



International Institute of Nutritional Research

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Ultimate Cell - *ULTIMATE LIFE !*

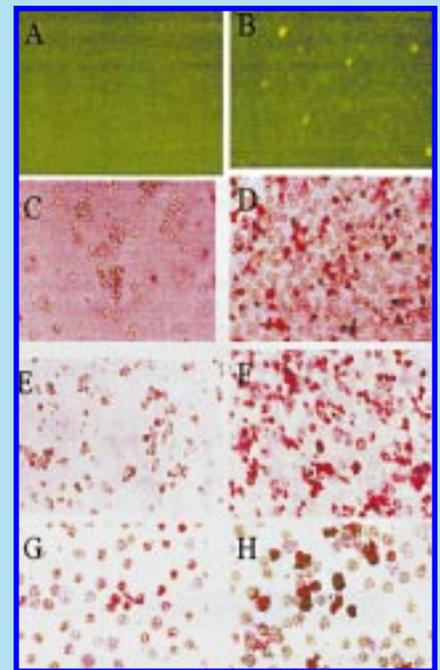
**Science Discovers the Tremendous Benefits
that Many Natural Ingredients Can Provide
for Your Healthy Cells**

*Nutrients that allow your cells to protect and
repair themselves from damage, keeping you
young and healthy while protecting you from
the ravages of so many degenerative
diseases!*

**Ultimate Cells are strong healthy cells capable of fighting off harmful
toxins, pathogens, free radicals and carcinogens. This special report
will share with you important information that you really need to
know about cell damage and many different types of cancer.**

Reprinted by permission from the new book "Ultimate Cells- Ultimate
Life" by Dr. Robert Preston N.D

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Rate of apoptosis or cell death among
cancer cells over a 24 hour period of time.
The photos on the left (A,C,E and G) show
cancer cells with a minimal amount of
apoptosis occurring.

The photos on the right (B,D,F and H) are
cancer cells exposed to the nutrients
found in the Ultimate Cell formula. Notice
the significant increase in the rate of
cancer cell death as compared to the
untreated side. The dots you see are
apoptotic (dying) cancer cells.

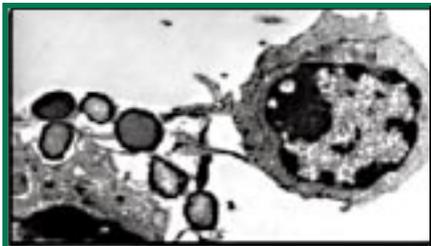
ULTIMATE CELL – NUTRIENTS TO KEEP YOUR CELLS IN ULTIMATE HEALTH !

REPORT TWO

Ultimate Cell is a special combination of nutritional factors, which has been formulated with the specific purpose in mind of keeping each of the cells in your body in perfect health, so that they may in turn keep you in perfect health. In Part One, the foundation was laid through a detailed explanation as to exactly how your cells work to keep you in perfect health and how that is really the key to great health above anything else. Simply stated “*if your cells are not healthy then you will not be healthy.*”



The first report also introduced you to a fermented soy extract, so unique that it is patented. In fact the typical soybean contains many different nutrients deep inside its cells that the soybean plant uses to protect and repair damages that have been done to its cell integrity. These nutrients are locked deep inside the soybean’s individual cells and are just as beneficial to humans as they are to the soybean plant! The only problem is that since humans lack the digestive ability to extract these important nutrients, eating soy based products simply will not provide you with these important cell health benefits.



Microscopic view of a Natural Killer (NK) Cell and killed cancer cell

The good news is that through the development of a unique patented process, we are now able to extract those critically important cell nutrients from the soybeans and thus make them readily available to your cells when you consume the product! In this form, *your cells can take up all that valuable nutrition quickly and efficiently.* You feel it almost immediately in the improvement to your health as your cells thank you by rewarding you with improved energy and health.

This is a powerful nutrient source to help your body achieve perfect health. In studies with animals at the University of Southern California, School of Medicine, it was shown to be so powerful that it allows cells to reverse damage so complete they had turned into cancer, and then revert back to normal and eliminate the cancer.

The focus of this special report is on many important nutrients, especially the Fermented Soy Extract and Resveratrol and how they can be used by your cells to combat all kinds of deadly cancers and related cell damage. After reading these first two reports, you should have a good understanding of what it is that damages your cells, what may cause them to become cancerous and finally how all the powerful nutrients found in Ultimate Cell work together as a team to help your cells combat and reverse cell damage that can lead to all kinds of degenerative diseases including cancer. As you will see at the end of this report, there is a very large amount of scientific evidence and research to back up the many benefits of using a product like Ultimate Cell on a regular basis to allow your body to resist and fight off cancers and cell damage.

Preparing a Good Foundation

In order to fully appreciate what is presented in this Second Report on the Ultimate Cell, you really need to read Report Number One, which is available from the address shown at the end of this report.

In the first report, there were numerous important facts that I shared with you about how important your cell health is if you want to be healthy and live a long and disease free life. The first report focused almost



entirely on understanding what your cells are, how they work and what they are designed to do as well as how they can be damaged or destroyed leading to premature aging, disease and death. I also shared with you the many health benefits of consuming this patented fermented soy extract found exclusively in the Ultimate Cell formula and how your cells can readily utilize the powerful nutrients to repair and protect themselves from disease and death.

To help you grasp and understand everything in this second report, let’s first review some key points that I shared with you in report number one.

√ *"Your entire body is made up of billions and billions of individual units of life called "cells." That's right, each of your cells is a "unit of life"- YOUR LIFE!" Each time one of them dies, a part of you dies."*

√ *"The entire aging process is simply the speed at which you are losing healthy cells faster than they can be replaced. If you should be one who dies from old age, what really happened is that you ran out of living cells. The faster the cell loss, the faster and more visible are the effects of aging."*

√ *"Normally your healthy cells have a limited lifetime. Once your cell has been exhausted or worn out, it is supposed to die (apoptosis) but not before a replacement (called a daughter cell) is made from the instructions contained in the worn out cell's DNA."*

√ *"The DNA of the Mitochondria of your cells controls the generation of ATP, or energy. One of the major reasons why we run out of physical energy as we grow older is because of the damage that has been done to our mitochondrial DNA. When this happens, the damaged cells can no longer produce ATP in a normal manner and you will feel the drop in your energy levels."*

√ *"Damaged cells have a much shorter life span than healthy cells. Damaged cells do not reproduce normal healthy cells, they reproduce more damaged cells, if they reproduce any cells at all. A cancerous cell is in fact a cell that has had its DNA altered and damaged and now it reproduces even more cancerous cells."*

THE CAUSE OF CANCER

After intense scientific study of cancer over the past one hundred years, scientists are in agreement that the largest cause of cancer is exposure of the cell to chemical substances that are toxic to it, and in particular damaging to its DNA. Our cells are exposed to these cancer-causing chemicals (carcinogens) from a very wide range of sources.

One source is the various microorganisms that gain entry into the body (bacteria, viruses, yeast etc.). All can produce chemicals as a result of their own life cycle that are carcinogenic to our own cells. These dangerous chemicals are very destructive to our cells and if they are able to damage our cell's DNA, they can begin the disease process and cancer. They can also cause disease that breaks down our own cells and causes them to release chemicals of our own origin which are now uncontrolled and thus become carcinogenic.

A second source is when our own body fails to function properly, such as a faulty colon, liver or kidneys. As a result,

over time, the body becomes over loaded with chemicals derived from our own metabolic processes, and they become carcinogenic to us because we can no longer neutralize, or eliminate them.

A third source is our modern diet and water supply, with its processed foods, water and beverages that contain cancer-causing chemicals (carcinogens). Thousands of tons of chemicals are added to our beverages, drinking water and processed foods every year. They are in the form of coloring, flavoring, extending, fluffing, purifying agents, and on and on the list goes of what chemicals are used for in our food, water and beverages.

Many of these are known to cause cancer when we are exposed to them in large amounts. The argument in support of their use is that the amount in each food or beverage serving is too small to be carcinogenic. **However, when combined with a compromised colon, liver or kidneys, or various disease states, these small amounts accumulate in the body to become amounts large enough to damage the cell and its DNA, thus causing cancer.** Especially in those families where there are weak and defective genes.

A fourth source is from a name you have read and heard a lot about in recent years. The "**free radical**" which is a partial molecule that contains a "free" negative electrical charge. The word "free" simply means that electrical charge is "free to go". Thus when a free radically charged molecule comes in contact with an important biochemical or structure in your body, it can release that electrical charge and cause damage or alter the chemical structure of the cell in an unfavorable way. This is a major cause of cancer.

Most of the free radicals, which you must face, are actually manufactured in your body as a result of natural and normal metabolic processes. Fortunately, your body generally

Cancer Facts: *"The death rate for cancer is soaring!"*

*U.S. Death Rate From Cancers

1900 64.0 people per 100,000

1920 83.4 people per 100,000

1940 120.3 people per 100,000

1960 149.2 people per 100,000

1980 183.9 people per 100,000

1990 203.2 people per 100,000

In 1996 cancer was the third leading cause of death claiming over 544,278 victims.

**source- US Almanac 1998*

has enough natural enzymes and nutrients to totally neutralize them. However, a diet rich in processed food and beverages harms you in two ways. One, it introduces more free radicals than your body is equipped to handle. Two, it lacks the nutrients that would allow your body to create its natural defenses against free radicals. Thus in today's modern world of processed food, water and beverages, excess and uncontrolled free radicals have become a major cause of cancer. Ultimate Cell is a powerful combination of natural nutrients that gives your cells the ability to fight off the damages of these carcinogens and to repair damage that may have already been done.

Your Body is Designed to Beat Cancer !

Specialists in the study of cancer tell us that we have all had abnormal cells reproducing in our body thousands of times. In a sense we have all had a form of cancer in our bodies many times. This has been going on ever since we were born. Yet we did not develop a cancer large enough to be detectable or cause a problem.

The reason why is because we have a very powerful immune system with numerous weapons at its disposal that are far more powerful than any drug. Our immune system can detect with great accuracy virtually anything that does not belong in our body and begin a campaign to eliminate it. This includes abnormal cells that begin reproducing wildly as cancer cells. Your immune system has been identifying and destroying abnormal and cancerous cells since you were born and most of the time it accomplishes this and you never knew it was taking place. Your immune system is truly amazing. Giving it the nutrients it needs makes a lot of sense to keep it in top shape and ready for any abnormal cells and infections that may come along.

A Complex Body Needs Complex Nutrition

Your body is very complex. In order for you to enjoy great health, there are many thousands of processes and functions that your body has to complete each and every day. Like a series of dominos stacked in a row, each process requires a successful completion of the prior process. Looking at your health from a standpoint of supporting your entire system is the only true way to build long lasting great health.

Your body also uses countless nutrients and biochemicals it needs to complete these important life giving processes. Many of these biochemicals your body manufactures from various nutrients, and others have to come from your diet completely.

When these beneficial nutrients are missing, your body can not perform as designed and eventually you feel it in your quality of health where you may experience premature aging and a shortened life span or even more serious diseases like cancer or heart disease.

While unique nutrients like the fermented soy extract found in Ultimate Cell have a wide range of health benefits, adding other important nutrients with them increases the benefits many times over. Even though some of these nutrients are certainly more exciting than others, it is very important to remember that without all of the supporting nutrients, you simply will not get anywhere near as good results.

Ultimate Cell is the "Ultimate" combination of powerful nutrients that science has proven effective. We will review each of these important nutrients and what it can do for you and what contribution it can make towards building your great health!

Natural Ingredients with Big Benefits

Ultimate Cell is loaded with many different nutritional ingredients that are all designed to work in harmony and support all the systems of your body.

Fermented Soy Extract - the wonder of this ingredient is that it contains all the important nutrients extracted from the cells of the soybean which can be utilized by your cells to protect and repair themselves from damage. The wonders of the fermented soy are enormous and the first report was written focusing entirely on its benefits to the consumer.

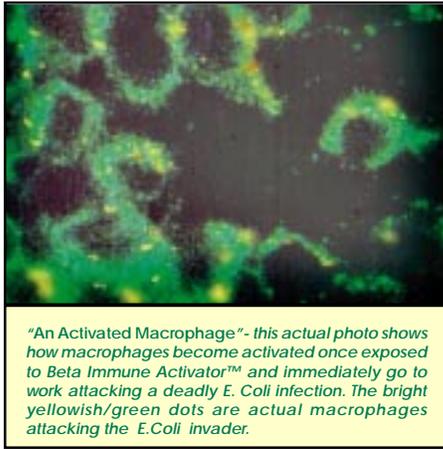
Calcium Magnesium Phytate- Calcium Magnesium Phytate can be used by your body to increase its own NK (*Natural Killer*) Cell activity. NK cells are powerful immune system weapons that are very capable of attacking and destroying abnormal and cancerous cells.

SAME- An all natural ingredient that is used by your body for many important health benefits including, pain relieving, anti-inflammatory, protecting your liver from toxin damage.

SAME is also a very important nutrient needed by your body to manufacture glutathione, which is an important part of your body's natural free radical defense tools. SAME can play a major role in helping your body to control many of the cellular degenerative diseases associated with illness and aging including cancer.

Beta Immune Activator™ - Activated macrophages (*a special type of white blood cell*) are extremely important to your good health. Activated macrophages are much better able to recognize harmful invading organisms whether they be bacterial, viral, pathogens or abnormal / cancerous cells.

Activated macrophages can spot the invaders much faster and will attack and destroy them quickly before they destroy you. Activated macrophages are also able to communicate with your immune system to call out even more powerful immune system chemicals and weapons if they determine that the problem is too big for them to handle.



Beta Immune Activator™ is the best form of Beta Glucan on the market. Using the product regularly will help empower your immune system to beat whatever may be challenging it.

Supporting the Critically Important Liver Function

When your immune system detects and destroys an abnormal cell, bacterial or viral invader, toxins or pathogens, it leaves behind a toxic debris that must be eliminated by your liver. Killing cancer cells is important. Making sure that your liver is able to remove the toxins and debris left over is critically important.

Any time your liver is overwhelmed with toxins, you will feel terrible until the toxins can be eliminated. You may feel extremely tired, or even have serious flu like symptoms all due to an overwhelmed liver and too many toxins inside of you.

Ultimate Cell has many liver support nutrients in the formula including *Green Tea Extract, Alpha Lipoic Acid, N-Acetyl Cysteine, Milk Thistle extract, Grape Seed Extract, Glutathione, Artichoke Extract, Vitamin C, Vitamin B-12, Vitamin E and Selenium*. All of these nutrients are designed to support and protect your healthy liver function while it gets on with the job of removing the dangerous toxins in your system.

RESVERATROL

In this report you are being introduced to another very powerful and newly discovered natural substance that has so impressed the scientific community world wide with its enormous wide ranging health benefits to mankind, that literally hundreds of scientific studies have been done on it within just the past five years. You will be introduced to the amazing results of some of these studies. This nutritional substance is called "Resveratrol" and is pronounced *rez-vera-trawl*. Indications are, that this substance may turn out to be one of the single most important beneficial discoveries in the field of nutritional science in the past 100 years.

PHYTO-ALEXIN

The first part of the above word is "phyto" and it means something that comes from a living plant. The second part of the word is "alexin" which is a word from medical science that means, "to ward off". Resveratrol is a substance derived from living plants, which have developed this substance to "ward off" the negative effects of injury, disease and the harmful effects of stress of any kind.

The truly amazing thing about Resveratrol is that it is able to provide this same kind of protective and recovery benefit to the health of human beings as well as to plants.

It is probably the single most important nutrient factor ever found, with regard to having a healthy cardiovascular system. It has now been established by scientific medical research to be the answer to what has come to be known as the "French Paradox". How can the French eat a diet so rich in fat, completely contrary to the teaching of American medical authorities, and still have virtually no cardiovascular disease, while those who follow the advice of the American medical community and avoid fat, still have a major problem with cardiovascular disease? The answer to the riddle it has turned out, is that the French consume red grape wine and juice on a regular basis. As a result, they are obtaining a significant protective dose of Resveratrol found naturally in the skin of the grapes from which wine and juice are made. The details of exactly how and what Resveratrol does to protect from and reverse cardiovascular disease is the subject of the next Ultimate Cell Report.

In THIS report the amazing power of Resveratrol to overcome and prevent cancer is fully explained, detailed and documented.

"Resveratrol is a substance derived from living plants, which have developed this substance to "ward off" the negative effects of injury, disease and the harmful effects of stress of any kind."

Resveratrol To The Rescue

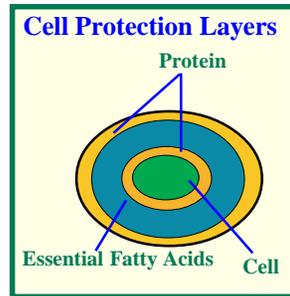
Now for the good news! Medical scientists and cancer specialists in every advanced nation in the world are so impressed with the power of Resveratrol to prevent and reverse cancer they are studying it at a record breaking speed. It is the most promising substance ever discovered to prevent and reverse cancer.

As you read this report detailing some of the findings of these scientists, you will soon see why they are so excited, and you will become as excited as they are when you realize what Resveratrol may be able to do for you and those you love.

Protection For the Cell Membrane

Our body is composed of cells, each of which is surrounded by a protective wall. That wall has a very thin outer layer of protein, next a thicker middle layer composed of essential fatty acids, and finally a very thin inner layer of protein.

This wall is designed to keep everything that belongs inside the cell, in there. And, to let in only the things the cell needs and wants. Which of course, means keeping out the things you do not want inside the cell. Such as chemicals, which can interfere with, and destroy the inner workings of the cell. This of course includes toxic chemicals, which can cause cancer.



Scientists working at the University of Murcia in Spain have thoroughly studied the cell membrane and how it is affected by Resveratrol. They found that **“Resveratrol is able to incorporate itself into the membrane”**. There the Resveratrol was able to preserve the integrity of the membrane and prevent the breakdown of the fatty acids, which composed the inner wall, even at the higher temperatures of inflammation.

Even when the scientists raised the temperature so high the cell wall broke down and released its phosphatidyl choline and serine content, which activates an enzyme known as *Protein Kinase C alpha*, the presence of **“Resveratrol inhibited Protein Kinase C alpha”** from moving in and altering cell structures, including the all important DNA. **Alteration of the DNA is what opens the door to cancer. (1)**

“Resveratrol inhibited Protein Kinase C alpha” from moving in and altering cell structures, including the all important DNA.

Resveratrol Helps Nerve Cells Mature

The true purpose of the kinase enzymes is to transfer energy in an orderly and step wise fashion for the conversion of new cells called “blast” or primitive cells, to mature into specific differentiated cells.

Today we hear a lot about “stem” cells, which are these same primitive or blast cells, and which can then grow into a wide variety of mature and highly distinct cells.

Scientists have been investigating Resveratrol for several years at the University of Milano in Milan, Italy and are in the forefront of this research. One of the things which was of great interest to them was to find out what effect Resveratrol would have on “mitogens.”

These are substances that trigger or speed up the conversion of a primitive cell and its DNA into that of a mature and specific type of cell. One of the most important ways mitogens bring this about is by triggering the activity of the Protein Kinase enzymes. If these enzymes are not properly phosphorylated, they can create cancer cells.

When primitive human nerve “blast” cells were exposed to a mitogen in the presence of Resveratrol, the Resveratrol speeded up the addition of phosphorus to the Protein Kinase enzymes ERK1 and ERK2, which in turn increased the rate of maturation of neuroblast cells into normal mature cells. **From this it was concluded that Resveratrol was protective of nerve cells, and would inhibit their conversion to cancer cells. (2)**

“Not only did resveratrol inhibit the Protein Kinase C directly, but it also had a powerful inhibiting effect upon the substrate (the substance the enzyme acted upon) and thus, resveratrol had a two way preventative action, the sum of which was greater than either of the single actions alone. ”

Resveratrol Inhibits Protein Kinase C Substrates

It has been shown that Resveratrol inhibits cancer in all three stages of its existence, from initiation, to progression on through promotion. One of the key enzymes that are present in cancer cells that allow them to grow so fast, is the enzyme *Protein Kinase C*.

This enzyme robs energy from various cell structures and transfers it to the cancerous cell’s DNA in order for it to grow and spread faster. **Scientists in various laboratories have already shown that Resveratrol inhibits this action in all three stages of cancer growth.**

At the University of Texas, M. D. Anderson Cancer Center, doctors already knew Resveratrol could weakly inhibit Protein Kinase C in the laboratory, but its power to inhibit it in all three stages of living cancer cells was much, much greater than that of its effect on the pure enzyme in the laboratory, and they needed to know why.

After a great deal of work, the doctors had their answer. Not only did Resveratrol inhibit the Protein Kinase C directly, but it also had a powerful inhibiting effect upon the substrate (the substance the enzyme acted upon) and thus, Resveratrol had a two way preventative action, the sum of which was greater than either of the single actions alone. The doctors concluded **“Our results indicate that Resveratrol has a broad range of inhibitory potencies...” (3.)**

Resveratrol Protects Against Cancer Causing Chemicals

Scientists at the U.S. Government's National Cancer Institute have found that Reseveratrol has the ability to prevent the creation of tumors in mice after they have been exposed to cancer causing chemicals. To find out how this was accomplished they took a special strain of human liver cells known as HepG2, which are highly prone to developing cancer, and exposed them to a very powerful cancer-causing agent. That agent was *Aryl Hydrocarbon*. It is the stuff on burned and charred meat you keep reading in the newspaper that you must not eat because it causes cancer.

What the scientists found was that there are special receptor molecules in liver cells, which are very reactive when they come in contact with this aryl hydrocarbon. Once the HepG2 liver cells are exposed to Aryl Hydrocarbon, they generate a cell chemical called CYP1A1, which in turn causes a breakdown of cell structures releasing Cytochrome P450, a chemical that ultimately causes the cell to become cancerous.

However, when the aryl hydrocarbon docked with its cell receptor in the presence of Resveratrol, **the receptor was unable to trigger the transcription of CYP1A1 and this meant the Cytochrome P450 was not released, and the cell did not become cancerous. (4)**

In a related study with the same aryl hydrocarbon the government scientists reported that, "Resveratrol competitively inhibited, in a concentration-dependent manner (meaning, the more the better) the activity of the carcinogen activating enzymes ... in intact HepG2 cells." **In non-scientific language they said the Resveratrol prevented the chemical from causing cancer in liver cells.** They even found that, "**Resveratrol abolished the binding of B(a)P-activated aryl hydrocarbon receptor ...**". B(a)P is one of the most powerful carcinogenic substances known, and here we see that Resveratrol completely "**abolished**" the binding site that would have made the cancer causing CYP1A1 possible. (5)

"Resveratrol promoted the conversion of these cells to normal by promoting a conversion of the cell's abnormal DNA back to normal."

Resveratrol Prevents Liver Cancer

When liver cells break down they release tiny bubble like containers called *microsomes*, which contain a pigmented compound known as *Cytochrome P450*.

As noted earlier, this is a very powerful cancer-causing chemical when released in the cell.

Researchers at the Chungang University, School of Pharmacy in Seoul, Korea, exposed human liver microsomes

The 3 Stages of Cancer Development

Contrary to popular opinion, cancer is not a disease that just suddenly develops. In fact by the time a cancer has become detectable, many times it actually started developing 10 to 15 years prior. Cancer follows the 3 stages of development.

Stage 1- Initiation

This is where a harmful carcinogen, toxin or free radical has been able to damage the cell's DNA and begin the abnormal reproduction cycle.

If the damage can not be repaired, then it becomes the responsibility of your immune system to recognize these damaged cells and destroy them before they can progress. This process is one that everybody goes through many times a year.

Stage 2- Progression

This is when the abnormal cells are starting to overwhelm your immune system as these cells are being nourished and fed.

Stage 3- Promotion

This is when the number of cancerous cells are huge and expanding rapidly while impairing the function of the body. Many times this is when the cancer is actually discovered.

containing Cytochrome P450 1A1 to a potent cancer causing chemical and to Resveratrol at the same time. They found that, "Interestingly, Resveratrol exhibited potent inhibition of human P450 1A1 in a dose-dependent manner ... **These results suggest that Resveratrol ... may be considered for use as a strong cancer chemopreventative agent in humans**". (6)

Resveratrol Halts DNA Changes Leading To Mouth Cancer

Dentists are generally the first doctors to diagnose cancer of the tissues of the mouth. This type of cancer is known as "*squamous cell carcinoma*" and is one of the fastest growing cancers known.

At the University of Missouri-Kansas, School of Dentistry, they were anxious to discover something that would prevent and halt the growth of cancer of the mouth. Learning that Resveratrol was showing great promise as a protective and recovery agent for cancer, the scientists did a research project in which they exposed cancerous squamous cells (cell line SCC-25) from the mouth to Resveratrol.

They were amazed to discover that **Resveratrol promoted the conversion of these cells to normal by promoting a conversion of the cell's abnormal DNA back to normal. (7)**

Resveratrol Inhibits Abnormal DNA In Leukemia Cells

Scientists at the College of Pharmacy of Seoul University in Korea, took human promyelocytic leukemia (HL-60) cells and exposed them to Resveratrol. They found the Resveratrol

- Inhibited the rate of growth,
- Inhibited the ability to reproduce,
- Increased the rate at which these cells would go into apoptotic cell death, which is generally found only in normal cells. **They also found that in the presence of Resveratrol these leukemia cells had their ability to create abnormal DNA greatly reduced.** They concluded, **“These results, together with previous findings, suggest the cancer therapeutic as well as chemopreventative potential of Resveratrol.”** (8)

Resveratrol Promotes Leukemia Cell Apoptosis (Cell Death)

Noting that many scientists around the world were reporting that Resveratrol promoted cell death in cancer cells of many types, scientists at the National University of Singapore, China, decided to see if Resveratrol would also promote apoptotic cell death in leukemia cells.

Using the human leukemia HL-60 cell line, they treated these cells with Resveratrol. They found that indeed the Resveratrol did induce apoptotic cell death in the leukemia cells in a dose dependent manner. **In other words, the more Resveratrol, the more leukemia cells there were that died.**

Furthermore they were able to determine that it did this by stimulating two very recently understood and sophisticated cell mechanisms, *PARP* and *Caspases*, to bring this about.

They also demonstrated that Resveratrol enhanced the expression of the CD95 receptors on leukemia cells, and their death was dependent upon its activation. They were also able to demonstrate that **normal white and red blood cells, when exposed to Resveratrol did not express the CD 95 receptor and did not undergo cell death or any other form of toxicity.** (9)

Resveratrol Promotes Tumor Death Through Apoptosis

Researchers at the University of Minnesota, noting the ability of Resveratrol to cause the destruction of tumors, sought to establish the manner in which it did this. They found that when tumor cells were exposed to Resveratrol, it did two different things at the same dose and within the same cell line.

They discovered that the tumorous cells had what was called a “wild-type 53” tumor suppression gene that was activated by the presence of Resveratrol forcing the tumorous cells into apoptosis or death.



They noted that once exposed to Resveratrol, the normal ability of the tumor cells to develop into cancerous cells was dramatically reduced and just as importantly, the normal and healthy cells did not experience any reduction in their cell life indicating that Resveratrol was capable of inducing cell apoptosis or death in tumorous cells, yet it had no adverse effects on normal healthy cells. **There was also no apoptotic effect upon normal cells.** (10)

Resveratrol Offsets Effects Of Estrogen

Due to the biochemical molecular structure of Resveratrol, some scientists wondered if Resveratrol would activate certain estrogen receptor sites in growing female animals.

Researchers at the Mayo Graduate School of Medicine took young female laboratory rats and stimulated them with doses of estrogen each day. This resulted in suppressed overall growth, except in the uterus, which gained in weight, cell structure changed, and an increase in messenger RNA for insulin-like growth factor 1 occurred.

There were no effects on the growth of any tissues as a result of being given Resveratrol each day. When Resveratrol was given to the same rats receiving the estrogen, there was actually some reduction in the effects of the estrogen administration. **Thus demonstrating that Resveratrol has no estrogenic effects and to the contrary appears to have a mild antagonistic and protective effect on externally administered estrogen.** (11)

Fascinating Fact #1

*As your cells wear out, they are replaced with new ones **at the rate of over ten million times a minute throughout your life!***

Resveratrol Prevents Uncontrolled Cell Proliferation

One of the major and most fearful problems with cancer, is the rapid and uncontrolled growth of its cells. At the New York Medical College, researchers used Resveratrol to treat arterial cells from the lungs.

These cells are easily induced to become abnormal, multiplying rapidly and creating plaques and obstructions of

blood flow, or turning cancerous. **When treated with Resveratrol there was a marked reduction in the development of abnormal cells.**

Careful examination of the development of these treated cells from the “blast” or primitive stage to maturity, showed that Resveratrol caused those cells, which would have progressed on to become abnormal, to express the tumor suppressor gene protein p53 and thus induced apoptosis (cell death). **This action by Resveratrol was considered to be in keeping with its observed ability to suppress tumor growth. (12)**

Resveratrol- A Potent Inhibitor Of Cox-2 The Cancer Generator

If you have been watching TV since the year 2000 you have surely seen the drug advertisements for Cox-2 inhibitors to relieve pain and inflammation, generally as associated with arthritis.



Obviously if there is a Cox-2, there must also be a Cox-1, and there is, and virtually all pain relievers from aspirin on up, inhibit both the Cox-1 and the Cox-2.

The problem is, generally the Cox-1 is the good guy, and so you don't really want to inhibit him. That is why aspirin and other Non Steroid Anti-Inflammatory Drugs cause stomach ulcers and kidney damage, because they inhibit the protective benefits of the Cox-1 as well as inhibit the pain and inflammation caused by Cox-2.

What you probably did not know, is that the Cox-2 promoted bio-chemicals also play a major role in creating tissue irritation and inflammation that can lead to cancer development. In fact, scientists are finding it is a major factor in the development of cancer. Naturally scientists want a Cox-2 inhibitor that will reduce the chance of developing cancer, but will not suppress the beneficial effects of Cox-1 at the same time.

Another one of the wonderful benefits of Resveratrol is that while it is a potent inhibitor of Cox-2 the bad guy, it is not of Cox-1 the good guy.

A large number of scientists at the University of Illinois joined forces in a giant effort to find out just how Resveratrol did some of the amazing things it does in preventing and reversing cancer. One of their most important findings was that Resveratrol significantly inhibited the cyclo-oxygen-ase (Cox) pathway 2. **Thus the use of Resveratrol greatly reduces the amount of highly inflammatory chemicals, and this in turn reduces the incidence of cancer, and its growth. (13)**

This result was independently verified at the Department of Medicine at the New York Presbyterian Hospital. Using human mammary and oral epithelial cells they bathed them in a

phorbol ester (PMA), which promoted the release of the Cox-2 chemicals of inflammation. **They also added Resveratrol to identical cells which had also been bathed with the PMA, and discovered that the amount of Cox-2 chemicals was greatly reduced.**

The Resveratrol also inhibited the activation of *protein kinase C* as well as blocked the activation of *AP-1*. A lot of technical jargon just to tell you that **Resveratrol significantly reduced all the chemicals, which would normally induce cancer in cells exposed to a carcinogenic substance. (14)** This same exact study was repeated with identical results at the Memorial Sloan-Kettering Cancer Center in New York. (15)

Resveratrol -A Potent Anti-Inflammatory

Using a standard laboratory test for the ability of a substance to reduce inflammation, laboratory rats received an injection of carrageenan in their foot. This substance caused rapid edema (swelling) of the foot.

Different rats were given different substances to make a comparison to see which one is the most effective at relieving the inflammation. They did this test at the College of Pharmacy at the University of Illinois at Chicago where they compared Resveratrol to the two best drugs for this purpose, *phenylbutazone* and *indomethacin*. **Resveratrol was far better at relieving the inflammation than phenylbutazone and comparable to that of the prescription drug indomethacin. (16)**

Resveratrol Found To Inhibit All Three Phases Of Cancer

Virtually every drug or substance found to affect cancer works in only one of the three different phases of cancer, **Resveratrol was found to be effective in all three phases, 1.) Initiation, 2.) Progression 3.) Promotion.**

Stage 1- Initiation

Human promyelocytic leukemia cells HL-60 were exposed to *TPA* the extremely potent free radical chemical known to initiate cancer, **yet in the presence of Resveratrol in a dose dependent manner, this effect was significantly inhibited. (17)**

The *salmonella typhimurim strain TM677* known for its ease of mutation, was treated with the powerful mutagen and carcinogen *DMBA*, **yet in the presence of Resveratrol the mutagenic effect was inhibited. (18)**

Resveratrol, when added to cultured mouse liver cells (*Hepa 1c1c7 strain*) induced the release of the *Phase II enzyme quinone reductase*, **which is widely known for its ability to metabolically detoxify carcinogens. (19)**

This experiment was repeated using cultured mouse liver cells of the *BPCI* cell line. These cells do not produce the Phase

If enzymes only the Phase I, and yet the identical results were obtained, **indicating Resveratrol does not rely solely upon the Phase II mechanism as an inducer of metabolic detoxification of carcinogens. (20)**

Stage 2- Progression

When the human leukemia cell line H-60 is cultured, it undergoes reproduction at an unlimited rate as immature non-differentiated cells. **Yet when these cells were cultured in the presence of Resveratrol, they differentiated into granulocytes and macrophages. There was also a marked reduction of thymidine uptake, which signals when the terminal stage of mature nonproliferation is reached. (16)**

Stage 3- Promotion

In this experiment the backs of mice were painted with the cancer initiating chemical *DMBA*, and then followed up with *TPA* twice weekly as a cancer cell promoter. During an 8 week period, the mice developed an average of 2 tumors each.

Another group of mice were treated identically except that they also received Resveratrol at the same time they were treated with the *TPA*, twice weekly for the 18 week period. In a dose dependent manner, the **Resveratrol reduced the incidence of tumors by as much as 98% and the number of mice with tumors was lowered by as much as 88%. (16)**

We see from all of the above research at the University of Illinois, Chicago School of Medicine and Pharmacy that Resveratrol was effective at inhibiting cancer growth at all three stages of its development, from initiation, to progression to promotion.

There is simply no other natural substance or synthetic drug, which can provide this wide a range of prevention and therapeutic action against cancer. Not only is Resveratrol such a powerful anti-cancer agent, it is totally without any toxic or harmful effects to healthy and normal cells and tissues.

Resveratrol Promotes Immune Cell Destruction Of *Candida Albicans*

A major health problem in advanced nations where antibiotic therapy has been heavily used is the subsequent infection by the fungi yeast *Candida Albicans*.

Overgrowth of this yeast in the intestinal tract is the cause of many health problems ranging from allergies, to chronic fatigue to cancer. At the University of Milano in Milan, Italy they created a robust culture of *Candida albicans* cells, which they then exposed to human promonocytic cells (U937 cell line) and observed the reactions. Then they exposed this mixture to Resveratrol. Within a short time there was a dramatic increase in the amount of whole *Candida* cells which were consumed by the white blood cells, reaching its peak after 20 hours.

The consumption of *Candida* yeast cells as a whole cell by the white blood cells is very important, because this prevents the yeast cell wall, and cell interior from emptying their contents into the blood and tissues spaces which triggers Cox-2 inflammatory responses leading to the generation of cancer. In addition the presence of the Resveratrol also stimulated apoptotic cell death in the yeast cells and dramatically reduced their rate of reproduction. (21)

Bone Stem Cells Protected By Resveratrol

Bone cancer is one of the most dreaded forms of the disease because it is virtually incurable. Naturally scientists want to find a way to overcome this problem.

At the Institute of Clinical Oncology in Austria, scientists took human bone stem cells known as *osteoblasts* (AHTO-7 cell line) and exposed these cells to a cancer cell supernatant (the fluid which rises to the top of a group of cancer cells).

This liquid contains substances known to cause immature cells to turn cancerous at a high rate. When this combination had Resveratrol added, the number and rate of bone stem cells, which reproduced abnormally, was lowered in a dose-dependent manner by as much as a 71% reduction. **Resveratrol exhibited the highest rate of preventing these cells from converting to cancer cells when they were exposed to supernatants from the cancer cells of the breast, lung, kidney, and pancreas. (22)**

Breast Cancer Development Inhibited By Resveratrol

A major problem and fear among women in advanced nations of the world is the development of breast cancer. Many methods of dealing with the problem have been developed, none of which are satisfactory, thus much research continues to be directed toward finding a satisfactory solution.



At the University of Maryland School of Pharmacy, researchers looked at the effect of Resveratrol as a preventive measure. They took human breast cells (MCF-7 cell line) and cultured them in the presence of estrogen, which is known to stimulate the initiation and growth of breast cancer.

They then added Resveratrol to this culture. They found that in a dose-dependent manner the Resveratrol significantly inhibited the activity of the breast cell's Estrogen Receptors, preventing its uptake to reach carcinogenic levels. **Resveratrol also antagonized (blocked) estrogen's ability to activate breast cancer genes or to promote abnormal cell growth. (23)**

In a separate study done at the School of Pharmacy in Limoges, France scientists took human breast cells (MCF-7 cell line) and exposed these cells to high levels of estradiol, which is known to stimulate cancer in breast cells. They also added Resveratrol and found that in a dose-dependent manner it would substantially **reduce the growth rate of breast cells, which had been initiated by the administration of high levels of estradiol.** (24)

Another study using the human breast cell line *MCF-7* as well as the highly invasive cell line *MDA-MB-435* was performed at the New York Medical College.

This study concerned itself with the frightening aspect of the invasive and rapid growth and metastasis habits of breast cancer. The researchers were pleased to discover that when Resveratrol was added to the culture of the MCF-7 cell line it inhibited its rate of growth and its invasiveness. However, they were truly shocked to find that Resveratrol was even more inhibitory to the very aggressive and invasive MDA- MB-435 cell line.

Additional research with MDA-MB-435 cells that had abnormal genes (nm23-H1 and nm23-H2), which are responsible for increased invasiveness, demonstrated that **Resveratrol, in a dose-dependent manner, was able to substantially reduce their ability to be expressed. With cancer cell growth rates, suppressed as much as 80%.** (25)

Resveratrol Blocks Expression of Cancer Genes

At the Lineberger Comprehensive Cancer Center, University of North Carolina, they wanted to know if there was some way to block the expression of cancer genes for those people who are genetically predisposed to developing cancer.

Such cancer genes require the use of a transcription factor to take their message into the cell and translate it into action, altering the cell structure in favor of the cancer cell. Without the use of this transcription factor, the cancer gene is powerless to express itself.

The essential transcription factor making this possible is known as *Nuclear Factor Kinase B (NF-kB)*. Using isolated Nf-kB they exposed it to Resveratrol, which promptly blocked its ability to initiate I-kB enzyme activity, without which nothing happens. The researchers concluded, **“Resveratrol is likely to function by inhibiting inflammatory and oncogenic diseases, at least in part, through the inhibition of NF-kB activation by blocking I-kB kinase activity. ... These data may also ...provide a molecular rationale for the role of a potent chemopreventive compound in blocking the initiation of inflammation and oncogenesis.”** (26)

Free Radical Kidney Damage Eliminated By Resveratrol

Free radical damage to the DNA of the cell is a well-known mechanism by which cancer is triggered in cells.

In Madrid, Spain at Complutense University, scientists exposed the kidneys of laboratory rats to a kidney specific cancer causing substance known as *potassium bromate* (KBrO₃) a substance that causes enormous free radical damage to the renal glands.

After 6 hours it was found there was a 100% increase in DNA damage to the kidneys. The scientists report, “This increase was completely abolished by treatment with Resveratrol.” This is incredibly good news, especially for those with sugar diabetes, or those who take chronic doses of pain medication or others prone to developing kidney failure or cancer. And for those of us who love our pet dog that is getting old. **Resveratrol provided better protection to the kidneys than any other substance ever tested.** (27)

Ultimate Cell provides ultimate protection because it has the highest amount of natural Resveratrol of any supplement!

Nerve Tissue Protected By Resveratrol

One of the problems of aging is the loss of function to brain and nerve tissue by ongoing exposure to free radicals and neurotoxic drugs and chemicals in the blood.

The damage caused by these things is impaired brain and neurological function as we age. Such conditions as *severe memory loss, senile dementia, Alzheimer's disease, and Parkinson's disease* are examples of some of the more common and well-known conditions, however new evidence is indicating that *schizophrenia* and *severe depression* may also result from exposure to free radicals and toxic substances.

At the University of Bologna, in Bologna, Italy scientists took young rats and gave them systemic injections of *kainic acid* an excitatory drug to the nervous system and which caused damage to the hippocampus area of the brain.

To a second group of identical young rats receiving the kainic acid, they also chronically administered Resveratrol. **Upon examination of the brain tissue of the Resveratrol treated rats it was observed that there was “significant protection from the damage caused by the injection of the excitotoxin kainic acid.”** (28)

Prostate Gland Protected By Resveratrol



Just as women of the industrialized nations are concerned by the high rate of breast cancer, men in these same nations are concerned by the high rate of prostate cancer.

Researchers are thus anxious to find means to protect the prostate gland from the development of cancer. At the Mayo Graduate School of Medicine, doctors conducted research using the *LNCaP* prostatic cancer cell line.

They exposed these cells to the different androgen (male) hormones in order to determine their uptake of these hormones as triggers for their cancer growth. They then exposed these same cells to Resveratrol at the same time they were exposed to the different androgen hormones. They found that Resveratrol blocked the Androgen Receptors (AR) on the cell surface and prevented the uptake of excess androgens, and thus substantially reduced their effect on the prostate cell and inhibited their growth. The doctors at Mayo concluded, **“This study suggests that Resveratrol may be a useful chemoprotective/chemotherapeutic agent for prostate cancer.”** (29)

Prostate Specific Antigen (PSA) Is Lowered By Resveratrol

In our modern world, nearly all older men have had their blood tested to determine what their PSA level is in order to determine the degree of abnormality in the cells of their prostate gland. When that level gets too high, it is often an indication of prostate cancer.

Using the prostate cancer cell line LNCaP, doctors at the New York Medical College measured their release of PSA over a four day period to determine a base line. Then for the next four days they fed them Resveratrol and then measured their PSA. **They found that the Resveratrol had lowered their PSA by 80% in just four days. The doctors concluded, “Thus, it would appear that the prostate tumor marker PSA is down regulated by Resveratrol. ...”** (30)

Prostate-Cancer Activity Lowered By Resveratrol

Doctors at the New York College of Medicine wanted to know if Resveratrol would reduce the growth rate of prostate cancer.

Working with the prostate cancer cell line LNCaP, they first determined the standard rate of growth and various biochemical and hormonal conditions for those cells.

Next they administered Resveratrol and measured these same factors again. They discovered that in a dose-dependent manner, Resveratrol substantially reduced the growth rate of

the prostate cancer cells. In addition it caused a significant number of the prostate cancer cells to undergo apoptosis (voluntary cell death) as would occur in normal cells. They also found a substantial decline in the level of PSA in those cells receiving the Resveratrol. Resveratrol also significantly prevented the number of cells that were able to express the gene responsible for prostate cancer. (31)

CONCLUSION

We have just presented the results of 31 scientific studies conducted by highly qualified scientists and medical doctors in highly respected institutions where they utilized Resveratrol with cancer cells and tissues. In ALL of these cases, Resveratrol was shown to provide:

1. *Protection from developing cancer.*
2. *Elevation of the death rate of cancer cells.*
3. *Normalization of abnormal cells.*
4. *Marked reduction of invasiveness.*

EVERY institution, which examined Resveratrol concluded that it was an extremely valuable and effective natural agent for the prevention and elimination of cancer - in all tissues, and that it is totally without harm to normal cells and tissues!

In today's highly toxic and cancer prone world, can any of us really afford to be without the protection of Resveratrol?

Ultimate Cell provides ultimate protection because it has the highest amount of natural Resveratrol of any supplement!

Immediate and Noticeable Benefits

Damaged cells are not able to manufacture ATP / energy efficiently. In fact the more severe the damage, the less energy you will have. This is a major reason why you seem to have less and less energy as you grow physically older, your cells simply are not manufacturing it like they used to.

Therefore one of the most important and significant signs that your cells are being repaired is when you begin to notice an increase to your energy levels. This is very important and in fact, your energy levels probably tell you more about your level of health than any other indicator.

Once you begin to give your cells the nutrients they need to start repairing and protecting themselves, it is very common to notice a significant change to your energy levels and usually within a few days or less. It is not a stimulated or caffeine type

of quick energy boost only to be let down minutes later. No, it is more of an increase to your endurance and stamina levels as if you were able to restore your energy levels to where they used to be 10, 20 or even 30 years ago. Many people describe it as a feeling of improved health and well being. Again, what it really is, is a process of cellular repair and protection which is greatly improving your level of health and providing your body with much more energy to run on.

Since this change can be very obvious for some and much more subtle for others, it is a good idea to make a few notes about your present state of health so you can see the results much clearer. Questions you might ask yourself include, at what time of the day or evening are you normally tired out and ready to take a nap? Are you physically more active now than before? Are you able to work harder and longer than before? How well are you feeling overall? What other health problems are you aware that you may have, and so on.

Keep these answers someplace safe and in a few weeks time, ask yourself these same questions and more than likely you will be very surprised at just how much progress you have made.

Peaks and Valleys in the Cancer Battle

If you are battling some type of cancer right now, there are some very important facts you need to know and understand about your body and the natural healing process.

You will most likely notice that certain days you are feeling really good and that much progress has been made in the battle. These good days can really raise your level of optimism and hope. **AND IT SHOULD!** They are a very good sign.

You must also realize that in the days to follow, you will have “bad days” where you may feel that all the progress you made was lost and now you are starting over in worse shape.

The reason why you feel so bad after feeling so good is because your body is dealing with a very large amount of toxins from these cancerous cells, as well as the toxic debris from the dead cancer cells and until your liver can get those toxins out of your system, you will feel poorly. Symptoms of toxicity can range from fatigue to headaches to feeling like you just contracted the worse case of the flu that you have ever had in your life.

Then on the days that those toxins are flushed out, you will likely feel very good again. This is the normal process that your body will go through and being aware of what is really happening will help you to keep from becoming depressed on those bad days. It is all a very important and normal part of the natural healing process.

Your mental attitude through the whole process can be the ultimate deciding factor as to whether you conquer your cancer or it conquers you. Don't give in, but rather take a longer term

look at your progress over the past few weeks and notice how the overall improvement to your health is up, not down. This is very important.

Diet -Rights and Wrongs



Diet and eliminating your exposure to toxins and carcinogens is also very important. Try to eat natural foods as they come from nature without any extra processing, preservatives, or pesticides. Look for organically grown foods as much as possible and eat a wide variety of foods in your diet. You never want to deprive your body of the balanced nutrients you can get from eating a healthy and balanced natural diet. Eliminate the sources of toxins and carcinogens from your diet as much as possible because the last thing your body needs is more of these poisons to overwhelm it.

10 or 15 years ago, the importance of consuming protein in overcoming cancer was not known. Due to the fact that cancer cannibalizes the body's protein stores, it robs your muscles and organs of vital proteins in order to satisfy its own needs for vital protein. Thus many people assumed that what you want to do is to try and starve the cancer by reducing or eliminating the protein consumption.

We now know that the less protein you consume when battling cancer, the less chance you have of a recovery because the cancer will destroy the vital protein of your body and take you down hill fast. You need to consume large amounts of high quality protein and here is why:

- Nearly 90% of every vital component in your body is made of protein.
- Red and white blood cells, all enzymes, all muscles, all connective tissue, your bones, all organs and glands, all of these are made of mostly if not all protein.
- If you deprive your body of essential protein when you are fighting cancer, then you also will limit the beneficial production of white blood cells and all the enzymes your body needs to be able to function and beat cancer.

How to Better Starve a Cancer

Eliminating the sugars and simple carbohydrates from your diet is a much better way to starve a cancer. Normal healthy cells generate energy through a process of oxidation or burning glucose in the cell for energy.

Way back in the 1930s, Dr. Otto Warburg won a Nobel prize for his research work that had proven that cancerous cells are different from normal cells in that they



generate their energy by a process of fermentation and not the normal oxidation process.

This is important to know because an excellent fuel for a cancerous cell that uses the fermentation process for energy, is glucose/ sugar. This illustrates the point even more clearly why you need to get those deadly refined carbohydrates, sugar and flour out of your diet.

Nothing raises your blood sugar levels any faster or higher than consuming simple carbohydrates and sugar. You are unintentionally adding fuel to the cancer fire by consuming them in your diet.

Keeping Things Moving

Lastly it becomes absolutely critical to make sure that you are having regular bowel movements at least once a day or more. You can not afford to become constipated and keep all those toxins inside of you. I strongly suggest a good colon health product with the balanced fibers like #1012 Colon Health Formula available from Vitality. It works to restore the normal healthy flora of the colon and it provides a great source of balanced fibers in a convenient capsule form that you simply swallow each day. You can use the product daily as it contains no stimulants or laxatives and it will help restore a healthy flora in your colon and eliminate constipation. This is a great product for everyone to use on a daily basis and especially so if you have any concerns about colon cancer.

ULTIMATE CELL AND DRUGS

This report has highlighted how the natural ingredients in the Ultimate Cell Formula work to aid the cells and tissues in the body to avoid cancer. It does this in three different ways:

1.) It aids the body in resisting the harmful effects of chemicals, which would otherwise cause the cells to become abnormal.

2.) It promotes the body's ability to cause truly abnormal cells to commit apoptosis (normal, voluntary cell death without reproduction).

3.) It encourages the body's ability to create the rapid conversion of marginally abnormal cells to normal healthy cells.

It is vitally important to understand that all of this occurs because the natural ingredients in Ultimate Cell provide the cells and tissues of the body with molecules they can use to promote normal healthy cells. These molecules do not, in and of themselves, do anything. They are the correct raw materials, which the cells and tissues can use to create their own excellent state of health. The ingredients of Ultimate Cell do not prevent, attack or alter cancer cells, it is the body itself, which uses these ingredients to accomplish these wonderful benefits.

How well any particular person's body is going to be able to utilize Ultimate Cell's ingredients to prevent, eliminate and normalize abnormal cells, no one knows. In all of the scientific studies with cells, tissues and animals with abnormal cells, there is always a certain percentage, which even when given all the correct molecules, are unable to use them effectively.

The medical profession uses Drugs that are designed to directly attack and destroy cancer cells. This is the difference between chemotherapy used in the treatment of cancer versus the use of Ultimate Cell, which allows the body to do its own prevention, elimination and normalization of abnormal cells and tissues. It is important that this distinction between how these two approaches work be clearly understood. Ultimate Cell should not be used as though it were a drug that is going to in any way directly affect cancer cells, because it does not do this. If this is what you wish to accomplish, you should seek the services of a qualified oncologist who will provide you with chemotherapy.

Fortunately the ingredients in Ultimate Cell are highly beneficial to normal healthy cells, as well as compatible with chemotherapy and radiation, and thus the two can be safely used together. Many anecdotal accounts of those who have used Ultimate Cell in combination with chemotherapy and radiation have reported they had virtually no side effects from either the chemotherapy or the radiation, and that they recovered their health much faster than their oncologist thought possible.

DISCLAIMERS

The material contained in this publication has been carefully researched and is believed to be reliable and accurate. However, it is not presented as medical advice. It is offered only as educational information. The reader is advised to obtain the services of a competent and qualified physician if the need for medical treatment is indicated.

*FDA Disclaimer- These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat or prevent any disease or illness.

Ultimate Cell - Suggested Usage Chart

Approximate Daily Amounts According to Age and Condition

Up to age	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>60</u>	<u>70</u>	<u>80+</u>
Good Health	1	1	1	2	2	3	3	3
Health Risks	2	2	2	4	4	6	6	6
Illness	3	3	3	6	6	8	10	12
Major Illness	16	20	24	28	28	28	28	28

Good Health is defined as no known health problems with good energy production relative to their age.

Health Risks is defined as being in apparent good health, but exposed to dietary food additives, or environmental toxins.

Illness is defined as being afflicted with some medically or nutritionally treatable health problem.

Major Illness is defined as being afflicted with a catastrophic type of health problem, such as seriously impaired circulation, extreme high blood pressure, cancer or heart disease.

Divided Doses: Whatever the daily usage is shown to be appropriate, the best policy is to divide that usage into 3 or 4 doses to be taken about 4 hours apart. Amounts of 16 capsules and above per day, should be taken in 4 doses about 3 or 4 hours apart with the last dose being taken just before bedtime.

The purpose of the divided doses is to spread the amount entering into the blood, and thus delivered to the tissues of the body, as evenly as possible over the 24 hour cycle. This allows the cells and tissues to obtain a maximum, steady and dependable level of nutrition with which to battle health problems and to build health. This in turn offers the greatest possibility for success.

To obtain additional reports and health publications please contact:

International Institute of Nutritional Research
18124 Wedge Parkway #420
Reno, NV, 89511
<http://www.IINR.org>

You can also obtain Ultimate Cell and other products from Vitality Corporation at:

Vitality Corporation
3123 Research Way #216
Carson City, NV. 89706
1-800-423-8365
<http://www.vitality-corp.com>

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BIBLIOGRAPHY OF ULTIMATE CELL RESVERATROL REFERENCES

1. Garcia Garcia J., et al, 1999 Dec., Arch Biochem Biophys, 372:2, 382-8
2. Miloso M., et al, 1999 April, Neuroscience Letters, 264:1-3, 141-4
3. Stewart J.R., et al, 1999 Oct., Biochemistry, 38:40, 13244-51
4. Ciolino H.P., et al, 1998 Dec., Cancer Research, 58, 5707-12
5. Ciolino H.P., et al, 1999 Oct., Molecular Pharmacology, 56:4, 760-7
6. Chun Y.J., et al, 1999 Aug., Biochem Biophys Res Commun, 262:1, 20-4
7. Elattar T.M. & Virji A.S., 1999 Nov., Anticancer Research, 19:6B, 5407-14
8. Surh Y.J., et al, 1999 June, Cancer Letters, 140:1-2, 1-10
9. Clement M.V., 1998 Aug., Blood, 92:3, 996-1002
10. Huang C., et al, 1999 Feb., Carcinogenesis, 20:2, 237-43
11. Turner, R.T., et al, 1999 Jan., Endochronology, 140:1, 50-4
12. Hsieh T., et al, 1999 June, Cancer Research, 59, 2596-2601
13. Jang M. & Pezzuto J.M., 1999, Drugs Exp Clin Res., 25:2-3, 65-77
14. Subbaramaiah K., et al, 1999, Ann N.Y. Academy Sciences, 889, 214-23
15. Subbaramaiah K., et al, 1998 Aug., Journal Biological Chem., 273:34, 21875-82
16. Jang M., et al, 1997 Jan., Science, 275, 218- 220
17. Sharma S., et al, 1994, Cancer Research, 54, 5848
18. Shamon L.A, et al, 1995, Anticancer Research, 14, 1775
19. Prochaska H.J. & Santamaria H.B., 1986, Annals Biochemistry, 169, 326
20. Zhang Y., et al, 1994, Proc National Academy of Sciences USA, 91, 3147
21. Bertelli A.A., et al, 1999, Intern. J Tissue Research, 21:4, 93-104
22. Uisperger E., et al, 1999 Nov, Intern. J Oncology, 15:5, 955-9
23. Lu R. & Serrero G., 1999 Jun, J Cell Physiology, 179:3, 297-304
24. Basly J.P., et al, 2000 Jan, Life Sciences, 66:9, 769-77
25. Hsieh T.C., et al, 1999 Aug, Interna. Journal of Oncology, 15:2, 245-52
26. Holmes-McNary M. & Baldwin Jr. A., 2001 July, Cancer Res., 60, 3477-3483
27. Cadenas S. & Barja G., 1999 Jun, Free Radical Biol Medicine, 11-12, 1531-37
28. Virgili M. & Contestabile, A., 2000 Mar, Neuroscience Letters, 2-3, 123-126
29. Mitchel S.H., et al, 1999 Dec, Cancer Research, 59, 5892-95
30. Hsieh T.C. & Wu J.M., 2000 Jan, Anticancer Research, 20:1A, 225-228
31. Hsieh T.C. & Wu J.M., 1999 May, Exp Cell Research, 249:1, 109-115

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