

Amino acids, the building blocks of protein, are the foundation of all life. There are twenty of these vital amino acids. Nine of them, known as the essential amino acids, cannot be synthesized by the human body, and must be supplied by the diet. You must constantly provide the building blocks for new protein formation.

If proteins are the foundation of life, and excess carbohydrates make you fat-why not eat more of protein and less carbohydrate? High-protein, low-carbohydrate diets are the basis of many quick weight-loss programs.



# Destiny Management

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

Almost everyone who tries them does lose weight at first, but let's look at the long term affects of these diet plans. High-protein, quick loss diets induce an abnormal state known as *ketosis*. This occurs when you have insufficient carbohydrate stored in the liver to meet the requirements of the body and the brain. (Remember that even when full, the liver stores only small amounts of carbohydrates.) Once the stored carbohydrates are used up, the body turns to fat to supply energy. However, with a high-protein, low-carbohydrate diet, the process of converting fat into energy becomes short-circuited due to the manufacture of abnormal biochemicals called *ketone bodies*.

The body has no use for ketone bodies. It gets rid of them through increased urination. That means weight loss-at first- but the vast portion of this weight loss is water. In addition, if you eat too much protein at one meal, your insulin levels will also start to increase. Your body does not want many excess amino acids floating around in the bloodstream. Remember, that increased insulin levels will help convert the excess protein into fat.

It has also been discovered recently that high-protein, ketogenic diets may cause changes in the fat cells, making them ten times more active in sequestering fat than they were before you went on the diet. So, when you go off the diet, you continue to accumulate fat at a frightening rate.

When the body has to deal with a high protein, low-carb diet the brain acquires the excess energy it needs to function by ripping down muscle mass and turning much of the protein in that muscle mass into carbohydrate. Also, keep in mind that because of the increased insulin levels, you are not losing body fat at anywhere near the rate you expect, and you eventually reach a plateau. These high-protein, ketogenic diets cause permanent changes in fat cells, changes that virtually guarantee increased body-fat accumulation in the future.

## FAT

**Dietary fat does not make you fat. You instead, have to eat fat to lose fat.** Currently the trendy high-carbohydrate diets are keeping people fat, even though the fat content is very low. **With a Zone favorable diet, the fat content is exceptionally important: in fact, it's the biochemical key that ultimately prevents the accumulation of excess body fat.** Note: Pilot studies of overweight people on a Zone favorable diet that combines the proper ratio of protein, carbohydrates and fat are listed in Chapter two -The Fattening of America.

Remember the two keys to permanent weight (fat) loss through a Zone-favorable diet: (1) dietary fat does not make you fat (2) you have to eat fat to lose fat. It comes down to how your hormones respond to the foods you eat. The more you know about these responses, the more likely you will get to the Zone. Once you are in the Zone, you will see permanent fat loss.

© 2006 Destiny Management

Page 6

For further assistance, or if you have any questions, contact us at 206-799-8650, or e-mail: [terry.linde@gmail.com](mailto:terry.linde@gmail.com)

[www.destinymgmt.com](http://www.destinymgmt.com)



# *Destiny Management*

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

## **THE HORMONAL EFFECTS OF FOOD**

The hormonal responses generated by the foods you eat can be your greatest ally, or your worst nightmare. Hormones regulate virtually everything your body does—from controlling blood-sugar levels to the basic survival mechanisms involved in stress, fear, and even love.

There are three hormonal systems tightly linked in a communication structure are the endocrine system, the paracrine system, and the autocrine system. The hormones in the paracrine and autocrine system are powerful short-acting and tend to self-destruct within seconds after accomplishing their task. They also do not appear in the bloodstream, so it makes it difficult to study through sampling.

Endocrine hormones represent the classic type of hormonal responses and are relatively easy to study. In the endocrine system, the action begins when a secreting gland sends a message as a hormone into the bloodstream. The message travels through the bloodstream to reach a distant target cell. The cell receives the message and responds with the action that has been ordered by the hormonal messenger.

Hormonal systems are constantly engaged in a balancing act. Hormones rarely act alone. They are usually paired in sets, consisting of two hormones with powerful but totally opposite physiological effects. The two most important paired sets for reaching the Zone are the insulin-glucagon axis. Insulin drives down blood-sugar levels, while glucagon has the opposite effect: it increases blood-sugar levels. The balancing of these opposed physiological effects allows the body to maintain a relatively tight control of blood sugar, allowing the brain to function at its best. When the hormonal balance is disturbed, the result is an imbalance of blood-glucose levels.

If insulin levels are too high, for example, or if glucagon levels are too low, the result is hypoglycemia, or low blood sugar. When that happens, brain function is compromised. There is also a condition known as insulin resistance, in which insulin levels are elevated but blood-sugar levels remain high because the target cells no longer respond to insulin. Insulin resistance and the resulting elevated insulin levels (hyperinsulinemia) lead to the accumulation of excess body fat, and prolonged hyperinsulinemia can not only promote diabetes but also speed up the development of heart disease.

The food you eat has an exceptionally powerful effect on all these hormonal responses: endocrine, paracrine, and autocrine. Once you understand the power of the hormonal responses generated by the food you eat, you can no longer think of food simply as a source of calories for the body.

All conventional diets ignore one vital fact: *food is the most powerful drug you will ever encounter. Learning how to control hormonal response to food is your passport to entering and staying in the Zone.*



# *Destiny Management*

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

How do you use food to control hormonal responses? Food needs to be viewed as a control system for hormones. Think of the composition of each meal as a hormonal ATM card that will determine which energy source you are going to use for the next four to six hours. Hit the correct ATM code, and you tap into a virtually unlimited source of energy—your own stored body fat. Hit the wrong code, and you will be forced to use a fuel that's low octane and in limited supply: stored carbohydrates.

The correct ATM code and your password to entering the Zone, lie hidden in the insulin-glucagon axis. Insulin is a storage hormone. Its job is to take excess glucose from dietary carbohydrates and excess amino acids from dietary protein and store them in the adipose tissues as fat. It's also helpful to think of insulin as a locking hormone: not only does it store fat in the adipose tissue, it locks that stored fat up so it cannot be released.

Glucagon, insulin's biological opposite, is a mobilization hormone. Glucagon's primary job is to release stored carbohydrates, as glucose, from the liver. Once released by glucagon, this glucose enters the bloodstream, and helps maintain the tight balance of blood sugar required for the brain to function adequately.

Since insulin drives down blood sugar, and glucagon restores blood-sugar levels, the communication and ongoing balance of these two hormones are critical for survival. Remember that the release of insulin is stimulated by carbohydrates—especially by high-glycemic carbohydrates like bread and pastas. On the other hand, the release of glucagon is stimulated by the release of dietary protein.

So, the critical hormonal balance of insulin and glucagon depends on two things. One is the size of the meal you eat—excess calories stimulate secretion of insulin. The other is the ratio of protein to carbohydrate in each meal. When the macronutrient ratio of a meal consists of too many high-carbohydrates and too low in protein, it causes carbohydrate cravings. The infamous sweet tooth and the constant cycle of recurring hunger (every two to three hours) are a recurring, viscous cycle. When your glycogen depots in the liver and muscles are full, you store the excess as fat.

Not everyone has such a negative hormonal response to high-carbohydrate diets. There are about 25 percent of the population with a very blunted response to carbohydrates. Their insulin levels do not rise rapidly, so there is not as much of an imbalance in the insulin to glycogen ratio. These people are blessed with genetic good fortune.

## **EICOSANOIDS**

**Eicosanoids** control hormones. They are the body's superhormones and are made by every living cell in the human body. They are the molecular glue that holds the body together. Eicosanoids control the body's hormonal systems and every vital physiological function: the cardiovascular system, the immune system, the central nervous system, the reproductive system, etc. *Eicosanoids are the most powerful biological agents known to man. Control eicosanoids and you will open the door to the Zone.*

© 2006 Destiny Management

Page 8

For further assistance, or if you have any questions, contact us at 206-799-8650, or e-mail: [terry.linde@gmail.com](mailto:terry.linde@gmail.com)

[www.destinymgmt.com](http://www.destinymgmt.com)



# Destiny Management

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

Eicosanoids are part of an axis of paracrine and autocrine hormones that are extremely complex, yet almost invisible. They are measured in seconds, they work at vanishingly low concentrations, and they do not use the bloodstream to reach their target issues. All eicosanoids operate at the level of the individual cell, and they have exceptionally diverse and powerful effects. They are the ultimate regulators of cellular function, turning cells on and off on a second-by-second basis.

Like all hormones, eicosanoids operate as control systems with opposing actions. A balance of these opposing actions spells good health, and an imbalance spells disease. In effect, eicosanoids are your body's ultimate cellular check-and-balance system.

There are 'good' and 'bad' eicosanoids. A dynamic balance of the good and bad eicosanoids maintains biological equilibrium. The 1982 Nobel Prize in medicine awarded for eicosanoid research led to a new and different perspective on disease. Virtually every disease state-whether it is heart disease, cancer, or autoimmune diseases, i.e., arthritis and multiple sclerosis, can be viewed at the molecular level as the body simply making more bad and fewer good ones. We can now look at wellness as the body making more "good" and fewer "bad" eicosanoids. *Optimal* health-the metabolic state in which the body and mind function at peak efficiency- is the state that all of us would like to reach.

To achieve optimal health, the metabolic state you are after is the state in which the dynamic balance of good and bad eicosanoids is favorable. That is the molecular definition of the Zone.

*If you follow a Zone favorable diet, it will get you to the Zone and keep you there for the rest of your life.* This Zone favorable diet is the balance of macronutrients-protein, carbohydrate, and fat-tightly controlled-every meal, every snack, every day.

What does macronutrient balance have to do with eicosanoids? **First, dietary fat is the only source of essential fatty acids that are the chemical building blocks for all eicosanoids. Meanwhile, the balance of protein and carbohydrate controls the insulin-glucagon axis, which in turn determines whether the eicosanoids your body makes are 'good' or 'bad'.**

## EXERCISE IN THE ZONE

Exercise and food go hand in glove; and you want to make sure that the hormonal effects of exercise are being enhanced, not destroyed, by the hormonal effects of the food you eat. Food is still the primary pathway to the Zone, but exercise can help widen that path and make it easier to stay in the Zone on a long-term basis.

**Burning Calories versus Burning Fat.** Most people think the goal of exercise is to burn calories. Fat, not carbohydrate, is the primary source of energy for your muscles. Fat is a more efficient raw-material source for energy generation-fat supplies more than twice the energy of carbohydrates-it is far more plentiful.

© 2006 Destiny Management

Page 9

For further assistance, or if you have any questions, contact us at 206-799-8650, or e-mail: [terry.linde@gmail.com](mailto:terry.linde@gmail.com)

[www.destinymgmt.com](http://www.destinymgmt.com)



# Destiny Management

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

When you exercise, you begin to place greater work demands on the body. So you have to get more fat from the storage depot to the factory-the muscles. What is the controlling factor in the release of fat from your storage depot? The balance of eicosanoids puts you into the Zone and allows you to access fat faster to meet your energy needs. If you move out of the Zone, the fat release drops to a trickle. The factories will then reluctantly switch to an inferior, lower-octane fuel: carbohydrate.

You want to burn more fat than carbohydrate when you exercise. If you begin to exercise too hard, the demand on getting the fat from where it's located (the adipose tissue) to where you make energy (the muscles) is often the limiting step. If the muscles cannot get enough fat, they switch over to using the stored carbohydrate that sits within the muscles. The higher the intensity of exercise, the more hormonal responses are effected. Specifically, higher-intensity aerobic exercise reduces insulin levels, and increases levels of glucagon. This is exactly what a Zone favorable diet does. When you decrease insulin, you begin to make more 'good' eicosanoids and fewer 'bad' ones. This favorable balance means you are releasing more stored body fat from the adipose tissue. So, when you are in the Zone, you have set the conditions for maximal fat release.

The intensity range of exercise that induces an improved balance of eicosanoids is between 60 and 80 percent of your maximum heart rate.

Anaerobic Exercise- Although anaerobic exercise does not access fat directly, it still has a powerful indirect effect on the fat-burning process. If the intensity of the anaerobic exercise is high enough, it causes the body to release human growth hormone. One of the important jobs of this potent hormone is to repair the microdamage done to muscle tissue during anaerobic exercise. It takes a lot of energy to do the repair job, and that energy comes from your stored body fat. This means, human growth hormone is the most powerful fat-burning hormone in the body and is controlled by good eicosanoids. So, this hormonal change gives you two crucial benefits: it burns fat, and it allows you to build new muscle at the same time.

## EVOLUTION AND THE ZONE

If you follow a Zone favorable diet consistently, you will soon experience sweeping changes in the way you feel-physically, mentally, even emotionally. These changes are so broad, yet so basic because from an evolutionary point of view-that is, a genetic point of view-*this is the way human beings are designed to eat.*

Eicosanoids have been around for some 500 million years. They represented one of the first hormonal control systems for living organisms to interact with their environment. With the evolution of man, the hormonal system of insulin, glucagon, and the eicosanoids, were adapted as a way to control an organism's response to food. This system has been conserved for hundreds of millions of years, and is standard operating equipment for an amazingly wide variety of species, including man.

© 2006 Destiny Management

Page 10

For further assistance, or if you have any questions, contact us at 206-799-8650, or e-mail: [terry.linde@gmail.com](mailto:terry.linde@gmail.com)

[www.destinymgmt.com](http://www.destinymgmt.com)



# *Destiny Management*

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

Without food, there is no possibility of life. Without some biological control system to control how the body uses food, there is no life either. That's where these hormones come into play.

Insulin responses evolved to cope with the uncertainty of the food supply under extreme, faminelike conditions. When times are leaner (between meals, for example) or during fasts, declining insulin levels mean a corresponding increase in levels of glucagon. This, in turn, tells the liver to release stored carbohydrates in a controlled, measured way to keep the brain fed and maintain adequate mental function.

By the time man came along, all these control systems were deeply embedded in his genes. Genetic changes evolve very slowly. Genetically, there is no difference between you and your ancestors who walked the earth 100,000 years ago during the Neo-Paleolithic era.

Modern analysis of Neo-Paleolithic diets makes it apparent why our ancestors were so physically developed. Their carbohydrate sources-fruits and fiber rich vegetables- were exceptionally rich in micronutrients (vitamins and minerals). Second, almost to the same percentage point, Neo-Paleolithic diets have the same protein-to carbohydrate ratio as a Zone favorable diet. So, the Neo-Paleolithic diet kept insulin, glucagon, and eicosanoid responses on an even keel.

All this dietary and genetic harmony was disrupted about ten thousand years ago with the development of agriculture. With agriculture came the new additions to the human diet: grains and dairy products.

Remember that from an evolutionary point of view, genomes (a species' total genetic makeup) don't change much in ten thousand years. So human genes have been adapting very reluctantly and very sluggishly to the introduction of these two new food groups ten thousand years ago. On the whole humankind has been genetically unable to cope with these foods.

Modern man has not genetically adapted to these "civilized" foods. To be genetically correct, man needs a modern version of a Neo-Paleolithic diet, a diet that's based on his current genetic makeup. That is exactly what a Zone favorable diet is. So, there is yet another way to think of the Zone favorable diet: as an evolutionary diet. Our bodies evolved millions of years ago to eat in a particular way. We have strayed from that path, a diet that is genetically correct.



# *Destiny Management*

The Final Edge to Metabolic Control™

Enhancing lifestyles through proven wellness and fitness systems™

Note: This summary is intended to give a brief overview. For more information on the topics of: Vitamins, Minerals and the Zone; The Zone and Your Heart; Cancer and the Zone; Chronic Diseases and the Zone; and The Zone and Life Extension, please refer to the book [Enter The Zone](#) .

For more information on how to begin a Zone favorable diet, contact Destiny Management toll-free at  
1.877.492.1957-8650,  
or e-mail: [terry.linde@gmail.com](mailto:terry.linde@gmail.com).

Visit our website at [www.destinymgmt.com](http://www.destinymgmt.com).

© 2006 Destiny Management

Page 12

For further assistance, or if you have any questions, contact us at 206-799-8650, or e-mail: [terry.linde@gmail.com](mailto:terry.linde@gmail.com)  
[www.destinymgmt.com](http://www.destinymgmt.com)