

ACNE - HOW TO PREVENT AND OVERCOME ACNE FOREVER.

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THIS REPORT WILL SHOW YOU WHY, AND ALSO HOW TO PREVENT THEM!

Dr. Robert Preston ND



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The purpose of this special report is to show readers the real meaning and grave danger that acne is warning of, and how they can actually greatly minimize and even eliminate the conditions that cause acne problems using simple and easy to follow diet and nutritional recommendations.

These recommendations are not simply our “pet” ideas, they are founded on a significant amount of scientific evidence that validates them.

The really good news is that you no longer have to suffer through acne, it can be eliminated. Once you understand exactly what acne is, what causes it, and most importantly, what nutritional elements your skin is crying out for, you can finally conquer acne and enjoy that beautiful skin Nature intended you to have in the first place.

Self Esteem Suffers When Acne Is Present.

Perhaps the worst damage done to its victims by acne is the great harm it does to their self esteem. Considering that **80% of the population between the age of 12 and 24 years old will be afflicted by acne to one degree or another, acne is a very serious and widespread concern.** For many people, acne problems can continue all throughout their life well into adulthood, even though they were told as teens that they would “outgrow” it.

Did you suffer with acne as a teen? Perhaps you still suffer with it as an adult. Looking back on your high school or even college years, would you have felt better about yourself and life in general if you had not had acne? Virtually all of us would answer, YES! Perhaps you would have had the courage to get a date with that “special” person. Perhaps you would have felt and done better on some of those early job interviews. A clear complexion might have created a stronger self image and a higher sense of self confidence. Would this have allowed you to early on set your goals in life significantly higher? It would have for me!



It would be ludicrous to blame acne as the sole cause of a poor self image or a low level of self confidence. However, no reasonable person in this day and age can deny that satisfaction with our appearance leads to a stronger self image and a higher level of self confidence. Both of which are essential in allowing us to achieve greater success in life. Given the extreme emotional stress and self esteem damage that acne can cause, it is very appropriate to view acne as much more than just merely blemishes on the skin.

What Acne Is

Acne is defined simply as “*an inflammatory skin disorder*”. The pimples, the redness, the infections, are all visible signs of skin that is inflamed or highly irritated.

Within every hair follicle is a tiny pit with a group of cells that are called a *sebaceous gland*. This gland produces an oil known as *sebum*, and its purpose is to oil the hair shaft and to spread out over the top of the skin, sealing in the moisture of the skin so that it stays healthy, soft, supple, youthful and wrinkle free. (see illustration #1)

This process works quite well as long as the sebaceous glands get all of the nutrients they need to produce a high quality oil. However, at puberty the process of sexual maturation occurs. This process is absolutely essential for the continuation of life and our species, and thus the sex glands get first call on the nutrients extracted from the diet. If the diet is not adequate to supply nutrition for both the skin and these essential sexual maturation processes, the skin becomes short changed and acne is almost guaranteed to occur.

Here is why! The hormones of sex are made from the same basic nutrients as is the oil made by the sebaceous glands. When there are not enough of these nutrients to do both, the production of sex hormones hogs all the nutrients and the skin begins to suffer as the result of a poor quality of oil being produced by the nutrient deficient sebaceous glands.

The single most common result of nutrient deficiency in the sebaceous glands is the production of an oil that is

thick and sticky. It can become so thick and sticky that it does not flow up and out of the hair follicle and over the top of the skin. Without the oil covering the skin, moisture is lost, the skin becomes dry and flaky, it itches and can crack and wrinkle and become inflamed.

By far, the biggest problem develops down inside the pores of the skin where this thick sticky oil begins to accumulate and harden. Eventually this accumulation will swell to such an extent that the pore will enlarge and become a visible white dot called a "whitehead". If dirt gets embedded into this thick and sticky oil it will be called a "blackhead". (see illustration #1)

The worst problem occurs on the face, which is more exposed to air borne bacteria than any other part of the body. Here the bacteria become trapped in the pores that are clogged with the thick and sticky oil. This would not be a problem except for one thing, they set up house in those pores, and they start raising a very large family. They only need three things to be a great success, **1. warmth, 2. protection from the elements and 3. food.** They have all three in great abundance in the clogged pores of the skin.

Eventually the immune system discovers these bacterial infestations in the pores of the skin and the white blood cells launch an all out attack. The most important of these white blood cells are "Langerhan's Cells" which are stationed in the skin, also known as *macrophages*, the really "big eaters" of bacteria.

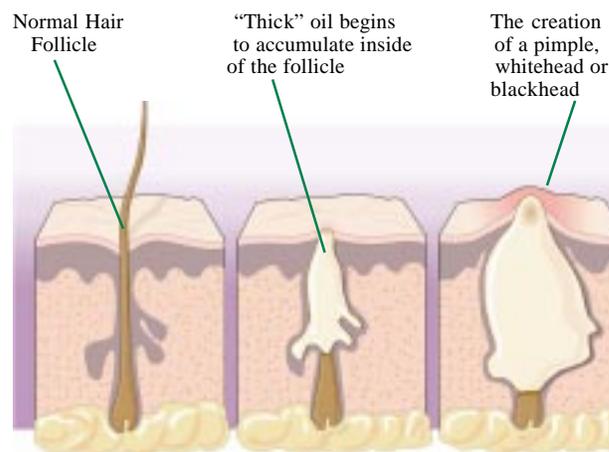
First the macrophages use chemical warfare, and that causes the entire area around the bacteria infested skin pore to become red, swollen and sore. This now attracts more macrophages to the infested pore, and at this point they begin a bacteria eating frenzy.

After each macrophage devours about 100 bacteria it has become so toxic that it dies, and its bulging yellow body lies within the battle field of the skin pore. As thousands of these macrophages lie dead within the pore it becomes swollen and yellow from their dead bodies. This is what is called "puss". You now have the dreaded "pimple", a skin pore that is infected, sore, and swollen with ugly puss! And when you get lots of them at once, it is called *Acne!*

Micro Nutrients That Prevent Acne

There are several micro nutrients (vitamins & minerals) which are important in preventing the development of acne, but none quite as important as Vitamin A. This is because **Vitamin A is essential for the conversion of the fatty acids in the blood stream into the oil of the sebaceous gland in a form that is normal and healthy.** In other words, oil that flows smoothly out of the glands and pores of the skin and provides a thin protective barrier over the skin. It is not thick and sticky, and does not trap dirt, dead skin cells or bacteria. *Ref. 1*

ILLUSTRATION #1



Of course Vitamin A does not do this job of creating healthy skin oil alone and unaided. A chief co-factor for Vitamin A is Riboflavin, known as Vitamin B-2. This is because Vitamin A naturally comes in several different forms, one of which becomes toxic to the body if it accumulates in any significant quantity. This toxicity quickly disappears without harm as soon as the individual stops taking Vitamin A. *Ref. 2* All three of these natural forms of Vitamin A have to be converted in the body to various derivatives of the original three in order to do their job. **Vitamin B-2 is an essential co-enzyme factor working in the liver to convert Vitamin A to its active and non-toxic derivative forms.** *Ref. 3*

Thus without enough Vitamin B-2, no matter how much Vitamin A is taken, much of it will remain inactive and ineffective. If large amounts of Vitamin A are taken, without the Vitamin B-2 to convert it to useful non-toxic forms, it can become toxic. *Ref. 4*

One example of the partnership between Vitamin A and B-2 is in the eye where Vitamin A is essential for the production of rhodopsin and retinene. These are the chemicals within the eye that allows the rods of the retina to "see" at night and in dim light. **Yet, it is well established that even when Vitamin A intake is adequate, night blindness will still occur if there is not enough Vitamin B-2 in the diet. This is because Vitamin B-2 is an essential cofactor with Vitamin A to create that chemistry of vision.** *Ref. 5*

A group of baboons were placed on a diet that was nutritionally complete in all respects except for a lack of Riboflavin, which is Vitamin B-2. Within 6 months their faces were covered by a mass of eruptions virtually identical to those of teenagers. This was in spite of the fact that they had plenty of Vitamin A. All of the skin lesions disappeared

shortly after large amounts of riboflavin were administered to make up the deficit. So it is that even adequate supplies of Vitamin A in the diet will not insure healthy skin without an adequate intake of Vitamin B-2. *Ref. 6*

Although not quite as critical as the nutrients just covered, Vitamin E, Vitamin B-2, B-3, B-6 and the mineral Zinc as well as others are also important in the creation of healthy skin.

Why Teens Are More Susceptible to Acne Development

There are three major reasons why modern teens have a profound tendency to develop severe cases of acne. I've already covered the first one in some detail and so I will just mention it here very briefly. **This refers to Nature sending all the nutrition required by the testes and the ovaries during the teen years to insure there will be adequate sexual maturation in order to guarantee the perpetuation of the species.**

In cases where the diet does not have enough of the important micro nutrients, such as Vitamin A and Vitamin B-2 to insure the conversion of the basic cholesterol molecule to both sex hormones and healthy oil for the skin, the sex hormones will win and the skin will suffer.

The second major factor is that the typical teenager's diet consists primarily of processed foods which are woefully deficient in the basic micro nutrients required to create both hormones and healthy skin, thus their diet is setting them up to have skin that is going to be nutritionally deprived and highly prone to develop severe acne. *Ref. 7*

The third major factor is the modern teenage diet which is terribly out of balance with regard to the macro nutrients of fat, protein and carbohydrate. The diet of the average American, let alone just teens, is drastically in favor of excess simple carbohydrates. This factor, more than any other, when taken in combination with the above two factors guarantees that teens will have severe acne. Worse still, it also guarantees that as time goes by, a lot of other even more severe, dreadful and life shortening problems will occur as well. **It is critically important for you to understand just how this third factor of an imbalance between the macro nutrients in favor of carbohydrates is not only the biggest culprit in causing severe acne, but why it also sets the stage for a life time of early onset, life destroying health problems. *Ref. 7***

Please read the next few paragraphs carefully, from the standpoint of your health they may be among the most important you will ever read.

Macro Nutrients - Protein, Fat and Carbohydrate

Most people now know that in order to be healthy, the human body needs a diet that contains enough vitamins and minerals to perform the various chemical processes that allow us to function. So, today millions of people take vitamin and mineral supplements, just to be sure they are getting enough. That is great as far as it goes. Unfortunately most people still don't have a clue about how the other and equally critical elements of nutrition work. What I am talking about here is the vitally important macro nutrients of proteins, fats and carbohydrates.

Protein - The great, vast majority of your physical body is composed of protein. The framework around which the minerals of your bones are assembled is pure protein. The muscles of your body are 98% protein. The connective tissues, the ligaments, tendons, and cartilage that hold your bones and muscles together are almost pure protein. The skin that covers your body and the membranes that cover your organs are almost pure protein. The formed elements of the blood, your platelets, red and white blood cells, as well as the vessels themselves, are almost pure protein. The organs which make up the interior of the body are almost all protein. The enzymes which do all the work within your body, are almost pure protein. If you take away the water from your body, over 90% of what is left of a normal weight person will be protein.

The proteins of your body can only be constructed from the amino acids derived from the proteins found in your diet. Obviously a diet that supplies adequate protein is critical to maintaining a healthy body. Fortunately due to the highly efficient way in which the body uses its existing proteins, and the effective way it breaks dietary protein down into amino acids and peptides, we actually only need about 8 ounces of high quality protein in our diet each day in order to have a really healthy body. But, we do need those 8 ounces of top quality protein and if we don't get them each day, important enzymes will not be produced, leaving vital work undone. Key immunoglobulins will not be built, leaving us vulnerable to infection. Tissue repair will not be completed, resulting in premature aging. Due to the key role proteins play in our health, there are 8 amino acids which are called "*essential*", meaning we must have them in our diet every day or our health will suffer.

Fat - We need fat in our diet to provide fatty acids, sometimes called *lipids*. When dietary fat is eaten, the acid of the stomach separates fat from the rest of the food, and in the intestines fat is attacked by an enzyme made by the pancreas called *lipase*, and by the bile salts from the liver. These digestive enzymes break dietary fat down into solitary fatty acids.

These fatty acids are then absorbed into the thoracic duct of the lymphatic system, where they are wrapped in a little protein covering. This makes them a *chylomicron*, and they are carried along in this part of the lymph system until they are dumped into the blood stream just as it reaches the heart.

Why? Because the heart gets most of its energy by burning these fatty acids in the heart muscle cells. *What?* Yes, the heart actually gets most of its energy by burning fat! Yep, and many of the other muscles of the body also gain a large amount of their energy by burning fat which was derived from the diet, or released from fat stores when we starve or go on a diet.

In addition to serving as a vital, major and key source of fuel and energy for the body, fatty acids are important structural components of the brain and joints, the foundation of many hormones, as well as a large number of nerve impulse transmitters in the brain and nervous system. So important is fat to our health, that there are two fatty acids which are classified as “*essential*”, meaning we must have them in our diet or our health will suffer.

In today’s world there is an unfounded fear of fat in the diet. One of those is that fat in the diet causes acne. **False!** It just is not so. I’ve got a surprise for you, **it is not the fat on the French Fry that causes your acne, as much as the starch in the potato**, but I am getting way ahead of the story.

Our ancestors whose health was far superior to our own, ate a large amount of fat each day and much of it was of the variety labeled by the so-called experts as the wrong type of fat, *saturated fat*. The truth is, saturated fat is actually the safest form of fat there is. This is because it is not going to oxidize on you and develop harmful free radicals like the unsaturated fats do. In fact, University of California Medical School research has shown that if you want to age rapidly and look old soon, just consume lots of polyunsaturated, or partially hydrogenated vegetable oils.

Proteins and Fats in Rapid Review - We have just seen that dietary proteins are primarily for the purpose of providing us with the raw material for enzymes, red and white blood cells, immune factors, and the structural elements of most of our body and there are “*essential*” amino acids we must have in our diet in order to meet all those protein needs.

Fats are mostly for energy and to provide a small amount of fatty acids for hormones and nerve transmitters as well as some structural components that make up the brain and the joints, and there are “*essential*” fatty acids which we must have in the diet in order to meet all those fat needs. Now we are going to take a look at carbohydrates, the most overused and abused member of the nutrition family.

Carbohydrate - The Sweet Foods- Although many people were fed breast milk by their mother when they were a baby, none remember what it tasted like, and only a few brave souls will admit to having tasted it as an adult. As the father of six breast fed children, I’ll admit that I know. It tastes sweet, very, very sweet! This very sweet tasting first food has programmed us from birth to love the taste of sweet food and drink.



If you have ever sat across from an infant in a high chair you know the difference between their reaction to eating mashed bananas or peaches versus green beans. They ate the peaches and bananas with joy but you probably ended up wearing the green beans on your face and clothes.

Nature has a clever way of using that preference for sweet tasting food to get us to eat nutritionally rich food. Here is how it works. *Did you ever notice that fresh sweet corn just off the stalk is sweet, and that which you buy in the produce department, even though it looks the same, is just not sweet?*

You’ve probably noticed the same is true for most fruits and vegetables as well. This is because Nature only puts the sweet into these items after she has put in all the other nutrition. Produce harvested for market is picked early before all the nutrition has gone in, and thus Nature has not yet added the sweet. Because of our preference for the sweet taste this little trick worked well when we got our food direct from Nature. We waited until it was sweet on the tree, vine, or bush before harvesting it and thus we obtained maximum nutrition.

Today, at least 95% of all people get their food from fast food outlets or the supermarkets. These food outlets get their foods from the giant food processing plants, who in turn get them from huge growing operations. These food merchants know we love sweet foods, but due to the complex growing, processing, packaging and merchandising chain that brings us today’s food, it just isn’t possible to bring it to us “*naturally sweet*”. So they sweeten it up with the addition of sugar and starch. We the public just love it, not realizing we are being short changed on nutrition as we consume our sweet tasting foods.



The problem is, the real nutrition of the food is largely lost during this food production chain, and what is left in most cases is largely simple carbohydrates. Today our consumption of simple carbohydrate foods is more than 100 times greater than

it was just 200 years ago. Unfortunately, our body has NOT increased its ability to handle this huge increase in simple carbohydrate foods, as a result, massive and life threatening health problems are occurring at an ever faster rate and at an ever younger age.

In talking to patients and teaching nutrition seminars, I have been shocked to find that most people have no real idea what I am talking about when I say "simple carbohydrates". Nor, do they have any idea why eating large amounts of these simple carbohydrate foods is very dangerous to their health.

For example, this Report is on the cause and correction of Acne, and yet at this point, my guess would be that most of my readers don't see any great connection between a large amount of simple carbohydrate in their diet and developing Acne. **Yet this is actually the number one cause of severe acne. Worse still is the fact that serious acne in the teen years brought on by a high amount of simple carbohydrates in the diet is a sure fire indicator of the diabetes, heart disease, high blood pressure, strokes and obesity to follow.** So let me see if I can help you gain this vital understanding of the role of carbohydrate in the diet.

The Origin Of Your Nutritional Needs

If we step back in time just 10,000 years ago, the last Ice Age was just ending and modern man was just emerging. *Ref. 8* Scientists are divided on the exact period of time that our ancestors had existed prior to this time. The commonly accepted time span ranges from 100,000 to a million years. Even though the scientists don't agree on the exact length of this time, the one thing they do agree on is the basic diet of the people who lived during that time period. It is called the Paleolithic Diet, also known as the Hunter-Gatherer diet. *Ref. 8, 9*

For this very long time our immediate ancestors existed mostly on the high protein and fat containing foods of insects, fish, shellfish, birds, eggs and animals. The reason for this was quite simple, they were easier to get and the energy derived from them lasted a much longer time. The large feline animals such as lions and tigers, and the canines such as wolves and coyotes need to eat only once every 3 days because the nutrient rich proteins and fats of the animals which make up their diet is very sustaining.

As our early ancestors moved around in search of animals to eat, they also learned to gather and eat edible herbs, seeds, fruits, nuts and berries when they were available. These were basically carbohydrate foods and while they tasted good, they were only available as food when they were mature, and that generally meant only once per year. In addition, the energy provided by these plant foods did not last as well as that of the animal foods. We see that illustrated today by the herbivorous animals such as cattle

and elephants who must eat constantly all day long in order to get enough life sustaining energy from plant food only. *Ref. 8, 9*

So the diet of early humans for 100,000 years or more, was mostly protein, and fat rich animal foods. The protein content of their diet was between 35 and 40%, which is about 3 times what the average person eats today.

The fat content in their diet was about was between 25 and 30%. Which is not much different than that of today, except that today, we get most of our fat from vegetable oils that are rich in Omega 6 fatty acids, which we now know an excess of, can lead to major health problems. Our ancient ancestors got most of their fat from animals and plants which were better balanced by supplying some Omega 3 fatty acids as well as the Omega 6.

The animal meats were supplemented with whole plant foods as the opportunity presented itself. Plants that were loaded with fiber, as a result they ate 100 grams of fiber a day. This is 5 times more than we get today. A great many studies have shown that people with a daily intake of 40 grams or more of diverse plant fiber never develop the health problems of our modern societies. *Ref. 9*

Unlike our refined plant foods (*they had no flour or sugar*) their plant food was also loaded with micro-nutrients, and high quality fats and proteins. In fact studies have shown they ate over 200 different species of plants, so they had an enormous diversity of micro and phyto (*plant*) nutrients available to them. For this reason, the biological machinery of the human body is very well adapted to this kind of diet. Humans were, and still are, *omnivores*, which means they can and did eat virtually every edible thing within their reach. This is one of the reasons why humans managed to survive the ice age while thousands of other species died out because their specialized diet limited their ability to survive and thrive. **The really important lesson to be learned from this information is that this is the exact same dietary demands and biological machinery you have in your body today.** *Ref. 8, 9*

The First Really Big Human Dietary Change

By the time the Ice Age ended 10,000 years ago, humans had learned they could harvest wild grain seeds such as rice, corn, wheat and oats, and instead of consuming them all, they could plant some of them in fertile soil where adequate rain fell. They saw that these seeds would grow and in a few months bear seed after their own kind at a ratio of 100 grains harvested for each seed sown. Suddenly humans were eating grains in large quantities and for the first time in their long history, complex carbohydrate food was becoming a substantial part of their diet. They also learned how to capture young meat bearing animals and

raise them in herds which they controlled. By allowing these animals to eat the grasses left in the fields after harvesting the grains it was possible to have a continual supply of animal food without having to wander from place to place. The ability to grow and harvest grains and feed domestic livestock without moving around allowed communities and cities to develop. Civilization was born! *Ref. 8, 9*

Although for the first time carbohydrates now became a major part of the human diet, it did not create a major problem in the health of humans because these grains were all used as “*whole*” grains.

Whole grains simply means that nothing was removed or altered in the grain. Thus the grain contained the germ which held a significant amount of vitamins, protein and fat, as well as the bran which also contained vitamins and fiber, and of course the main part of the grain which consisted of pure starch. In other words, these grains were what we call a whole balanced food. Even though there was now a much larger amount of carbohydrate in the diet, it was wrapped in the complexity of a whole food and it took time for the body to digest and absorb it. **Because of this fact, the introduction of larger amounts of carbohydrate to the diet was still in harmony with the human biological machinery they had inherited.** *Ref. 8, 9*

The Second Major Human Dietary Change

The second major change in human food consumption began nearly 400 years ago with the invention and distribution of a “*simple*” carbohydrate known as *sugar*, followed 250 years later with the introduction of another “*simple*” carbohydrate known as *refined flour*.

Whereas nutrient rich “*complex*” carbohydrate with lots of fiber made up no more than about 35% of our ancient ancestors calories, the consumption of nutrient deficient fiber free “*simple*” carbohydrates now makes up as much as 60% of the daily caloric intake of humans in the advanced nations. This has set in motion an ever escalating cascade of major health problems. *Ref. 8, 9*

You do not have to look any further than the change in health problems in the United States to see the devastating effect this drastic change in diet has caused. As hard as this is going to be for most people to believe, the truth is, just sixty years ago, America only had one heart specialist, Dr. Paul Dudley White. Cancer specialists were rare, and diabetes was a condition you had to be born with, and no one knew what to do for it. Nobody had heard of Attention Deficit Disorder or Autistic children. *Acne?* Not a problem. An occasional pimple for teens, but the biggest problem for most teens was a changing voice for boys and an increasing bust size for girls. My how times have changed, all courtesy of an explosive consumption of simple carbohydrates.

What A Carbohydrate Food Is

The simplest way to describe carbohydrate is to say that it is any portion of food which upon digestion will be broken down into glucose. This means all food that contains any form of sugar, or starch are carbohydrates.

Natural foods contain sugar in three forms, *glucose*, *fructose* or *sucrose*. However, by far, most of it is sucrose which is one molecule of glucose joined to one molecule of fructose. Except for fruit, most natural carbohydrate foods do not actually contain any sugar, instead they contain *starch*. Starch is sugar that has been changed in form so that it can be stored.

Starch is formed when one molecule of water is removed from between two sugar molecules. This joins them together into one unit of what is called starch. The reason Nature converts most sugar into starch is because it is more compact and stable than sugar, and this makes it easier to store food with less chance of loss.

Virtually all fruit (except avocados) are carbohydrate food. The more solid fruits such as apples and pears are more starch than sugar, while those with more juice than solids are mostly sugar with only a small amount of starch.

Vegetables only contain modest amounts of sugar and are mostly starch. Grains contain no sugar and are mostly starch. The fruits, vegetables and grains thus constitute what are called natural complex carbohydrate foods.

Fruit, vegetables and grains are called complex carbohydrate foods because they also contain various amounts of protein, fat and fiber. These foods digest slowly and release their glucose content steadily without upsetting the blood sugar and this allows the body plenty of time to adjust and use the glucose effectively.

When these same foods are treated by the food processing plants they remove most, if not all of the protein, fat and fiber, leaving only the sugar and starch. Stripped of virtually all the protein, fat and fiber we now have naked sugar and starch foods which are very simple to digest, taking only minutes for the body to convert to glucose, and this is why they are called “*simple*” carbohydrates. *Ref. 9*

In their most basic form, simple carbohydrate foods are foods which are man made from mostly sugar and/or flour. Soda pop with six or seven teaspoons of pure sugar per glass is a prime example. Cold cereals, crackers, bread, buns, rolls, cakes, doughnuts, cookies, pies, potato chips, corn chips, pasta, spaghetti and candy, as well as jam, jelly, milk shakes, fruit juices and similar foods are all examples of simple carbohydrate foods. These foods are not bad for you if you only eat small amounts once in a great while. **It is when you eat a lot of them all of the time like teens**

do, that they create acne, obesity and serious health problems later on. Ref. 9

Most people think we need carbohydrates in our diet every day, just as we need protein and fat. They think that carbohydrate foods are essential to good health. I have a big shock for you, in reality, you don't really need any at all. You do need 8 "essential" amino acids to create the proteins of your body, and you do need 2 "essential" fatty acids to make the fat your body needs, but there are NO "essential" sugars, starches or carbohydrates. *Why?* Because when it gets right down to it, **if necessary your body can manufacture all the glucose it needs from fat and protein.** Thus there are no essential carbohydrates, sugars or starches which are required to maintain human life.

Carbohydrate is not an "essential" food at all. Don't get me wrong, the right kind of carbohydrates are good for us, because they make it a lot easier for the body to meet all of its needs. The important thing for you to realize is that you don't need large amounts of carbohydrate, and certainly none of those which have been refined, such as flour and sugar.

Digestion And Metabolism Of simple Carbohydrate

Remember, it only takes a few minutes to digest simple carbohydrate down to its basic unit of glucose. Once this glucose crosses over from the intestines into the blood it is called *blood sugar*.

Blood glucose is the raw material from which the body manufactures a complex high energy molecule known as *Adenosine-Tri-Phosphate*, also known as ATP.

ATP is known as "the energy currency of the body". It is the energy that powers everything that goes on in our body. It is so vitally important that every cell of the body has tiny mechanisms within them called *mitochondria* so they can produce their own ATP. **Mitochondria take in fat or glucose and use them as a source of fuel with which to produce ATP.**

The more each cell needs energy, the more of these mitochondria energy factories those cells have. The heart muscles which never have a moment to rest, need lots of energy, so they have 2,000 or more mitochondria per each cell. They are equally as efficient at burning either fat or glucose to provide the power to manufacture ATP.

While the heart cells can burn either fat or glucose to power the production of ATP, the brain cells can only utilize glucose. Thus their need for glucose is even higher than that of heart cells giving them the highest glucose requirement of any cells in the body. Because brain cells have no capacity to store glucose, they must have an immediate ready supply of glucose directly from the blood.

This need is so great, unlike all other cells of the body, they are able to take up glucose directly from the blood without the need for the insulin transport system.

Clearly, a steady and continuous supply of glucose in the blood is critically important in order for the brain to function. Without it we would be unable to think, or even remain conscious, and soon we would die.

Glucose is also essential for the rest of the body to produce the energy it needs for all of its varied functions. Unfortunately this great need for a constant supply of blood glucose has led some to believe that a diet high in simple carbohydrates is the ideal way to remain alert and have lots of energy. Tragically for them the exact opposite is true!

Getting Too Much of a Good Thing

All "simple" carbohydrate food is quickly converted to glucose which floods into the blood within minutes after it has been eaten or drunk. All of this glucose in the blood is very dangerous as it will soon crowd out the oxygen and our brain will go into a coma. So the pancreas produces a special hormone to get rid of all this glucose and shove it into the cells of the organs, muscles and skin. This hormone is called *insulin*.

Recent research has shown that all "simple" carbohydrate foods are not equal in the speed with which they enter the blood and stimulate insulin release. This difference in speed and intensity of insulin release by a carbohydrate food is known as it's *Glycemic Index*.

Foods with the highest Glycemic Index are those which create the fastest and largest release of insulin. These are the foods which offer the fastest road to Acne, Syndrome X, Diabetes, Gall Bladder Problems, High Blood Pressure, Obesity, Heart Attacks and Strokes. Ref. 10

When glucose is absorbed into the blood, it goes first to the liver which then sends a message to the pancreas to produce enough insulin to keep the glucose level of the blood within the normal range.

The insulin then bonds to the glucose and escorts it to an insulin receptor site on the surface of the cell and demands that he and his sweetie be let in. These receptor sites don't



just open up to any old thing that is combined to glucose. They demand an identity card, so insulin has to show his co-factors of chromium, vanadium and three special amino acids, along with a few other nutrients. If everything is in order, the group are allowed to enter the cell.

Once inside the cell the insulin/glucose complex must locate one of the cell's tiny mitochondria energy factories mentioned previously. Here is where the glucose will be converted to the real energy, the ATP molecule. However, here is also where a real problem can occur that most people are not aware of. Most people imagine in their mind that more glucose rich sources in the diet automatically means more energy.

This is only true up to four very limiting points. The first limitation occurs when we don't have enough insulin or co-factors (*which is almost always the problem*) to get the glucose into the cell. The second limitation occurs when we don't have enough additional co-factors, such as *lipoic acid*, to get the glucose into the mitochondria. The third is when the mitochondria itself is lacking enough of certain co-factors, such as *niacinamide*, and thus is only able to process a limited amount of glucose. The fourth is that even when everything is just right, there is always a limit to the amount of glucose each mitochondria can process, after that, all other glucose molecules must be rejected. *Ref. 11* Once the individual consumes more glucose supplying foods than their body has the capacity to convert to energy, serious health problems start to occur.

For tens of thousands of years humans did not have to worry about getting more glucose than their body could handle because the diet contained only very "complex" carbohydrate foods. The nutrient rich complex foods people consumed allowed only a small amount of glucose to enter the blood stream at a steady rate. No such thing as a "*glucose rush*" and this process worked without a hitch. The pancreas could produce plenty of insulin and release it slowly and steadily, and there were plenty of nutrients to get this glucose/insulin team into the cell, into and through the mitochondria with plenty of ATP being produced. *Ref. 8,9*

Then about 100 years ago the diet began a drastic change that introduced a larger and larger amount of simple carbohydrate foods into the body every single day.

To give you some idea of the size of that change, let's take a look at the consumption of sugar. Sugar was invented about 400 years ago, but it was so difficult and expensive to make, that for the first 200 years very little of it was consumed. At the time George Washington was serving as the first President of the United States, the average American consumed only 4 pounds of sugar per year. Now, only 200 years later the average American consumes 180 pounds of sugar a year. So, humans have gone from no sugar per

year 400 years ago, to 4 pounds a year 200 year ago, to 180 pounds a year today. *Ref. 12*

The same thing has occurred with regard to the consumption of flour milled from grains. Until about 100 years ago, most of the flour used to make baked goods was produced from home grown grain and milled as the whole grain at a local mill.

Rapid Inducers of Insulin*

Soda Pop, Alcohol, Candy, Candy Bars, Puffed Rice, French Fries, White Bread, White Rice, Carrots, Corn, Bananas, Raisans, Apricots, Ice Cream, Corn Chips, Potato Chips.....

Moderate Inducers of Insulin

Pasta, Spaghetti, Cereals, Oranges, Orange Juice, Peas, Baked Beans, Garbanzo Beans, Navy Beans...

Low Inducers of Insulin

Beef, Chicken, Fish, Poultry, Nuts, Whole Grain Rye Bread, Barley, Cheese, Kidney Beans, Lima Beans, Apples....

* Source- Barry Sears, Ph.D

Enter The Zone- Regan Books 1995

Whole grain flour meant it had all the protein, fat, fiber, vitamins and minerals of the entire grain, as well as the starch. Almost all of the baked goods consumed in every family was what mother and the girls in the family could make from that whole grain flour. This amounted to about 104 pounds of whole grain flour per person per year. *Ref. 8,9*

During the first two decades of the 1900's there was a mass migration of the population from the farms and small towns to the cities, factories, stores and jobs. At that time flour underwent a dramatic change because people were no longer growing their own grain and having it locally ground into whole grain flour.

Grains were grown far away and shipped by rail to large grain centers, and there it was ground into flour and shipped to bakeries all over the nation. To do this successfully, the millers had to remove the germ of the grain, taking out the minerals, vitamins, fiber, fat and protein and leaving only the starch. *Ref. 8,9*

In other words, flour was turned into another nutritionless source of glucose. It was only one small step removed from being pure sugar. Busy working mothers found that commercially baked goods made from this type of flour and pastries loaded with sugar was an easy way to make every meal a success. Today, the average American consumes about 442 pounds of refined white flour per year. *Ref. 12*

When you combine the amount of refined white flour and sugar consumed per year, you find the average American now consumes about 622 pounds of “simple” carbohydrate foods per year. Another, and clearer way of saying that is to list it as 622 pounds of glucose per year, or about 1.7 pounds of glucose per day.

When you realize that up until as recently as 100 years ago, the amount of “simple” carbohydrate in the average daily diet was almost zero, it is not difficult to understand why the number of people developing glucose related health problems has now reached epidemic proportions. It is really quite simple, we have drastically increased our glucose intake without being able to increase our bodies ability to process it adequately.

How Acne Develops

As a child consuming cold cereals made of refined flour coated with sugar, drinks of fruit juice and soda pop, snacks of cookies, crackers, and doughnuts, and meals of pasta and spaghetti, and deserts of cookies and cake, and candy treats, your young and healthy pancreas puts out all the insulin you need.

However, by the time you reach those all important teen years, this kind of micro-nutrient deficient “simple” carbohydrate diet for the first 12 years of your life has left your cells with too little in the way of nutrient reserves to be able to process all this glucose in an effective way.

The first thing that happens is that the glucose in the diet is in excess of the ability of the nutritionally deficient mitochondria to convert it into ATP. As a result the glucose can't get into the mitochondria and the glucose starts to saturate the cell.

Because of the constant exposure to the environment, the skin endures a high degree of wear and tear, thus skin cells have to replace themselves constantly. This means they have a high energy demand, and they need and get a lot of glucose, and the more glucose there is in the diet, the more they get.

The nutritional deficiencies that accompany a “simple” carbohydrate diet, eventually show up as nutritional deficiencies in every cell in the body, including skin cells. These nutritional deficiencies prevent the skin cell mitochondria from fully functioning. The glucose does not get converted to ATP and just stays in the cell as glucose until the cell becomes so saturated it can accept no more.

By this time the lack of Vitamin A and B-2 are causing the oil in the sebaceous glands to become thick and sticky, and this traps bacteria. Looking around for a good meal, the bacteria discover a huge supply of glucose in the neighboring cells. With all this food they are soon

multiplying faster than rabbits in Australia and a huge bacterial colony is established in the skin pores.

At this point the immune cells discover the bacterial colony and attack. First comes the chemical warfare becomes red, sore and swollen. Next is the attack by the macrophages who eat themselves to death gorging on bacteria, littering the battlefield with their swollen pus filled bodies. By now your dreaded pimple is sticking out there for all the world to see. So, if you are a typical teenager you console yourself with a candy bar and wash it down with a bottle of soda pop and wonder why your pimples are turning into a bad case of Acne!

Syndrome X - Precursor To Sugar Diabetes

As a result of this massive consumption of “simple” carbohydrates devoid of the other macro-nutrients of protein, fat and fiber, and also totally devoid of the micro-nutrients of vitamins, minerals and phyto-nutrients, tens of millions of Americans, as well as those in other advanced nations, are suddenly finding themselves in a great wasteland of a new health condition called *Syndrome X*!

The earliest sign of the onset of this condition is severe acne. It is also a condition characterized by bouts of confused thinking, difficulty remembering at various times, energy that is no longer steady, but surges at times only to fade away later, with more and more low energy episodes than high ones.

It is brought about by a loss of the ability to effectively and efficiently utilize glucose in the blood, the cell and the mitochondria. This condition generally begins to manifest itself in the teen years as severe acne. **It then continues to intensify over the next decade and a half, ultimately culminating in over one and a quarter million people each year graduating from Syndrome X to a full fledged Type II, Adult Onset Diabetic. Ref. 9**

From Acne to Hypoglycemia, Diabetes, Cancer, Obesity, Heart Attacks, and Strokes ...

Hypoglycemia - In the beginning those who were fortunate enough to be born with a really strong pancreas will find it producing so much insulin, so fast, in response to all this “simple” carbohydrate in the diet, that it quite literally removes so much glucose from the blood there is not enough left to run the brain.

These people get sudden bouts of weakness, lightheadedness, nervousness, irritability, poor memory,



difficulty concentrating and thinking. All courtesy of a brain that does not have enough fuel to run on.

As soon as they eat, the blood glucose level rises and they feel better. However, if they eat “simple” carbohydrates, they will feel terrific, but only for a short period of time, and then a little later as the insulin from their pancreas floods in, their blood sugar drops and they are in the pits again. This is what is known as hypoglycemia or low blood sugar.



Diabetes - As the years go by and the body ages just a few more years, those who early on were hypoglycemic, will have their cells become less and less willing to take in the glucose.

At first the blood glucose level is still being brought down to normal after meals, but it is taking longer and longer. Eventually this unwillingness of the cells to take up the insulin/glucose combination leads to higher and higher blood glucose levels. Whereas they used to have low blood sugar, now they have high blood sugar. *Why is this happening?* It is because the “simple” carbohydrate foods which make up such a large part of the diet, are also devoid of the important nutrients, the vitamins, minerals and amino acids which are required to transport the glucose into the cell, into and then through the mitochondria. The co-factor minerals of chromium and vanadium as well as lipoic acid, riboflavin and niacinamide are in short supply. Finally, the lack of these nutrients leads to the day when the insulin/glucose complex can no longer muster up the important cofactors that allow it to gain entry into the cell. Now the blood fills with both glucose and the ineffective insulin.

When this occurs, the level of glucose in the blood begins to rise above normal limits for longer and longer periods of time. If this whole process is not stopped and reversed by halting the excess use of “simple” carbohydrates, the individual will become what is known as a Type II or Adult Onset Diabetic. **Always remember, a high “simple” carbohydrate diet is the ONLY cause of this type of diabetes.**

Because of today’s excessive use of “simple” carbohydrates, **Adult Onset Diabetes now makes up over 90% of all diabetics in the advanced nations of the world. Currently there are over 17 million people diagnosed as diabetics in the United States, with over 15 million of these being due to “simple” carbohydrate diet induced Adult Onset Diabetes. It is increasing at an alarming rate that will double the number of people afflicted with this condition every 15 years. It is now the fastest growing disease in America. It is the 7th leading cause of death in the United States, and the statistics are no better in other major advanced nations also pursuing a “simple”**

carbohydrate diet. What used to be an old peoples condition is now afflicting more and more young people, even people in their early twenties. Ref. 13

Cancer - Long before the individual becomes a full diabetic, because of these long hours of high blood glucose, the glucose starts to combine with various protein structures in the blood. Everything from blood cells, platelets and vessel walls to various enzymes. These are now called *glycoslated structures*, and the really unfortunate part of this is that they can no longer function as they should. Ref. 9

Let’s take the red blood cells for example, when they become glycoslated the amount of oxygen they can carry is greatly reduced. This in turn means the cells of the body become deficient in enough oxygen to produce their normal amount of energy. *Why?* Because those mitochondria energy factories I have been referring to must have plenty of oxygen in order to convert all that glucose to ATP.

Once the cell oxygen level drops, acids begin to form in the cell, and because it still needs energy, it starts fermenting these acids in order to create energy. **Nobel Prize winning scientist Dr. Otto Warburg discovered that fermentation of acids for energy instead of respiration of oxygen is the chief characteristic common to ALL cancer cells. Ref. 14**

The loss of oxygen in the cell due to glucose crowding it out, is one of the key reasons that people with chronic high blood sugar have a much higher rate of cancer.

Obesity - When the blood glucose remains higher than the insulin can bring down to normal, the liver steps in and tries to bring the high blood sugar back to normal by converting as much of the glucose as possible into fatty acids.

It then joins three of these together with a glycerol unit into what is called a *triglyceride*. While in the blood, another name for triglyceride is *blood fat*.

We all have cells located throughout our body into which this triglyceride is poured for storage purposes. Once stored, we call these triglycerides “*body fat*”.

As strange as it may seem skinny people and fat people have roughly the same amount of these fat storage cells. The difference is that in skinny people they are flat, like an empty plastic sandwich bag. For those who gain weight easily, what is happening is that as they eat more and more “simple” carbohydrates, the excess glucose which cannot be burned as energy is turned into more and more triglyceride molecules which are then stored in these fat cells. These fat storage cells just keep getting bigger and bigger, literally stuffed with triglyceride molecules.



When you look at the fat which is stored on your body, what you are actually seeing is glucose derived from your diet which was in excess of what your body could use. This excess dietary glucose has been converted to triglyceride and stored as fat.

How dangerous to your health is stored body fat? There are a couple of things which have been learned about this which is important to know. If you are a thin person, and you eat lots of "simple" carbohydrates but don't get fat, it may be that your fat cells just refuse to take up the triglyceride and it is just getting higher and higher in your blood. In this case, **you may be in much more danger of having a heart attack or stroke than the person who is more than 20 pounds above their ideal weight.** *Ref. 15*

It has also been found that where you store that fat has a lot to do with how harmful it is going to be. Estrogenically dominated fat deposits, with most of the fat placed below the waist tends to keep blood triglyceride levels low. Although large fat deposits anywhere increase health risks, it poses less risk of heart attack to that person than someone who has Androgenically dominated fat deposits. This is when most of the fat is placed at and above the waist. The danger here is that these individuals tend to have higher blood triglyceride levels. The more your waist measurement is larger than your hip measurement, the more likely it is that you will have higher blood triglyceride levels.

Scientists have found that consistently elevated blood triglyceride levels is a better indicator of future heart attacks and strokes than is elevated cholesterol. *Ref. 15*

What is important for you to keep in mind, is that both high cholesterol or high triglyceride, as is obesity, is the direct result of a diet that is low in micro-nutrients and high in simple carbohydrates that quickly convert to glucose. Obesity, being more than 20 pounds over your ideal body weight is one of the fastest growing health problems in America. **As with diabetes, obesity is a condition which always has more cancer, heart attacks, strokes, high blood pressure and shorter life span occur, than with normal body weight people.** *Ref. 14*

Heart Attacks and Strokes - There has been a great deal of fuss raised over the danger of high cholesterol in our blood as a cause of heart attacks and strokes. Since most cholesterol is not derived from the diet, but is created in the liver, it would be helpful to know what the liver uses as a raw material. **Surprisingly, it is not the fat in the diet, but it is manufactured from high blood glucose.** The more extra blood glucose, the higher the level of cholesterol, especially the more undesirable form, known as *Low Density Lipoprotein* or LDL cholesterol.

Here is why LDL cholesterol is so bad for you. Its protective protein coating is not dense enough to provide

adequate protection from the damage caused by free radicals in the blood. With holes blown in the protein coat, the interior content of fatty acids of this LDL cholesterol is now exposed to the oxygen of the blood. In this condition LDL cholesterol is quickly oxidized and becomes a free radical itself.

This is very dangerous, and so the macrophages of the immune system try to gobble up as much oxidized LDL cholesterol as they can and get it out of the blood.

It has now been found that the macrophages become swollen with this oxidized LDL cholesterol, they try to leave the blood, exiting through the arterial wall as they normally do. Unfortunately once in a while one will be too swollen with oxidized LDL cholesterol, and they can get stuck there. Then the oxidized LDL, acting as a free radical, damages the arterial wall. This injury creates a hole in the inner lining of the artery.

As the muscle cells just under that lining go through their normal reproductive cycle, some of those muscle cells have been found to protrude up through the hole in that lining. Then fibrinogen responds and starts laying down a mesh of fibers over this protrusion trying to close it off.

Next calcium starts filling in the holes in the mesh and it starts to harden. Finally cholesterol coats the top of this bulge and we now have an arterial plaque. Once started, a plaque tends to grow in size with more and more fiber, calcium and cholesterol added as time goes by. **When these plaques are numerous and large enough, they can cut off the flow of blood to the heart or brain, and this results in a heart attack or stroke.** *Ref. 16*

Now the astonishing thing is this, half of those who die from a heart attack or stroke have normal cholesterol levels. This is because in addition to getting rid of excess glucose by making cholesterol, the liver has another favorite method, it turns it into fatty acids which then become triglycerides, also known as blood fat. At first, the body of most people will try and get rid of this triglyceride by storing it as body fat. As you can tell by looking around, some of these bodies are pretty good at that. However, in time, the body can not store it as fast as it is being produced and the blood triglyceride level rises higher and higher. **There is a grave danger here, because it is now scientifically acknowledged that high blood triglyceride levels are a far more accurate predictor of pending heart attacks and strokes than your cholesterol level.** *Ref. 15*

The Tragic Lesson To Be Learned From The North Canadian Eskimo

Although many studies have been made of various groups of native people living on the Paleolithic diet which changed to the "civilized" diet of modern man, and which

documented dire consequences to their health, in virtually all of these cases, the change was made over a rather long period of time and the direct cause and effect link was not clear enough to offer complete and irrefutable proof of the connection. All of this changed as a result of the Cold War between Russia and the United States.

For tens of thousands of years the Eskimo people that lived in the Arctic region of North Canada had followed the same Hunter-Gather life of their ancestors. Then in the 1950's the Cold War changed all of that. Fearing the Russians would launch a sneak airplane or missile attack on North America, the U.S. and Canadian military created a string of advanced warning radar and air bases across the Arctic Circle in the farthest reaches of North Canada. This meant they needed workers to do this, and so they offered the local Eskimo people jobs, and housing, with the usual benefits of base stores to buy food and obtain the services of doctors and one hospital.

During the first few years everything went just fine. However by the end of the first 15 year a great tragedy had befallen these people. It began with a sudden need for gall bladder surgery for the older Eskimos. This was followed with heart attacks and strokes, then obesity, diabetes and cancer among those of middle age.

The problem got so bad they had to build two more hospitals across the Arctic Circle. One of the most disturbing things was what befell the teenagers. They developed a terrible skin condition. Their entire face broke out all over in red, inflamed, puss filed sores their parents or their grandparents had never experienced. It was Acne!

It was at this point that Dr. Otto Schaefer became interested in what was happening. He knew that the Eskimo people had never had any of these terrible health problems prior to going to work at the military bases. He looked through the records of the one hospital which had served the area for many decades. There was not one single record of any Eskimo having gall bladder surgery, heart attacks, strokes, cancer, diabetes or acne in all the years before they went to live and work at the military bases.

Dr. Schaefer then reviewed the records of the trading posts in the Arctic region going back for many decades. Because the Eskimos did not have jobs, they did not have money, and therefore they made no purchases at the trading posts.

However after the Eskimos went to work and lived at the military bases, they began to purchase the same foods in the base stores as the military personnel did. Dr. Schaefer found that within one decade of time they ate just as much food made with sugar and flour as did the other people of Canada and the United States. He also found that within 15

years of taking up this new diet, the Eskimo people who had never before known gall bladder problems, heart attacks, strokes, diabetes, cancer and acne, were being plagued with these problems at the same rate as were the people in the United States and Canada.

Here at last is the smoking gun, the shocking proof that a diet high in refined carbohydrates, stripped of their vitamins, minerals and fiber, rapidly leads to the very diseases that are the number one killers in our society today. He found that in less than 15 years on such a diet an entire people went from perfect health to all the diseases and deaths they cause, just as in the United States and Canada.

It begins with acne among the teens, progresses to sugar control difficulties, which then lead to gall bladder problems soon to be followed by diabetes, heart attacks, strokes, cancer and obesity. *Ref. 7*

How To Conquer Acne

The enormous number of people with Acne, from teens to adults, has spawned a huge number of drugs and over the counter preparations for the elimination of acne. As people soon discover with their use, none of these preparations have any long term or lasting effectiveness. Worse still, the drugs are accompanied by many undesirable side effects.



Fortunately there are natural steps you can take to eliminate acne and enjoy the beautiful and healthy skin Nature intended you to have. Below, I have outlined those steps, which, if followed, will bring you not only healthy radiant skin, but a long and healthy lifetime free from the diseases which are the scourge of modern society.

1. Take control of your blood sugar levels - NOW!

I would hope by this point you've gotten my message, and this message is not just for having healthy skin, the message I have shared with you about avoiding "simple" carbohydrate foods, is the single most important message I could ever give you about every aspect of your health. Take a look at illustration number 5 and you will see some of the reasons why this is so important.

I realize that giving up all those "simple" carbohydrate goodies in a world gone mad with them is not an easy thing to do, especially for teens. However, Nature has so organized your body that if you want a great complexion free of acne, and great youthful and vibrant health for the rest of your life, you really don't have any other choice.

Eliminating as many “simple” carbohydrate foods and beverages from your life as you can, will pay you enormous benefits for the rest of your life!

Remember - “What you are eating and drinking today, is determining what the state of your health will be ten years from now!”

I didn’t know any of this when I was a teen, and I had terrible Acne. Acne that followed me until I was past 30 years of age. Like so many others I suffered the terrible loss of self esteem this brings. I didn’t know it in those days, but I was one of those with a strong pancreas, and the more glucose rich foods I ate, the more it moved me into hypoglycemia and all the problems of what is now called Syndrome X.

Fortunately, by the time I was 35 I had gained a medical understanding of what was going on, and “simple” carbohydrates pretty much became a thing of the past.

Now I am twice that old, and I have perfectly normal blood sugar, cholesterol, triglycerides and blood pressure. I have no health problems of any kind, and have taken no drugs in all these years. This places me in the upper 4% for people of my age.

Another of the great benefits of adhering to a diet almost totally devoid of “simple” carbohydrates for all these years, is that many people think I look, feel, move and act like a man 10 years younger than my actual age. I tell you this only so that you can realize there are increasing long range health benefits which DO come to you as a result of avoiding those “simple” carbohydrates.

2. Drink plenty of water every day.

Your skin is the largest organ of your body. Moisture in those skin cells is the single most important thing to keep them full, fresh and youthful. The skin is also the organ through which you remove a great amount of cellular waste via your perspiration. In reality, your entire body is mostly water, and it is the water circulating through your body that allows your liver and kidneys to eliminate cellular toxins. By drinking plenty of water, as close to a gallon a day as you can, you can ensure good elimination of the cellular toxins of your body and greatly improve your appearance and your health.

A word of caution here, don’t drink tap or distilled water, drink spring water with all of its minerals, but which is lacking chlorine and fluorine (both are dangerous health destroying free radicals). Keep a CLEAR plastic bottle of this water with you at all times and drink a half a glass of it every hour. The first three days you will think this is going to be impossible because you will have to live in the bathroom. However, by the fourth day your body will have adjusted to your water intake and your trips to the bathroom

will be no more than before you started drinking this much water.

3. Stop irritating your skin.

I know it is tempting to think that anything as tough to get rid of as acne must need tough treatment with harsh soaps and cleansers. I’ve got news for you, this is just not true. Your skin cells are delicate, fragile and sensitive, so treat them kindly. The acne you are trying to eliminate is not coming from the surface of the skin, so you can’t wash it away or kill it with harsh chemical creams.

You can help your skin by applying Miracle Skin Repair Cream which I formulated to provide soothing protection for the skin and which will provide topical nourishment that will help it return to health much faster. However, never forget that acne is coming from the inside of your body as the natural consequence of two things. **One is too many “simple” carbohydrates in your diet, and the second is a lack of adequate nutrition. Once that is corrected, the acne will disappear as if by magic.**

4. Put the nutrients back into your body which it needs to produce healthy skin.

A) Take a Vitamin A supplement every day to give your body the nutritional power it needs to make hormones and healthy skin oil at the same time. Remember healthy skin oil is thin and is not thick and sticky and does not trap bacteria that causes skin infections leading to pimples and blackheads. **Researchers found Vitamin A was low in the blood of those with acne. Ref. 1.**

Dr. P.M. Elias and associates found that when these individuals were given Vitamin A their skin lesions cleared. *Ref. 17.* Dr. H. H. Williams did a study in which he examined the need for Vitamin A in those with acne, and found that the greater their consumption of “simple” carbohydrates along with a low protein intake, the greater was their need for Vitamin A supplements. *Ref. 18.* Dr. M. A. Pallotto and researchers found that giving 50,000 IU of Vitamin A daily, even over long periods of time, did not produce any toxicity. *Ref. 19.*

B) Take a Riboflavin (Vitamin B-2) supplement every day. As I explained earlier, Vitamin A requires an adequate supply of Riboflavin to convert it to its active and non-toxic forms. Ref. 5 So if you take Vitamin A, you must take Riboflavin along with it.

Riboflavin is valuable for more than just making Vitamin A more effective. Several studies have found it to be essential for the overall good health of the skin, and deficiencies soon lead to skin problems. Ref. 6

Riboflavin is the major portion of 2 key co-enzymes in the oxygen respiration cycle of the mitochondria, and

without it all ATP production halts. *Ref. 20* In the skin this results in cell glucose accumulation and food for the growth of bacteria within the skin pores, which in turn leads to pimples and acne. **Evidence shows that in promoting adequate cell respiration it may be the single most important nutrient to prevent cancer from developing.** *Ref. 21*

People always ask me how much of each I would suggest, so here is the guideline I provide: I always suggest Vitamin A to be taken in an amount in IU's that is 100 times greater than that of milligrams of Riboflavin.

For example, 50,000 IU of Vitamin A would need to be balanced by 500 mg. of Riboflavin. This happens to be the amount I normally suggest for the average case of Acne. Those who have really severe cases of Acne I suggest twice that amount each day. Using this combination, along with a sugar and flour free diet, I have seen it work wonders on even the most severe cases. It may take a while to clear the excess glucose from the system, but once that is done, and the food for the bacteria is gone from the skin cells, acne disappears very quickly.

C) I have found that people who eat and drink enough "simple" carbohydrate foods to cause them to suffer from severe acne, always have a deficiency of Niacinamide. Keep in mind that I did NOT say Niacin, this form is contraindicated for glucose metabolic problems. Niacinamide is what you want and you need at least 200 mg. 3 times a day. Taking it 3 times a day is very important because this vitamin does not stick around very long, so you can't just load up once a day and forget it.

Like riboflavin, niacinamide is an absolutely essential nutrient in 2 critical co-enzymes within the energy cycle of the mitochondria. Without enough of it available your mitochondria simply cannot process the glucose into ATP. By supplementing this vital nutrient you can assure your body and its skin of improved cell respiration, reduced risk of cancer, and increased ATP production. *Ref. 22* You will be astonished what this will do for your energy level as it speeds up the conversion of glucose into energy in the mitochondria of the cell. As this happens, the surplus sugar in the skin cells will disappear, and the bacteria in the skin pores will find themselves starving for a lack of food.

D) This next vitamin is beneficial in the improvement of everyone's skin, because without it, the proteins so essential in the daily replacement of skin cells can not be produced. But, it is especially helpful for females. Most women find acne gets a lot worse in the week before their menstrual period. My own experience matches that of researchers who found that when women experiencing this problem supplemented with 50 mg of Pyridoxine (Vitamin B-6) each day, it eliminated this pre-menstrual flare up. *Ref. 23*

E) Vitamin E is a vitamin that I have found works wonders on Acne. There are a number of reasons for this. One is that it protects Vitamin A from being destroyed by oxygen, or allowing it to become toxic. *Ref. 24* Also, researchers have found it is essential in the protection of the enzyme glutathione peroxidase, which in turn is absolutely essential to protect the prostaglandins which are vital in regulating skin health.

When Vitamin E is low, glutathione peroxidase in the skin drops to a low level. This means there is a loss of effective prostaglandin regulation of skin cells that resulted in an increase of acne. *Ref. 25*

F) The final vitamin I suggest is Lipoic Acid. This little known nutrient is absolutely vital in allowing glucose to be metabolized properly. Prior to 1990, very little was known about its role in this area. Since then researchers have found that lipoic acid works with insulin to greatly increase its ability to move glucose out of the blood and into the cell.

Once in the cell, lipoic acid, independent of insulin, moves the glucose into the mitochondria. Once in the mitochondria, lipoic acid joins the other enzymes in the respiratory energy cycle and speeds up their reactions producing more ATP in a shorter amount of time. This one vitamin has been providing wonders to correct the disfunctional energy cycle of glucose seen in hypoglycemia, syndrome X and diabetes. **You can see, that by lowering the glucose content of the skin cells and tissues, this vitamin can do wonders in reducing the available food supply of skin dwelling bacteria.** *Ref. 26* I generally suggest about 200 mg. of lipoic acid three times per day.

Along with the above five vitamins, I have listed below four minerals which are equally essential for the elimination of acne.

G) Zinc is absolutely essential for good skin health. This is especially true during the teen years, because like Vitamin A, Zinc does double duty. It is required for the production of the germ cells of reproduction which are so active during those years. This is especially true for the male which uses a large amount of zinc for the production of sperm cells.

In addition, Zinc is required by the skin cells in order to produce normal protein as new skin cells are produced, quite literally on a daily basis. *Ref. 27* The diets of most Americans at any age is notoriously low in this mineral, and for teens, this lack of Zinc is a recipe for Acne. I have found that 60 mg. of this mineral each day will work wonders. **One study found that it was at least as effective as the antibiotic Tetracycline that is so popular with dermatologists.** *Ref. 28* **Other researchers used either Vitamin A or Zinc supplements alone on acne patients,**

and while they found about a 60% improvement in the acne, when they used them together there was over an 80% improvement. *Ref. 29*

H) The next mineral is vital because it is essential for the production and release of insulin. It is also a major factor in creating more glucose/insulin receptor sites on the surface of the cells so that more glucose can be taken up. It is also vital for the production of proteins and enzymes in every tissue of the body. This includes the proteins and enzymes of skin cells where new cells are constantly being produced. It is also absolutely essential for the proper use of the vitamin Pyridoxine mentioned just above. This mineral is Magnesium, and I generally suggest taking supplements of about 500 mg. of this mineral each day. *Ref. 30*

I) This mineral, is absolutely essential for the effective utilization of Vitamin E which we mentioned just above. This mineral is also essential for two key enzymes which play major roles in the health of the skin. One is glutathione peroxidase which protects the skin from free radical damage, and the other is thioredoxin reductase which recycles Vitamin C. This mineral is Selenium and I generally suggest taking about 400 mcg. per day as selenomethionine. *Ref. 25, 31*

J) The final mineral I consider essential for acne free skin is the mineral Chromium. This mineral is very, very

scarce in the American diet, and the diet of those with acne probably contain NO Chromium. As a result, this mineral, which is a key element to allowing the glucose/insulin complex to get into the cell, is in such short supply that glucose and insulin just builds up in the blood.

Several studies have shown a close association between acne, unstable blood sugar and low blood chromium levels. Dr. M. McCarty discovered that when these patient were given supplements of 400 mcg of chromium twice daily their acne improved rapidly. *Ref. 32* I generally suggest about 1,000 mcg. per day of Chromium in the Picolinate form.

You can easily find all 9 of these nutrients as separate supplements, and while it may be a chore to take them all every day, if you have acne, even serious acne, nothing will do as much to eliminate it as a good diet low in "simple" carbohydrates and these nutrients. Following this regimen will eliminate your Acne. The improvement may seem slow the first week or two, but after that the improvement will become more and more rapid and spectacular.

You may prefer to take all of these nutrients and a few more in a single formula which I have recently created that is designed to meet the special needs of those who are afflicted with Acne. Check with Vitality 1-800-423-8365 for availability. You can also go directly to their web site at:

<http://www.vitality-corp.com>



Dr. Robert Preston...

A NATUROPATHIC PHYSICIAN.

The modern doctor of Naturopathic medicine is trained in the same basic sciences of medicine as any other medical doctor. They study from the same text books, the same courses, the same number of hours and must pass the same basic examinations. However, where the ordinary medical doctor studies drugs to treat disease, *the naturopathic doctor studies natural methods to overcome health problems by building good health.*

The Naturopath specializes in using remedies, as well as diet, vitamins, minerals, amino acids, enzymes and manipulation as a means of normalizing body chemistry.

Dr. Robert Preston attended Arizona State University at Tempe, Los Angeles College of Chiropractic, American College of Natural Healing Sciences and the Arizona College of Naturopathic Medicine. He is a diplomat of the National Board of Naturopathic Examiners and certified by the Idaho State Board of Naturopathic Examiners.

President and Founder of the International Institute of Nutritional Research in 1985, Dr. Preston has dedicated his entire life to the research and scientific study of the ever changing role that nutrition plays in achieving optimum health. Publishing his research, he has helped literally thousands of people all around the world to improve the quality and health of their lives!

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The use of anyone's name in reference to their research, knowledge and experience is not meant to imply their endorsement of anything in this book.

"Committed to Knowledge and Truth"
International Institute of Nutritional Research
18124 Wedge Parkway
PMB #188
Reno, NV. 89511