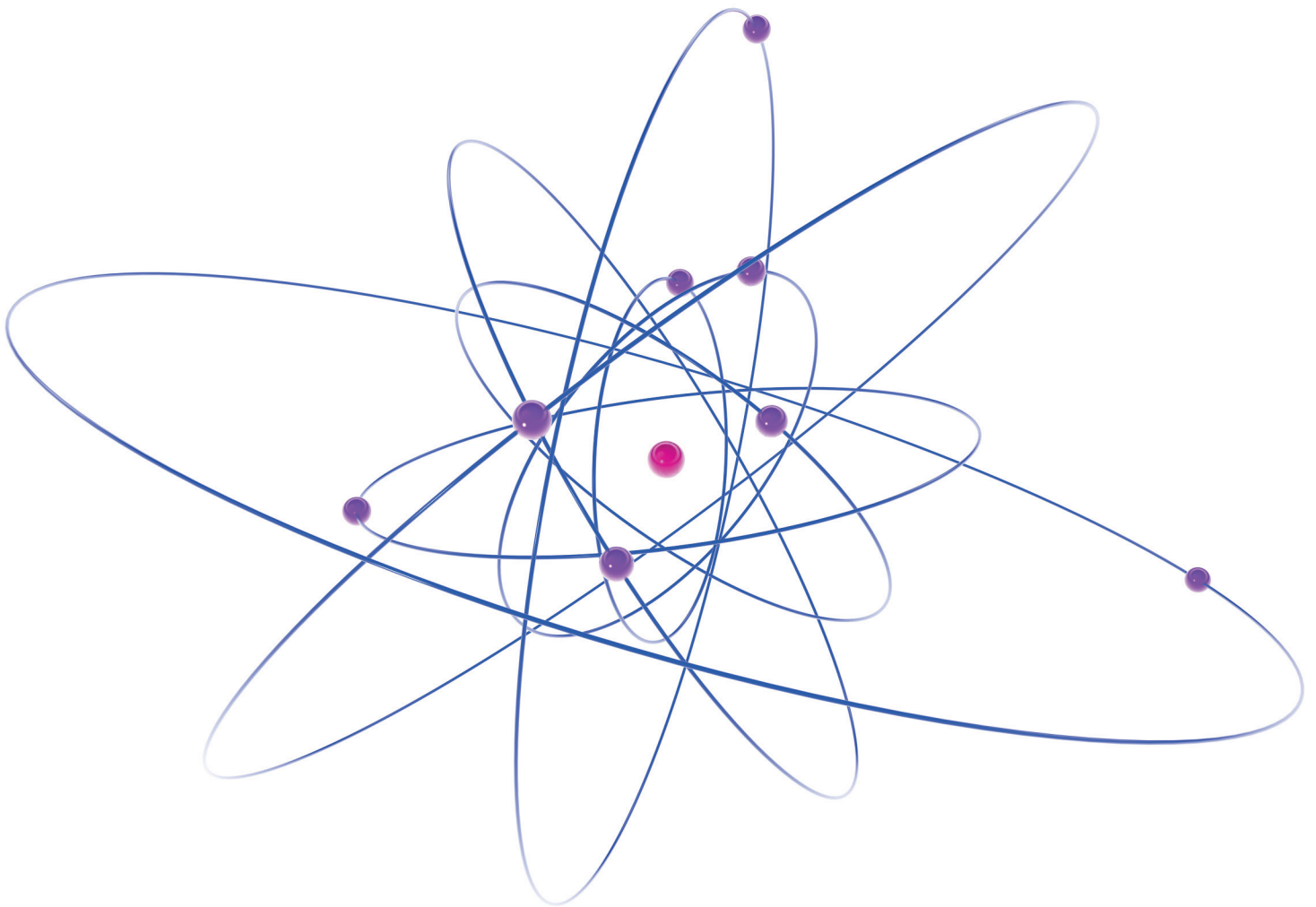


The 8th Element

Nature's Universal Cancer Killer



DR. AL SEARS M.D.
America's #1 Anti-Aging Pioneer

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After entering private practice, Dr. Sears was one of the first to be board-certified in anti-aging medicine. As a pioneer in this new field of medicine, he is an avid researcher, published author, and enthusiastic lecturer.

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As the founder and director of Wellness Research Foundation, a non-profit research organization, Dr. Sears travels the globe to bring back to his patients the latest breakthroughs in natural therapies. Trips to Peru, Brazil, India, Jamaica, Uganda, South Africa, Ecuador and Bali have yielded important new discoveries in nutrition, traditional herbal treatments, anti-aging and alternative medicine.

Dr. Sears currently writes and publishes the monthly newsletter, ***Confidential Cures***, and daily email broadcast, ***Doctor's House Call***, and contributes to a host of other publications in the field. He has appeared on over 50 national radio programs, ABC News, CNN, and ESPN.

Dr. Sears has published 14 books and reports on health and wellness with a readership of millions spread over 163 countries. His bestselling titles include: ***The Doctor's Heart Cure***, ***The 12 Secrets to Virility***, ***Rediscover Your Native Fitness***, ***Your Best Health Under the Sun***, ***High-Speed Fat Loss in 7 Easy Steps***, ***P.A.C.E.: The 12-Minute Fitness Revolution***, and ***Reset Your Biological Clock***.

Dr. Sears is currently writing three additional books; ***The Health Secrets of Bali***, ***Cracking the Telomere Code***, and ***Healing Roots of Africa***.

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The 8th Element: Nature's Universal Cancer Killer

There's a simple element that has been shown to kill cancer. And this includes all kinds of cancers.

- ▶ Breast cancer¹
- ▶ Colon cancer²
- ▶ Brain cancers³⁴
- ▶ Bladder cancer⁵
- ▶ Lung cancer⁶
- ▶ Leukemia⁷
- ▶ Epithelial cancer⁸
- ▶ And many more ...

The result is always the same. Cancers die when they come in contact with this element.

I'm talking about the 8th element on the Periodic Table: **Oxygen**.

It's the most important element for life. You can live for weeks without food, and days without water... but you can't live more than a few minutes without oxygen.

And when you can't get enough, you'll do anything to get it.

Have you ever gotten the wind knocked out of you? Do you remember the horrible frenzied feeling you had when you couldn't suck in any air?

You get anxious, you start to panic... you grasp at your chest and wonder if you're ever going to be able to take another breath ... you can even hear the sound of your mouth working desperately to try and suck some oxygen in.

It's much worse than being hungry or thirsty. You have an instinct that you need that oxygen, so you'll gasp and claw and do anything to get at air again.

That's what's happening to you in the modern world. Your cells are going through that gasping, desperate search for oxygen every day because our tissues don't get enough.

The worst part is, you may never know your cells are being starved of oxygen.

What you might feel is just the slightest tinge... you might not be able to sleep well. Or you might get headaches, or aches and pains. You might have constant fatigue, lack of focus and memory loss.

Over time, those dying cells lay the foundation for disease, dementia and cancer.

But now you can do something about it.

You can get more oxygen into your body to refresh your mind, repair an aging brain, purify your organs, and power up a tired heart. When you expose bacteria, viruses and cancer cells to oxygen... ***they die.***

The Nobel Prize-winning scientist Dr. Otto Warburg discovered that a low-oxygen environment is why healthy cells turn into cancer.

Here in my practice, I'm adding on a special new room to my wellness center just to give patients oxygen therapy that I'll tell you about in just a minute. The best cancer specialists in the world consider this a must-have for cancer patients...

Why? Because when you get more oxygen into your cells and you can wash away toxic heavy metals... you flush out the buildup of chemicals, revive stressed-out glands and breathe new life into old, dying cells. The fact is, oxygen is nature's most important healer.

It's the best detox agent, it's your brain's main nutrient, it's a natural antibiotic, and it directs your immune system to kill off invaders, especially cancer.

The more oxygen you have, the better your lungs can breathe, the stronger your heart beats, and the faster your brain thinks.

Oxygen is why you can digest and absorb nutrients from your food, and why you can move every muscle in your body.

Oxygen also plays a huge role in giving you energy. Every cell uses oxygen to make the energy that keeps you going and lets you do all the things you want to do every day.

But if you don't have enough oxygen ... if you have **chronic hypoxia**, which is low amounts of oxygen in the cells ... it can lead to cancer.

In fact, do you know what researchers do when they want to make a cancer cell grow faster and stronger? They take away oxygen.⁹

But it doesn't have to be this way in your body.

Today I'm going to show you what you can do to flush your body with oxygen so you can defend yourself against illness, toxins and cancer.

Unfortunately, in our modern world, low-oxygen or **chronic hypoxia** is almost universal. Low oxygen in our cells has become common.

And even though we know it's a major cause of cancer, no one is talking about how we're all suffering from chronic hypoxia.

Modern Environment Is Losing Oxygen Fast

We've evolved over millions of years in an atmosphere with a set amount of oxygen that was constant. But in our modern world your cells are having the breath choked out of them.

We've cut down trees, cities have fewer parks, and there are fewer plants to produce oxygen. Add in pollution around major cities and the result is as much as a 30% cut in oxygen.

But even if you live out in the country with pure air, you're still not getting as much oxygen as your body and cells were made for.

Making things worse, most people are deconditioned and don't have enough lungpower. The less we use our lungs, the more your lungs shrink and the less oxygen you can get to your cells.

That's bad news, because we already get a LOT less oxygen than our ancestors did:

- ▶ **We've lost 15% of our oxygen-producing trees:** After the last ice age ended, forest covered about 45% of the earth's land area. Now they only cover about 30%.¹⁰
- ▶ **Our oxygen-producing plants are disappearing:** Deserts are taking over land that used to have oxygen-producing plant life on it.¹¹
- ▶ **The oceans are dying:** Did you know that 50-70% of our oxygen is produced by microscopic plants that live in the oceans? They're called marine algae, or phytoplankton.¹² Oxygen-producing phytoplankton concentrations are as much as 30% lower today than they were *just 30 years ago*.¹³
- ▶ We've cut down trees, cities have fewer parks, and there are fewer plants to produce oxygen. Add in pollution around major cities and the result is as much as a 30% cut in available oxygen.
- ▶ Today, estimates are that we only have about 21% oxygen in our atmosphere ... and if you live in a populated area, without many trees and with industrial complexes and cars and other pollutants, you might only have 15 % or less oxygen to breathe.

Professor Robert Berner of Yale University researched levels of pre-historic oxygen. He analyzed the air trapped in fossilized tree amber and found that there was much more oxygen available 10,000 years ago.¹⁴

But he's not the only scientist sounding the alarm about chronic hypoxia:

Professor Robert Sloan, paleontologist at University College London, found that the dinosaurs had

oxygen levels as high as 35%. That's what you would get in a supposedly "high-oxygen" environment like an oxygen tent in a hospital.¹⁵

So even if you live out in the country with what you would normally consider "pure" air, you may not be taking in enough oxygen. Plus, most people are deconditioned and don't have enough lungpower. The less we use our lungs, the more they shrink.

All of that can add up to an oxygen deficit.

How is this affecting our health, and what does it have to do with cancer?

Suffocating Cells

The damage from oxygen deficit begins in the mitochondria, the energy-producing organelles inside your cells.

They make energy by using the flow of oxygen. Mitochondria turn the air you breathe into energy. They use nutrients and oxygen to make a fuel molecule called ATP that your muscles can burn.

Without oxygen, there's no flow of energy, no spark of life, no ATP for fuel... and no energy for your tissues and organs.

Without enough oxygen, your cells start to suffocate.

First, your muscle cells burn through the little bit of ATP they can make without oxygen (anaerobically).

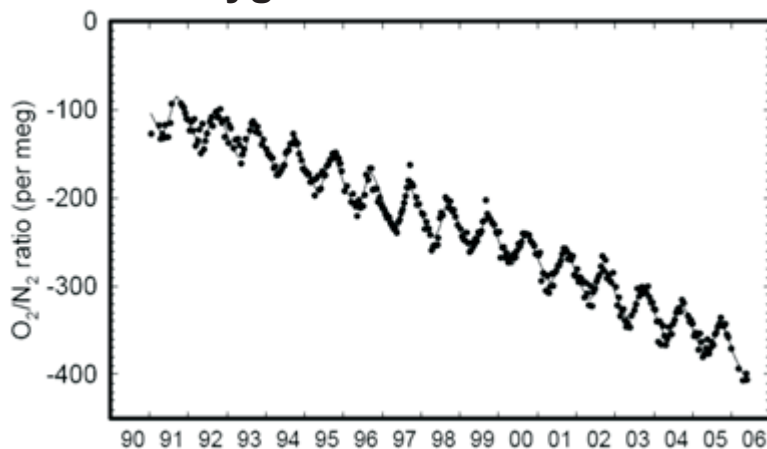
Then your muscles begin to "cramp up," getting stiff and achy.

Your adrenal glands and thyroid gland pump out more of their hormones to try to get more fuel to the cells.

But while this will give you energy, it is not the kind of energy that feels good. It's a "fight-or-flight" kind of energy that feels stressful and depletes your body even more.

Your nerve cells and brain cells have no way to make energy besides using oxygen, and they suffer the most. You start to think more slowly, even to the point of being unable to follow normal conversation.

Oxygen Content of Our Air



This graph shows the oxygen content in the air from samples collected near Mauna Loa in Hawaii. The amount of available oxygen in our atmosphere has been steadily dropping for years. Source: NOAA. <http://www.esrl.noaa.gov>.

You have slowed reaction time, and it might be difficult to drive.

You start to do everything in slow motion, and take a long time to “think about it” before you can do the next thing.

Have you ever opened the refrigerator door and just stood there, staring at everything for a few seconds before being able to remember what you wanted?

This is what happens when you can’t use oxygen in your cells. You could also experience poor athletic performance, have poor hearing, or weak muscles ... and worse.

Chapter 2: The Low-Oxygen Cancer Connection

Cancer is big business. And I mean *big*. The *Journal of the National Cancer Institute* says the projected cost for cancer care in the U.S was \$124.57 billion in 2010 (the most recent year they have data for).¹⁶ That’s not even including the National Cancer Institute’s \$5 billion budget, the almost \$3 billion worth of budgets for over 260 non-profit organizations dedicated to cancer research.

By 2020 we’re expected to spend \$173 billion. In other words, the Cancer Industry is making a lot of people rich. And wherever there’s a lot of money, you have people who want to keep it flowing.

It’s important to understand this, because it’s an important key to understanding the cancer puzzle. The fact is, curing cancer would put a lot of people out of work. And it’s simply human nature to try to hold onto your living.

Does this sound cynical? Maybe so. But consider some of the myths that have grown up around cancer. Why else would the Cancer Industry keep them alive?

Myth #1: Cancer has always been a serious public health problem.

The Cancer Industry likes to tell you that cancer rates have always been high. “It’s just that we couldn’t detect it without modern methods,” they say.

In reality, we’ve been able to track cancer pretty effectively since the mid-1800’s. And back then, according to the University of Colorado’s Professor Richard McIntosh, your chances of dying from cancer were about 1 in 100.

Today, it’s around 1 in 4.

By any measure, that’s a *huge* increase. An increase that actually created the Cancer Industry that now denies its existence.

Myth #2: We only see more cancer because people are living longer.

The logic behind this myth is that cancer takes a long time to develop. (And it usually does.) So, the argument goes, we're seeing more cancer because people live longer nowadays.

On the surface, this sounds logical. But there's one huge hole in the argument. And that's infant mortality.

The average life expectancy in the U.S. is about 30 years longer now than in 1850. But the number is heavily skewed by the high death rate among children in past centuries.

If an 1850's American survived past their 10th birthday, their life expectancy was almost the same as yours. So if longer lives automatically translate to higher cancer rates, cancer should have been almost as common 150 years ago as it is today.

But it wasn't. Because cancer isn't just about age.

Myth #3: Cancer is genetic.

Oncogenes – genes that cause cancer – are the latest craze in the Cancer Industry.

Robert A. Weinberg, a professor and researcher at M.I.T, discovered the first “oncogene” in the 1980s. But even Weinberg presents arguments against a genetic cause for cancer.

Take, for example, his book, *One Renegade Cell: How Cancer Begins*. In it, Weinberg writes that early 19th-century researchers began to notice high rates of certain cancers in certain populations. But these weren't blood relatives. They were populations related only by trade or habit.¹⁷

Chimney sweeps had an unusually high rate of cancer of the scrotum. Men who used snuff developed nasal cancer more often than those who didn't use it. X-ray technicians were prone to skin cancer. And by the 1950's, lung cancer rates had skyrocketed among smokers.²

Clearly, a mutant gene can't be behind all these cancers. And even if these situations – and the many since discovered – cause a genetic mutation that leads to cancer, genetics still isn't the root cause here.

Even Prof. Weinberg himself seems to have changed his opinion regarding a genetic cause for cancer.

After discovering that “fewer than one DNA base in a million appears to have been miscopied,” an article in the *Townsend Letter* reports Weinberg changed his mind. He said this wasn't enough of a defect to trigger mutation. “Something was very wrong,” Weinberg wrote. “The notion that a cancer developed through the successive activation of a series of oncogenes had lost its link to reality.”¹⁸

The BRCA1 gene is another problem for genetics as the cause of cancer. Researchers discovered women carrying this gene have about an 80% risk of breast cancer. But if this gene causes cancer, why in only 80% of cases? Plus, only about 10% of all women carry the BRCA1 gene. Many women who lack the gene get breast cancer anyway.⁴

Finally, Texas A&M professor Wallace McKeehan points out the genetic link to cancer is hopelessly tangled. “There are just a mind-boggling number of mutations associated with cancer,” he says, “We need some new ideas.”⁴

Or do we need some forgotten and discarded ideas that turned out to be correct?

Turns out we need a little of both.

New Technology Fits Old Theory

The key to preventing cancer would be uncovering one critical element all cancers share.

One starting point from which all healthy cells became anaerobic zombies.

We know that point.

A man named Dr. Otto Warburg discovered cancer’s common element nearly 100 years ago. And it’s so simple, most cancer researchers refuse to accept it. Even when presented with overwhelming proof.

Cancer has many secondary causes. But tumors and other cancers have this one trait in common. And one simple way to prevent their development.

Here is Dr. Warburg’s discovery, as he explained it to a gathering of Nobel Prize winners in 1966...

“The prime cause of cancer is the replacement of the respiration of oxygen (oxidation of sugar) in normal body cells by fermentation of sugar.”

Warburg had found the root cause of cancer. And he’d discovered how to prevent it...

“It is indisputable that all cancer could be prevented if the respiration of body cells were kept intact.”

In other words, cells become cancerous when they don’t get enough oxygen. They become anaerobic zombies, surviving by fermentation – like yeasts. But give them enough oxygen, and they can resist the attack of almost any cancer-causing substance.

Is the answer to cancer really that simple? Well, yes and no. Dr. Warburg has been proven correct on every point. But there's more to the story, as you'll soon see.

And it involves something I've been following and studying for more than 20 years. The field of telomere biology.

“Metabolic Reprogramming”

Cellular energy is where the body gets the ability to make repairs and the strength to fight the mutations that lead to cancer.

Some of these cancerous mutations begin with damaged mitochondria from low oxygen.

The process begins when low oxygen, free radical attacks, toxins in the environment, or even excess ultraviolet radiation ... all of these result in *premature shortening of the telomere*.

Abnormally shortened telomeres can cause your body to produce the “DNA damage response.” That's when the cells send in the repair teams of molecules to fix the DNA.

Problem, is, all that repair activity generates a lot of cellular waste in the form of more free radicals.

And when there's not enough oxygen, this process can go haywire...

As I mentioned, when your cells don't get enough oxygen to make energy, telomeres are abnormally shortened and the cell goes into full repair mode. I mention it again because I want to stress this important fact: a lack of oxygen that sets off the chain reaction that shortens telomeres causes the *wrong mitochondrial genes to be expressed*.

What that means is that the body sends out a new set of instructions to cells. It says to the mitochondria, “We have hypoxia (low oxygen). Please use sugar instead of oxygen to make energy.” That's called glycolysis.

When hypoxia goes on for long enough, old mitochondria, and new mitochondria created in that cell, are “metabolically programmed” to use glycolysis to make energy. The cell begins running in reverse, making energy from sugar instead of oxygen like it should. This generates huge amounts of free radicals that can then damage other cells' telomeres, causing the same chain reaction.

Cells then become dependent on glycolysis and hardly use oxygen for energy anymore. Some use no oxygen at all.

We call those cells cancer cells. And the chain reaction effect that creates these kinds of cancerous cells is called the Warburg Effect.

Warburg's Contrarian “Personal” Research

As a young medical researcher, Otto Warburg had an advantage over his peers. He didn't have a traditional medical background.

His father was a well-known physicist, and Warburg had grown up in a world ruled by physics rather than medicine. And his primary studies had been in chemistry. So Warburg had a solid background in hard science.

Warburg had been trained to question what was not proven. To take nothing for granted. He wasn't shackled by current medical opinion as much as his peers.

And he had lost his mother to cancer. So, in a way, his research was personal.

When Warburg began studying tumors, he took note of the work of others in the field. One of them was a Japanese researcher named Okamoto.

Okamoto showed that tumor cells can survive without oxygen. He placed tumor cells in a serum containing glucose – a form of sugar your body burns for fuel. But he deprived the cells of oxygen. The tumor cells survived and continued to divide. Some cells lived for 72 hours completely without oxygen.

Warburg and his colleagues took the experiment a step further. They discovered that tumor cells can survive for days without oxygen ... but not without sugar. Cut off oxygen and sugar, and most of them die within a few hours.

Warburg also devised a clever way to find out exactly how tumors survive. First, he carefully measured the amount of glucose going to the tumor cells. Then he measured the amount of lactic acid – a fermentation byproduct – they produced. He calculated that tumor cells survive mostly by fermentation. They only use 34% of the available sugar for normal respiration.

In other words, unlike healthy cells, cancer cells are largely anaerobic.

From there, Warburg proved that depriving healthy cells of oxygen triggers them to become partially anaerobic.

A drop of just 35% in oxygen will trigger the change to fermentation. And after just a few hours, the change becomes irreversible. At that point, healthy cells effectively become cancerous.

Warburg linked secondary causes of cancer to this one underlying cause. “All carcinogens impair respiration directly or indirectly by deranging capillary circulation,” Warburg claimed, “a statement that is proven by the fact that no cancer cell exists without exhibiting impaired respiration.”

Denying healthy cells necessary oxygen creates zombie cells... mindless cells that do nothing but multiply.

“In every case, during the cancer development, the oxygen respiration always falls, fermentation appears,” Warburg told the gathering of Nobel scholars, “and the highly differentiated cells are transformed into fermenting anaerobes, which have lost all their body functions and retain only the now useless property of growth and replication.”

Otto Warburg solved the basic riddle of cancer in 1923. By the mid-1960s, other researchers confirmed his findings with every kind of human tumor known. Yet the Cancer Industry *still* denies Warburg’s pioneering work.

Others Prove Warburg’s Discoveries True

In 1953, two U.S. researchers graphically proved Warburg’s claims. They did it with tissue from a strain of lab rat bred to be highly resistant to tumor formation.

They exposed some tissue samples periodically to a nitrogen atmosphere. This forced the cells to turn to fermentation to survive. A second set of samples were kept in a normal, oxygen-rich environment.

After being denied oxygen repeatedly, the tissues began to change. Their growth became abnormal, and the samples produced malignant cells. The researchers had “created” cancer based on Warburg’s findings.

It was a different story with the oxygen-rich samples. Even after 21/2 years, they all continued to thrive as normal healthy cells.

Two years later, another research team used a different approach to show that tumor cells are anaerobic.

In this experiment, they inoculated two groups of mice with tetanus spores. Some of the animals died within 48 hours, while others showed no sign of sickness.

The difference? The animals that lived were healthy, normal mice. Those that died had cancerous tumors. And here’s why that’s important...

Tetanus spores can only germinate in a low-oxygen environment. The healthy mice had plenty of oxygen in their blood and tissues. So the spores couldn’t germinate, and the mice remained healthy.

But the researchers found that the spores injected into the tumor-bearing mice did germinate. *But only in the areas where tumors were growing.*

In other words, the tumors were low-oxygen areas. They were anaerobic.

Warburg never knew of the existence of the telomere, but he had discovered the key to the modern plague of cancer. And plenty of human studies back up Warburg's claims, too.

In 1993, German scientists found higher levels of oxygen in uterine cancers predict longer survival rates.¹⁹ And in 1999, a team at Duke University showed that oxygenating tumor sites resulted in improved results in treating head and neck cancers.²⁰

We Already Know Enough About Cancer to Prevent It

Otto Warburg was right. Cancer cells don't "breathe" the way healthy cells do. They convert partially to fermentation. And once the process starts, it can't be reversed.

Warburg's discoveries may well have saved his own life. Because one of his parents was Jewish... and Warburg worked in Germany when the Nazis rose to power.

Hitler was famously paranoid about his health. And there are many reports he had a fear of cancer. Breast cancer killed his mother in 1907. And there's a record of Hitler having the Reich Chancellery inspected for "earth rays" – a primitive view of radiation thought to cause cancer.

Warburg's discoveries opened up a new and promising avenue for one of the most frightening diseases imaginable. The Nazis saw the value in Warburg's research... and bankrolled it. But America's biggest players in the Cancer Industry didn't think it was worth pursuing.

Or perhaps they thought it was worth deliberately not pursuing.

In spite of a lack of funding, progress has been made. Warburg's work was taken up by a handful of renegades and visionaries.

Before we delve into how you can put Warburg's discoveries to work for you... let's recap just what he – and the dedicated few following his pioneering trail – uncovered.

Cancer Cells Are Different

It seems hard to believe, but the single most important breakthrough in cancer research took place almost 100 years ago. And mainstream medicine continues to ignore it.

In 1923, Warburg and his colleagues discovered that cancer cells don't survive the way healthy cells do. Healthy cells survive through respiration. They "breathe." But cancer cells survive partly by fermentation.

The problem with fermentation is it's a primitive process. It's how primitive cells like yeasts

survive. But only survive. Because fermentation is also very inefficient.

Fermentation *does* have one important advantage. It doesn't need oxygen. So primitive cells can function – and even reproduce – in the absence of oxygen.

Warburg followed up on a discovery by a Japanese researcher named Okamoto. Okamoto proved tumor cells could survive in a petri dish without oxygen... if they had glucose. That was Warburg's light bulb moment.

And his research confirmed his suspicions. Cancer cells survive differently than healthy cells. And they're different in more than one way.

Cancer Turns Back the Clock – in a Very Bad Way

Fermentation isn't just primitive. It's an inefficient process. And that's a key to understanding oxygen and cancer.

Fermentation requires more fuel to produce less cellular energy than respiration. And it produces more waste. It pretty much takes all a cell's attention just to keep going when it survives by fermentation.

That's why you'll only find simple creatures – like yeasts – surviving by fermentation. It's too inefficient for more complex creatures.

The simple cells that survive by fermentation are called “undifferentiated.” They're all alike. They process fuel and they reproduce. That's about all these simple cells can manage.

And that's exactly what happens with cancer.

Cancer cells don't depend entirely on fermentation. But they're crippled by it. They become undifferentiated. All they can do is eat and reproduce.

Cancer literally turns the clock back. It reduces your cells to a primitive state. Which brings us to the next question Warburg and his peers answered. How do cells become cancerous?

The Underlying Cause of Cancer

While the Cancer Industry was busy inventing mustard gas “cures,” Warburg and a few others were unraveling the true cause of cancer.

As Warburg explained as far back as the mid-1950s, there are many *secondary* causes of cancer. *But there is only one underlying cause.*

Imagine for a moment someone jumps into a swimming pool. But they hit their head on the edge of the pool. They're knocked unconscious and sink to the bottom.

If you can fish them right out, they'll probably be okay – apart from a bump on the head. But if they stay at the bottom too long, they'll drown. It's not the water that kills them, though. It's the lack of oxygen.

The same thing happens to individual cells. When they have plenty of oxygen, they're fine. Cut off their oxygen completely, and they die.

But what if you don't cut off the oxygen enough to kill a cell? What happens in that space between “doing fine” and “dead?” Well, let's take a look at our hypothetical swimmer.

Let's say the medics fish the poor soul out of the pool in just the nick of time. They save his life, but all that time under water – without oxygen – has left its mark. Chances are, there will be brain damage. He'll never be fully functional again.

And that's pretty much what happens to individual cells, according to Warburg.

Sometimes cells don't get enough oxygen... but the lack isn't great enough to kill them. It is enough, however, to damage those cells. To damage their respiration.

And here's a key... Once a cell has been switched to partial fermentation, it can't ever go back. That's the first step on the road to cancer.

The Short Trip from Damage to Cancer... and How to Stay Off that Road

Once a cell converts from respiration to partial fermentation, it's lost. As it devotes more of its resources to survival, it stops performing other functions. Specialized cells become undifferentiated.

Some of these damaged cells die off. But some survive and reproduce. But they don't produce healthy cells. Their children are damaged and undifferentiated just as they are.

These unhealthy cells soak up fuel and oxygen meant for healthy cells. They continue to reproduce. What started as a few damaged cells becomes a tumor. Your own cells have become a monster.

But what if you could stop the process before it began? What if you could prevent the damage that leads to cancer? Well, if Otto Warburg was right – and he's been proven right on every point so far – you can. All you need is oxygen.

Denying your cells oxygen starts you on the road to cancer. It only stands to reason that providing an abundant supply of oxygen would block the process.

Warburg recommended taking “respiratory enzymes.” These are nutrients linked to supplying oxygen on the cellular level. But you have other options, too.

In the following chapters, you’ll discover several ways to increase your cells’ oxygen supply. And in so doing, you’ll short-circuit the process that leads to cancer.

Oxygen is the surest, simplest path to a life without disease.

Chapter 3: Oxygen Transport Stops Disease Before It Starts

For just a moment, close your eyes and pay close attention to your breathing. You inhale, filling your lungs with oxygen. Then you exhale, expelling carbon dioxide. Of course, there’s a bit more to the process than that. But that’s the basic function.

Your cells do something similar with the oxygen carried by your blood. The oxygen is transferred into your cells, where it’s transported to the mitochondria. They’re your cells’ energy factories. But they’re also your cells’ lungs, so to speak.

The mitochondria use the oxygen to make ATP – the fuel your cells use to function. Like your lungs, these little energy factories don’t just take oxygen in. They also pass waste products out into the cell.

So, like your lungs, your mitochondria are constantly taking oxygen in and passing waste products out.

That’s cellular respiration, boiled down to its simplest.

But what if your cells are short on oxygen? The world of sports can help you understand.

Preparing Your Cells for the Olympics

Back in 1968, the summer Olympic games were held in Mexico City. And the announcement led to a change in many athletes’ training plans.

You see, Mexico City is about 7,300 feet above sea level. That’s 1-1/4 miles up. And the air is a lot “thinner” there than in most cities. And by “thinner,” I mean there’s a lot less oxygen than at sea level.

U.S. athletes began training in Colorado. Denver is the “Mile-High City.” And at 5,280 feet above sea level, it, too, has “thin air.”

By training at 5,000 or 6,000 feet, an athlete’s body adapts to the lower oxygen level. In scientific

terms, their VO_2 Max – the maximum amount of oxygen they can take in – increases. Their bodies begin to make more efficient use of the scarce resource.

Now let's get to your cells.

When they get too little oxygen, some of your mitochondria begin to shut down. In other words, your cells respond by closing off their “excess capacity.”

But less oxygen doesn't mean your cells need less energy. It just means they have to find the energy they need another way.

And you've probably already guessed how. If your cells' oxygen supply drops off, they have to turn to fermentation for energy.

You can't fix this problem by moving to Denver. But you can head it off by helping more oxygen get to your cells. Because that's how you break the “cancer chain.”

One Last Cellular Secret

There are actually two chains that concern you here. The first is the cancer chain – the chain of events that leads to cells “gasping for breath” without oxygen.

The second is the electron transport chain. It's the process your cells use to make energy. And it takes place inside those little cellular energy factories... your mitochondria.

Electron transport involves several steps, but we can boil it down to the basics. Inside your mitochondria, two hydrogen atoms combine with two free electrons and half an oxygen molecule to produce water and energy.

“Half an oxygen molecule” may sound strange. But the oxygen molecules (O_2) in the air we breathe travel in pairs. It's called a “diatomic gas,” because there are two atoms. These pairs actually share electrons.

If you split a pair of oxygen atoms, both atoms will combine easily with other elements by sharing electrons with them. This is what happens when things rust. The process is called oxidation.

In the electron transport chain, that lone oxygen atom is the key. It “wants” to balance the number of electrons it carries. And it can only do that by combining with another atom. When it does – bam! – you have cellular respiration.

Without that critical link in the chain, cells soon resort to fermentation... or they'll die. And once a cell has turned to partial fermentation for its energy, there's no going back. The cancer chain has started.

Now you understand why your cells need oxygen and how they use it. It's time to take a look at how to keep that oxygen flowing. And the first step is to keep your energy factories – your mitochondria – humming along.

Are Your Cells Suffocating?

As I've explained, oxygen plays a huge role in giving you energy. Every cell uses oxygen to make the energy that keeps you going and lets you do all the things you want to do every day.

But your cells use one critical nutrient to turn oxygen into energy...

I'm talking about CoQ10.

CoQ10 is part of an incredible system of reactions that happen inside you that make your body run.

These reactions produce brain chemicals that let you laugh and remember the experience. You make hormones that boost your sex drive, and keep you relaxed and ready for action. And you make energy so you can get up and go any time you want.

CoQ10 is like the spark that lights the oxygen. It regulates how the oxygen gets used. In fact, CoQ10's role is so important that its discovery won Peter Mitchell the Nobel Prize in 1978.

The engines of your cells, called mitochondria, use nutrients and oxygen to make a fuel molecule called ATP that your muscles can burn. CoQ10's job is to run back and forth, carrying and delivering electrons that are the spark for the whole process of using oxygen for energy.

That process is called the "electron transport chain." Without CoQ10, there's no flow of electrons, no spark, no ATP for fuel... and no energy for your tissues and organs.

So with no CoQ10, you can't use your oxygen, and your cells start to suffocate.

Low CoQ10 levels also contribute to gum disease, diabetes... and heart disease. There have been over 100 studies at major universities and hospitals linking CoQ10 deficiency with heart disease.

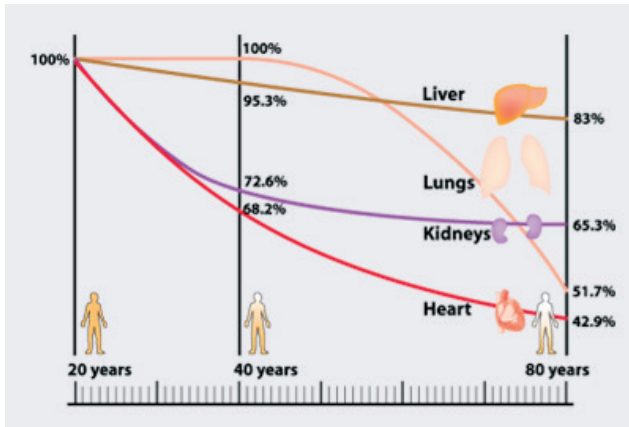
Deprive your heart of CoQ10 and its available energy declines, leading to a decrease in the volume of blood pumped. If your heart pumps less blood than it receives, fluid backs up and your heart swells like a water balloon. We call this congestive heart failure.

There is no better treatment for congestive heart failure than the simple oral administration of CoQ10. In my experience, it has worked better than any medication I have ever used. Many cases appear to be completely resolved after CoQ10.

Many cases of high blood pressure share a similar mechanism. About half of patients coming to me treated with high blood pressure medications have stopped that medication with nothing more than adding CoQ10.

And one of the reasons heart disease and high blood pressure are so common in America is because we are universally deficient in CoQ10. And without CoQ10, we can't use even the oxygen we do get.

What Is Normal?



Profoundly Deficient: Most of your CoQ10 production disappears by the time you're 80.

In medicine, when we say something is normal, we take the population that is healthy and not complaining of anything and we measure their levels.

Then we use a bell curve distribution to pick the ninety five percent of people right in the middle. We toss out the numbers from the top two and a half percent, and the bottom two and a half percent, and we say that everyone else is "normal."

But if we do that with CoQ10, what we're calling "normal" is actually an exceptionally diseased and deficient population.

And we are a nation that is now profoundly deficient in CoQ10 because we don't have our dietary source of CoQ10 in the modern world – animal organ meat.

When was the last time you had deer kidney or elk brains or lamb heart? I wouldn't necessarily recommend you do these days, anyway, unless it's from a grass-fed or wild-caught animal.

Studies show that levels of CoQ10 in commercial livestock are very low when compared to wild game. These animals are fed an unnatural diet of grains. Confinement stops them from getting enough exercise, and they are artificially fattened with hormones. These conditions inhibit healthy CoQ10 levels.

It's sad because we're making it impossible to get the only really good source of dietary CoQ10. Organ meat has 200 times more CoQ10 than the skeletal muscle.

We're lucky if we even eat enough red meat skeletal muscle, since we're told not to eat it. And there's virtually nobody eating red meat internal organs. So you're just not capable of getting enough CoQ10 from the modern Western diet we follow.

Then we're taking that population – that universally already has that extreme dietary deficiency – and we're calling that normal.

And if you take a statin drug to lower your cholesterol, your CoQ10 will be below that already deficient “normal” range.

Right now, over 30 million people have prescriptions for statin drugs. And what’s worse is that they are told even more specifically NOT to eat red meat.

That’s a kind of profound ignorance, combined with that arrogant command relationship between the doctor and the patient. The doctor gives you an order – but he’s giving you an order to do something in this case that reveals a really exceptionally troublesome ignorance.

Because it’s not like CoQ10 is an unknown substance. For example, they did a famous study almost 20 years ago that looked at two groups of people having heart surgery. These were people with already diseased and failed hearts. One group was pre-treated with CoQ10 before surgery, and the other got a placebo.

The study found that the people treated with CoQ10 had significantly stronger heartbeats and pumped blood more powerfully. Not only that, but recovery time for the CoQ10 people was short, with no complications. The placebo group took *six times* as long to recover and had complications.²¹

It’s almost a willful ignorance for a doctor almost 20 years later not to know this issue of CoQ10 deficiency, and why it’s so important, and that it gets even worse if you’re on statin medications.

Choking The Breath Out Of You

Statin drugs used to be called by their scientific name, HMG-CoA reductase inhibitors. In other words, statins work by stopping your body from “reducing” HMG-Coenzyme A, and keep you from using it to make other compounds.

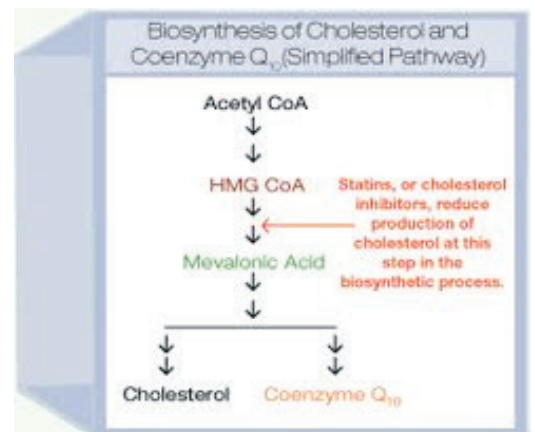
One of those things you make with HMG-CoA is cholesterol.

But, typical of modern medicine, they invented a treatment that’s worse than the problem. Statins simply block or “inhibit” HMG-CoA from becoming cholesterol.

But this causes a huge amount of trouble. Your body also uses HMG-CoA to make two other critical things.

The first is testosterone, the sex hormone that both men and women need.

The second is CoQ10, the one nutrient vital to all your cells for making energy.



You already can't make very much CoQ10 after the age of 20. If you're older than 30 and you add a statin drug to that, you have a recipe for disaster.

Not enough CoQ10 can mean fatigue, muscle soreness, weakness and heart failure... which just happen to be the most common complaints of statin users.

Some people think they have avoided the dangers of statins by lowering the dose, but even small doses still drive your CoQ10 levels into the basement.

One study found that only a 10 mg dose of a statin decreased CoQ10 levels by 40%.²² The authors of the study specifically wrote, "It is imperative that physicians are forewarned about the risks associated with CoQ10 depletion."

A regular dose of statins prescribed to people with "high" cholesterol can be anywhere from 20-80 mg. People taking those doses have almost no CoQ10 in their bodies at all, and will have a very difficult time turning oxygen into energy.

Meanwhile, here is a fact you need to know about CoQ10 and oxygen:

Dysfunctional oxygen use contributes to every single inflammatory, autoimmune and neurodegenerative disease there is.

And it's not just stain drugs that can rob you of CoQ10. Beta blockers, diabetes medications and other drugs drop your CoQ10 levels. Excess body fat, repeatedly exercising for too long, or chronic inflammation can also use up your CoQ10 stores.

To re-energize yourself, here are the two best ways to get more CoQ10 so you can enjoy all its benefits:

1. Forbidden Food Full of CoQ10 – Your best source of CoQ10 is something everyone is afraid to eat today, and you're advised not to eat it: red meat.

Even people who are nutrition advocates and are very knowledgeable about nutrition want to try to gloss over this issue... that there are *no* good vegetable sources of CoQ10.

If you're going to become a vegetarian, you are going to be profoundly deficient in CoQ10. Meat and fish are your only sources.

They'll find miniscule amounts of CoQ10 and say, "Oh, see, you can eat brewer's yeast and get CoQ10."

No you can't. You can't get an appreciable amount.

Spinach, broccoli, peanuts, and wheat germ? Not even close.

Whole grains? Forget it. Whole grains are not a significant or bioavailable source of CoQ10.

Avocados, almonds, grape seeds and sesame seeds do have a tiny bit of CoQ10, but not as much as animal meat.

And eating meat will not boost your cholesterol levels. One recent study proved that eating lean meat helps *reduce* LDL and *raise* HDL levels. It didn't matter what kind of meat.²³

The best food sources of CoQ10 are fish and meat, in this order:

One thing to remember is that these amounts are all the ubiquinone form. Your body needs 400 mg per day of this form of CoQ10. One kg of meat is about 35 ounces. That means you would have to eat more than two 16 ounce steaks to get 80 mg of the ubiquinone form of CoQ10 from your beef.

A better option would be grass fed animal meat. Grass fed beef has much more CoQ10 than feedlot beef does. That's because CoQ10 accumulates in the fat around the organs in animals raised on grass. Commercially raised animals are fed an unnatural and toxic diet of grains and hormones. Toxins then collect in the fat instead of nutrients like CoQ10.

Food Item	Coenzyme Q10 (mg/kg of meat)
Pork heart	126.8-203
Chicken Heart	116.2-132.2
Beef heart	113.3
Sardines	64
Beef liver	39.2-50
Red Mackerel	43-67
Pork	24.3-41.1
Beef	31.0 – 36.5
Pork liver	22.7
Chicken	14.0 – 21.0
Pork ham	20

2. Get The CoQ10 Your Body Uses – If you can't get grass fed animal meat and would like to supplement, I recommend the ubiquinol form of CoQ10. Ubiquinol is the form that already has the electrons your body uses for energy. And it's *eight times* more powerful than the old form, ubiquinone.

I suggest you get a minimum of 50 mg of ubiquinol CoQ10 every day. If you have high blood pressure, heart disease, high cholesterol, gingivitis, age related memory loss, chronic fatigue or are a vegetarian, increase your dose to 100 mg of ubiquinol per day.

Getting enough CoQ10 is simply one step in the process of putting the cell back on the road to full respiration. And as long as there's enough oxygen to support the process, it works. The two keys are mitochondria and oxygen. Which brings us right back to Otto Warburg.

Driving oxygen to your cells keeps the mitochondria humming along. And as long as your cells operate by respiration, cancer can't get a foothold.

Fortunately, there are other nutrients that support this critical process...

Mitochondrial Reactivation – Warburg’s Respiratory Enzymes

At the time Warburg was writing, scientists knew far less about the functions of many nutrients. But Warburg’s research led him to create a list of nutrients that directly support cellular respiration.

The most basic of Warburg’s “enzymes” is iron. And the reason is quickly obvious.

Iron is strong, but it has one weakness. It rusts like crazy. In other words, iron is prone to oxidation. It combines very readily with oxygen. And that makes it a super-efficient carrier to get oxygen from your lungs to your cells.

Your red blood cells contain lots of iron. It’s a major component of hemoglobin. And hemoglobin is what delivers oxygen to cells throughout your body.

When you get a little cut or scrape, you see red blood running out. But that blood wasn’t red till it hit the air. Minor cuts puncture veins, and these blood vessels carry blood that’s already given up its oxygen.

But the instant it’s exposed to the air, hemoglobin sucks up oxygen like a sponge... and the blood dripping from your cut appears red.

You’ll find iron in another important compound called myoglobin. Myoglobin stores oxygen in your muscle cells to ensure a ready supply when these cells need quick energy.

Iron also plays a role in the electron transport chain. The actual transfer of electrons is handled by special iron-containing compounds called cytochromes. Without them, your cells couldn’t produce energy.

You can probably see how important iron is to cancer prevention. It’s involved in cellular respiration all the way back to the lungs.

Adult males and women over 50 need about 8 mg of iron daily. Women from the age of 14 to 50 should get more. Up to age 18, about 15 mg, and 18 mg daily from 18 to 50.

Oysters, lentils, beef and prune juice are good sources of iron. Some women also take a tablespoon of blackstrap molasses when they’re menstruating, because it’s particularly rich in iron.

Iron supplements are controversial – especially for men. “Iron overload” could result in damage to the nervous system, and other vital organs. Don’t take a supplement containing iron without talking to your doctor.

The Oxygenating “Energy” Vitamins

The rest of Warburg’s respiratory enzymes are B vitamins – riboflavin (B2), pantothenic acid (B5) and niacin. All the B vitamins are involved in energy production, but we’ll focus on these three.

Animal research suggests that vitamin B2, also known as riboflavin, is key to successful iron absorption. So a shortage of this nutrient can spell disaster for your body’s oxygen supply.

B2 is also a building block for key coenzymes involved in the electron transport chain and in the metabolism of proteins, fats and carbohydrates. In other words, B2 is critical to both sides of the energy equation.

The government recommends 1.3 mg of B2 for men daily. Women need a little less – about 1.1 mg. Milk, eggs almonds and spinach are all good sources of riboflavin.

Vitamin B5 – pantothenic acid – is another key energy player. Your body needs it to make coenzyme A (CoA), which is also involved in the metabolism of proteins, fats and carbohydrates.

Your body also needs CoA to make the fatty acids used in cell membranes. Healthy cell membranes speed the movement of oxygen and nutrients into the cell for energy production.

Adults – both men and women – should get about 5 mg of vitamin B5 per day. Avocado, chicken, milk and sweet potato are some of the best sources of this vitamin.

Finally, there’s niacin, another B vitamin. Like B2 and B5 it’s involved in breaking down proteins, fats and carbohydrates.

Niacin is also necessary to accomplish the electron transport chain. It’s a building block for nicotinamide adenine dinucleotide phosphate (NADP), which aids in the electron-transfer process.

Guidelines call for men to get 16 mg of niacin a day. The target for women is 14 mg. Tuna, salmon, chicken and turkey are all rich in niacin. Peanuts and lentils are among the best vegetarian sources, but fall far short of the levels found in the animal sources mentioned here.

All three of these vitamins are intimately involved in cellular respiration. They’re also water-soluble. Any “extra” you take in typically washes out of your body before too long. For this reason, taking a supplement containing all three may be helpful.

These four nutrients are the basis for improving oxygen delivery and function within your cells. But there are still others.

Deliver Life-saving Oxygen When and Where You Need It

As we've seen, cells that get lots of oxygen don't "go rogue." That is, they don't become cancerous or cause disease. It's only cells that are starved for oxygen that turn to fermentation and become cancerous.

One of the pioneers of this thinking – though she may have missed a key element or two – was Dr. Johanna Budwig.

Dr. Budwig – who was nominated for the Nobel Prize in Medicine a remarkable 7 times – developed an anticancer diet. This diet included B vitamins identified by Dr. Warburg as essential to oxygen transport – along with Essential Fatty Acids – EFA's.

EFA's are "oxygen sponges." Combined with B vitamins, EFA's virtually *guarantee* more oxygen will reach your cells.

In one study, one group of healthy people got the essential fatty acids DHA and EPA and another got safflower oil for 6 weeks. Both groups did 20 minutes of bicycle exercise before and after DHA + EPA or safflower oil treatment.

When the researchers measured their hearts and found that the omega-3s increased both stroke volume and cardiac output... which means their hearts were taking in and using more oxygen. The safflower oil had no effect at all.²⁴

Dr. Budwig would have loved that study because one of his key discoveries was that healthy people's blood contains far higher levels of Omega-3 fatty acids than the blood of cancer patients.

Dr. Budwig combined some of Warburg's key nutrients with EFA's to provide a basis for multiplying the oxygen capacity of cells.

And it worked. Dr. Budwig's protocol claims an 80% or higher success rate – far and away more successful than mainstream approaches to cancer.

Dr. Budwig's research also echoes Warburg's. One of her four pillars of cancer is "oxygen deprivation."

Dr. Budwig's diet delivers plenty of the B2 (riboflavin) and B12 Warburg considered essential to providing adequate oxygen for cellular health. Plus potent EFA's – critical to oxygen transport and delivery through cell membranes.

I'm convinced the key to Dr. Budwig's success was focusing on EFA's. And here's why...

Omega-3s are “Oxygen Sponges”

You already know oil doesn't mix with water... but what it does mix easily with is oxygen. When oil goes bad it's actually oxidizing. In other words, it's combining with oxygen. Omega-3s oxidize at the drop of a hat. Which means they combine readily with oxygen.

In fact, you could think of omega-3s oils as “oxygen sponges.” Any oxygen that comes by, they'll suck it up like a thirsty sponge. And here's where it gets interesting. Because EFA's are key elements in all your cell membranes – including the membranes that surround the mitochondria – those little energy factories inside your cells.

When oxygen-rich blood passes by cell membranes, EFA's “sponge up” the oxygen, transferring it inside the cell – and inside the mitochondria.

EFA's are incredibly effective. They're so good at getting oxygen where you need it, even just supplemental omega-3 in the form of fish oil can increase oxygen efficiency.

In 2010, Australian scientists tested fish oil on rats.

Some rats ate a diet high in saturated fats. A second group was given a diet with lots of Omega-6s. Finally, a third group ate a diet with supplemental fish oil.

After 8 weeks, they tested the rats' leg muscles. The Omega-3 group's muscles simply worked better. Their muscles didn't tire as easily, and they used oxygen more efficiently.⁵

And it's not just rats. Omega-3 supplementation has a similar effect on humans.

In a 2008 study, researchers ran a blind test. They took 16 men in pretty good shape and split them into two groups. The first group took fish oil capsules. The researchers gave the other group olive oil capsules.

The scientists measured their subjects' exercise efficiency both before and after 8 weeks of supplementation.

The olive oil group didn't see much change riding exercise bikes before and after the 8-week study. But the Omega-3 group experienced several changes.

Their heart rates dropped – both during and after exercise – indicating their bodies were handling the workload more easily. Plus, they used less oxygen.²⁵

“But, wait a minute!” you may be thinking. “You just told me EFA's *increase* the amount of oxygen getting to cells. These guys used *less*.”

Sort of. Since their peak oxygen intake hadn't changed, they weren't getting more oxygen... but they *were* using it more efficiently. More of the oxygen they took in was getting to where they needed it.

In fact, they were using oxygen so efficiently, their heart rate dropped. *Their hearts didn't have to work as hard to deliver oxygen, because the EFA's were sucking the oxygen they had into their cells like crazy.*

And remember: This was just fish oil – EPA and DHA. But even boosting the EFA's that make up less than 5% of what your body uses boosted oxygen efficiency tremendously.

And that was in athletes – men whose bodies already use oxygen far more efficiently than average.

What's Missing from Your Diet

Your ancestors ate a very different diet from what the average human eats today.

Your distant ancestors ate very little – or no – grain at all. And plenty of wild fish and game. The typical modern diet is rich in corn and farm-raised livestock.

This change has resulted in an imbalance. For eons, your ancestors ate two kinds of EFA in relative balance. Their diet provided Omega-6 EFA's in slightly higher amounts than Omega-3 EFA's. Sometimes, intake approached a 1:1 ratio.

But the average American diet today includes up to 25 times more Omega-6 EFA's than Omega 3's.¹ But it's not just a problem of being out of balance...

The typical American diet is sadly lacking in Omega-3's.

And one reason is our sources of these essential fatty acids are drying up.

Beef used to be a great source of Omega-3's. But not anymore. Not since giant factory farms began fattening cattle up with grain.

Today's cattle are descendants of wild bovines that were tamed by our distant ancestors. For countless centuries, wild cattle – and their eventual domestic offspring – ate a diet of grasses. And these grasses are a good source of EFA's – specifically, Omega-3's.

But factory-farmed cattle eat very little – if any – grass. And the grains they *do* eat don't contain high levels of Omega-3's. So beef is no longer the rich source of Omega-3 fatty acids it once was.

Unless, that is, you buy grass-fed beef. Organic, grass-fed beef has much higher levels of Omega-3's than grain-fed. So it can help you move towards a more natural balance of fatty acids... and increase

your intake of Omega-3's.

In 2013, the Weston A. Price Foundation had a lab contain the fatty acid content of samples of grass-fed and grain-fed beef. The grass-fed beef had 66% less Omega-6 fatty acids – and 400% more Omega-3's – than the grain-fed.²

The ratio of Omega-6 to Omega-3 was 1.4:1 in the grass-fed sample. In the grain-fed beef, the ratio was more than 16:1.

Fish is the other good source of omega-3, and the best fish sources of omega-3s are fatty cold-water fish like salmon, lake trout, sardines, and pollock. But even these are now raised on an unnatural diet and don't have the omega-3s they once did.

So while normally, I recommend foods as your best option to get nutrients, omega-3s are a case where you will need to supplement to get enough for improving oxygen transport.

I used to take fish oil, which *was* the best option for getting EPA and DHA, two of the essential fatty acids that make up the omega-3s. I would take it with a big meal. I ate half the meal, then I would take the fish oil. Then eat the rest of the meal. Otherwise it wasn't worth it to have the fishy smell.

About three months ago, I started taking something else instead. A supplement my team and I formulated that includes krill oil and squid oil.

It's so far superior to fish oil that you can't even call it fish oil. Why?

First, krill oil has more DHA than fish oil. But what's more important is that the DHA in krill oil is stored in a different biochemical form than fish oil. Krill store most of their omega-3s as phospholipids. These are much simpler to digest than the triglyceride form you find in fish.

That means krill delivers more EPA and DHA directly to your cells than fish oil can. And the reason the omega-3s in krill help with oxygen so much is that attached to each phospholipid is an antioxidant called astaxanthin. Astaxanthin can cross the blood-brain barrier and deliver the benefits directly to hard-to-penetrate tissue.

Even better, krill oil has a little-known omega-3 called DPA.

DPA has its own benefits, including helping you maintain a normal inflammatory response, and reducing the amount of fat in your liver to help you have normal triglycerides and cholesterol.²⁶

DPA also helps protect your brain by keeping the fatty protective layer that covers the nerves and cells of your brain intact. This fatty layer is called myelin, and DPA helps maintain its integrity and strength throughout your lifetime.²⁷

And a new study shows that the DPA in krill oil also has the unique ability to make you feel better and maintain a better outlook.²⁸ Maybe that's because DPA helps keep oxygen in the cells of your brain very efficiently.

The other omega-3 source I now use is calamari or squid oil. It's high in DHA like krill oil. But the omega-3s in squid oil are exceptionally stable.²⁹ That means squid oil doesn't turn "rancid" like fish oil can. It stays fresh and doesn't oxidize. You get all the benefits without it going bad before you can take it.

I recommend you replace your fish oil – or start to supplement if you aren't taking any extra omega-3s – with a combination of krill and squid oil omega-3s from the purest sources you can find.

It's also important to remember that taking in too many omega-6 fatty acids causes inflammation, which shortens telomeres ... and leads to mitochondrial dysfunction and an inability to use oxygen in your cells. So stay away from farm-fed fish and processed meats. These man-made creations have unhealthy amounts of omega-6.

Other Potent Oxygen Activators

A few other nutrients may help you keep your cellular respiration at peak efficiency. Which, in turn, can help prevent the conditions that leave you wide open to cancer.

Alpha Lipoic Acid (ALA) is a potent antioxidant. And it appears to have unusual effects.

In animal studies, ALA improves mitochondrial function. Researchers have even used the word "rejuvenate" to describe it.³⁰ According to some researchers, ALA boosts oxygen use – a sign of greater energy production – and enhances membrane permeability.

But ALA shows very different effects on human cancer cells. When scientists exposed human colon cancer cells to ALA, it acted as an *anti*-antioxidant. Instead of mopping up free radicals, it triggered the creation of more of them. And set a process in motion that resulted in cell death.³¹

Our next nutrient is also an antioxidant of sorts. But this one's a mineral.

As cellular respiration creates energy, it also creates by-products – free radicals. As you boost oxygen use, you'll also boost production of these damaging molecules. So, to keep the process running smoothly, you need a tremendously powerful antioxidant.

Luckily, your body makes one. Or rather, it makes several. SOD – superoxide dismutase – is your body's top antioxidant. And as I said, it comes in several varieties. The type that works in your mitochondria is called MnSOD.

The "Mn" stands for manganese.

You don't need a lot of manganese in your diet. But the small amount you need, you need very badly. Manganese is critical for wound healing, building strong bones, and to keep your body's energy process running. Cut off the manganese, and free radicals will soon overwhelm your mitochondria. And that spells disaster.

Getting enough manganese is fairly easy. You'll find good amounts in most dark green leafy vegetables. It's also abundant in pecans and some other nuts. Beans are another good source.

Men should get at least 2.3 mg daily. Women need about 1.8 mg. But don't go overboard with manganese. The safe upper limit is only 11 mg per day. More than that could be toxic.

The Oxygen Multiplier

Finally, let's look at a third important antioxidant. One that studies link directly to mitochondrial health and your ability to use oxygen in your body.

It's Glutathione, one of your body's most powerful antioxidants ... but also essential for redox (*reduction-oxidation*) reactions. And cellular respiration is a redox reaction.

To keep it simple, enzymes act on GSH to make nutrients and oxygen into water and ATP – your cellular energy source.

Animal studies show that mitochondrial damage results from a shortage of GSH – both in muscles³² and in the brain.³³

Your body can make this powerful antioxidant, but you can boost your levels even more. And it's incredibly easy.

Step #1: The most natural way to build more glutathione in your body is eating foods high in glycine and cysteine, two of the three amino acids that make glutathione. Meat, eggs and fish are your best sources. But you can also get glycine and cysteine from yogurt and sunflower seeds. Also, horseradish, broccoli, cauliflower, cabbage, red peppers and Brussels sprouts contain cyanohydroxybutene which increases glutathione levels.

Step #2: Glutamine is the third amino acid you use to make glutathione, and your digestive system relies on it. You make glutamine from another amino acid, glutamate, which powers the cells of your gastrointestinal tract.

And did you know that the friendly little defenders in your gut called “microflora” help turn glutamine into glutathione? That's because these flora help you make a form of vitamin B3, or niacin, which helps the conversion.

Like any amino acid, meat is your best source for glutamate. But you can also get it from raw spinach (there is very little left after spinach is cooked). To protect your flora so it can produce glutamine, eat fermented milk products like yogurt, kefir and even buttermilk. You can also take probiotic supplements.

If you can't get enough glutamate in food, take 1 gram (1,000 mg) of L-glutamine three times a day.

Step #3: These nutritional supplements will boost your glutathione:

- ▶ Alpha Lipoic Acid (ALA) – Works throughout your body helping regenerate glutathione making it active again, increasing its effectiveness. Take 250 mg a day.
- ▶ Melatonin – Increases the activity of enzymes that help metabolize glutathione in your cells.⁵ Take .3 to .5 mg a half hour before bedtime.
- ▶ Bilberry – The extract of bilberry seems to keep glutathione from being depleted, and increases its activity. Take up to 100 mg a day.
- ▶ Grape Seed Extract – Helps switch on your glutathione production. 60 mg a day.
- ▶ Turmeric – This spice derived from the rhizomes of *Curcuma longa*, a member of the ginger family, enhances the synthesis of glutathione. You can find Turmeric's active ingredient, curcumin, as a supplement. Take 500 mg twice a day.

Step #4: There are also three reliable glutathione precursors – nutrients that your body uses directly to make glutathione. They are:

- a. Vitamin C. A team working at Arizona State University discovered that simply taking 500 mg of vitamin C daily was enough to boost GSH levels.³⁴
- b. N-acetyl cysteine. Many clinical trials show NAC directly boosts production of glutathione and completely reverses depletion. Take from 1,800 mg to 2,400 mg a day.
- c. Selenium. You use it in the process of synthesizing glutathione. All you need is 55 mcg of selenium a day. Eating one Brazil nut each day more than does the trick.

Step #5: I recommend you help your body build its glutathione levels up naturally with food and amino acids. But if you can't get enough of those, you can take glutathione supplements. You will need from 1 to 2 grams per day. About 80 percent of most glutathione supplements are absorbed and used by your body.

These are all some of the most powerful ways you can use nutrients to boost cellular respiration. Next we'll look at how to get plenty of oxygen into your body, blood, tissues and cells to keep the process rolling ...

Chapter 4: Get the Oxygen Boost That Could Save Your Life

Today, we have succeeded in completely removing ourselves from our native world.

What's worse is our own powerful ability to adapt – our natural adaptive response to our surroundings – has got us into big trouble because we're longer faced with the same physical and metabolic challenges.

You see, we are still perfectly adapted for a life and death struggle between predator and prey. Yet we no longer have to hunt for our food. We grow it. And we no longer have to chase our food, or fight off predators, so we've become more sedentary.

This has had a disastrous effect on our bodies not only because they're not as lean and strong, but also because we **don't get enough oxygen to our tissues**.

And you may NEVER know your cells are being starved of oxygen.

You simply feel the effects like headaches, chronic pain, constant fatigue, lack of focus and memory loss. Over time, those dying cells lay the foundation for heart failure, dementia and cancer.

But now you can do something about it.

MORE oxygen refreshes your mind, repairs your aging brain, purifies your blood, and powers up your tired heart. It even destroys cancer cells on contact.

Get more oxygen into your cells and you can wash away toxic heavy metals... flush out the buildup of chemicals, pesticides and oxidized fats... revive stressed-out glands and breathe new life into old, dying cells.

Here in my clinic, I use a new form of oxygen therapy that immediately doubles the amount of oxygen that gets to your brain. I get even better results when I increase the amount of oxygen your heart can pump in a single beat.

My program can boost oxygen delivery to your cells by up to 2,000% in a matter of minutes. And it doesn't require any special equipment or expensive treatments.

It's a new type of exercise I developed and designed to be exactly what your body needs to increase your oxygen delivery.

Here's why: When you exert yourself at a high level for just a few minutes, circulation – and therefore oxygen transport – goes through the roof.

Compared to the *light exertion* of cardio and aerobics, blood flow to your lungs, and the amount of oxygen pumped by your heart increases by more than 400 percent.

And when you compare peak exertion to normal, daily activity, the oxygen boost is close to 2,000%.

The difference is important. Your brain gets almost ***twice as much blood and oxygen*** during exertion with my new type of exertion than it does with light or medium exercise.

And exercise is essential for more oxygen...

You see, About 98.5% of the oxygen in your blood is attached to hemoglobin molecules. While you're resting, hemoglobin pushes only 20 to 25% of that oxygen to your tissues. The rest stays in the bloodstream. It takes exercise to get hemoglobin to release oxygen to the tissues where you need it.

Cardio and aerobics can't do the job. Oxygen diffusion to the tissues requires higher intensity exertion.

My new form of exercise pumps oxygen-rich blood to your vital organs by up to 18 times more than light exercise such as walking.⁸ I call this new category of exercise P.A.C.E. – Progressively Accelerating Cardiopulmonary Exertion. It increases your cardiopulmonary power to give you:

- ▶ 400% more oxygen to your lungs
- ▶ 1733% more oxygen to your muscles
- ▶ Nearly double the oxygen to your brain
- ▶ 331% more oxygen from your heart

Let me show you why it works...

Challenge Your Lungs to Grow Stronger

Think back for a minute to when a gym used to be a gymnasium, and we got a huge oxygen boost from those strenuous but fun exercises. We were healthier and had less chronic disease.

Then modern diet and fitness advice got us off on this wrong track. It's a combination of a well-intentioned person who comes up with a theory that becomes accepted as fact, and the continuation of the theory because of financial incentive.

In this case, "aerobics" and cardio training instruction became accepted fact, and the gym industry has become come a \$200 billion business.

Any activity beats no activity, but that's not a reason to *do* the activity. Having cardiovascular

endurance through “cardio” should never have been recommended as a health goal.

In fact, if you do these exercises for long enough, it makes your lungs weak and old before their time ... and wipes out your capacity to deliver enough oxygen to your tissues.

What they should have recommended was training for cardiopulmonary capacity.

When I was a kid, we had YMCAs and old-style gymnasiums where people went to play basketball. There were boxing gyms, athletic clubs and tennis clubs and that sort of thing.

My uncle taught a class to children where they would learn to walk on their hands and do handstands and other body weight movements.

The interesting thing is these old-style gyms were healthier. The things they told you to do back then were good. The instructors looked good and stayed fit into their later years. They were the “health nuts” who did lots of sit-ups and pushups and chin-ups.

They mimicked the natural movements our ancestors used to have to do out of necessity each day, and it kept them fit and strong.

Those movements gave our Paleo ancestors strength, power and reserve capacity ... exactly what your heart and lungs need most to deliver oxygen for real world demands.

Yet for years, trainers and so-called “experts” have been advising you that to become fitter, you need to do increasingly longer and more regimented workouts, instead of the healthy, intense exertion we evolved to need.

The truth is, there’s a role for endurance, but training for it is not only not enjoyable, it’s not health enhancing. Endurance exercises make your body think the environment is bad. That it’s stressful. So you start to break things down, becoming injured and inflamed.

We’ve traded bursts of intense exertion and the oxygen boost that goes along with it for long-form exercise that zaps our ability to deliver oxygen.

To make matters worse, without an understanding of the cause of problem, pundits have advocated the wrong solutions. Many only take you further from your natural challenges and aggravate the situation.

The good news is that reversing this problem is easier than you might think.

You can re-oxygenate your bone marrow, cartilage, brain, heart, muscles and organs with physical challenges that are much shorter, but more intense – the same way our ancestors did. You’ll feel energized, motivated and ready to take on any challenge. The key is to build back the reserve capacity

our modern world has taken away. You do this by incrementally challenging your heart and lungs, and then accelerating the challenge.

Maximum Oxygen Capacity Is the Key

All of our power for healthy living starts with how we breathe. Think about it: Our lives begin and end with a single breath. The problem is that as you age, your ability to breathe gradually decreases. If you don't do anything about it, you'll lose 45% of lung capacity by age 75.³⁵

This has serious implications for your overall health. Less oxygen makes its way to all your vital organs, your muscles, and over time, this can lead to potentially deadly health problems.

A study published in the European Society of Cardiology reported that even a moderate decline of lung volume increases your risk of heart disease by 200%. This is true even for those who have no family history of heart disease.

The Copenhagen City Heart Study found that a loss of lung volume raises the risk of first-time stroke by over 30 percent and boosts the risk of fatal stroke by 200 percent.³⁶

The way I help my patients reverse this loss of lungpower and raise their ability to deliver oxygen is by increasing their VO2 max.

VO2 max measures the amount of oxygen your lungs can use while you're exercising at your maximum capacity. And the more oxygen you can get to your body, the better your body works.

VO2 max is usually written in milliliters of volume per kilograms of body weight (ml/kg) because oxygen and energy needs are different depending on how big you are.

This chart shows typical VO2 max measurements for non-athletes.

Notice that VO2 max typically declines with age.

But here's something that's news to most doctors: you don't have to let it.

Modern medicine always believed that VO2 max was unchangeable. But that's because they were looking at the wrong thing. The endurance exercises they've recommended for 50 years don't increase it.

Age	Male	Female
10-19	47-56	38-46
20-29	43-52	33-42
30-39	39-48	30-38
40-49	36-44	26-35
50-59	34-41	24-33
60-69	31-38	22-30
70-79	28-35	20-27

So of course you can't improve oxygenation with cardio. You need *power*, not endurance.

Studies show your risk of death from disease gets lower and lower for those who exercise for lungpower, not endurance. That's the key to increasing VO2 max and improving lung power for better health.

You remember those powerfully-built Nordic skiers we saw at the winter Olympics? They have much higher VO2 max than the skinny endurance runners you'll see at the summer Olympics.

Why? Because Nordic skiing is much more intense. Skiers expend huge amounts of energy pumping their legs and arms for power. Like sprinters do. This kind of exertion builds real power and increases your lungpower and how much oxygen you can deliver to your body.

Meanwhile, if you want to know how powerful your lungs are, that's something else you won't find out from most doctors. They aren't aware that you can improve lungpower, so they don't bother to measure it during a doctor visit.

Yet it's easy to do, and I measure it at my clinic. And the prescription I give to improve lungpower is my Paleo PowerFit program.

It's the next evolution of my P.A.C.E. program, and it's helped me tremendously. I recently measured my lung strength with a "VO2 max" test at my clinic. I scored better than what an 18-year-old is expected to do. Not bad for someone in their late 50s.

The secret is to exert yourself with intensity. One study found that during the months when runners ran *faster* – when they increased the challenge to their lungs – their VO2 max went up. When they just jogged at low intensity, their lungpower shrank.³⁷

Another study divided 36 people into three groups. One trained for intensity, one for duration (like jogging) and the other for strength. The intensity group had the most significant fitness improvement. It was the only group that had their lungs grow stronger.

Their VO2 max improved by an average of 14%.³⁸

Become PowerFit: Build The Heart Of A Champion

When I go to Africa, I sometimes have to climb all day depending on whether or not I'm on a gorilla trek, mountain hiking or trekking through the jungle. Sometimes the high altitudes are a real challenge. But my lungs are up for it because of Paleo PowerFit.

When I play tennis, I play for two hours. But it's fun because I'm running all over the place in lots of different positions. I'm competing with another person, and I'm fully engaged and focused.

If you're doing something you don't enjoy for that long – more than about 30 minutes – your body considers it stressful.

Oxygen Secret that Destroys Invisible, Disease-Hiding Fat

Even if you're outwardly thin, there's a type of fat that can accumulate around your organs without you ever knowing it.

It wraps around organs like your heart, liver, and kidneys and is far more dangerous to your health than subcutaneous fat, which lies right beneath your skin. It fills up all the space in your abdominal cavity, so there's no room left for your organs, nerves, and vessels to function properly.

Visceral fat is a storehouse for toxins that cannot be cleaned by the liver and pump directly into your body. It causes inflammation, and can lead to the inflammatory diseases diabetes, high blood pressure and obesity. And cancer.

As published in the American Journal of Human Biology, doctors discovered that visceral adipose tissue volume is inversely proportional to the length of telomeres. **In other words, as visceral fat volume went up, telomere length went down.**

What does this have to do with oxygen?

Pumping oxygen into your tissues blasts away visceral fat.

In a study from Wake Forest University, researchers looked at 112 overweight women. They found the same thing I discovered years ago that helped me develop my PACE program: more

intense exercise reduced body fat better than typical aerobics.

But, they also found that it's the increased oxygen uptake that destroys visceral fat. For all the women in the study, the ones who took in more oxygen burned off more of the dangerous visceral fat.

Another study took a look at why inflammation goes down when you increase VO2 max. Not to get too science-y on you, but if you remember, VO2 max is a measurement of the maximum amount of oxygen your lungs can deliver to your body while you're exercising at your peak capacity.

Well, buried inside the study, I found a nugget that the researchers glossed over, but that's hugely important. When you increase VO2 max is blasts away visceral fat. And it's the reduced visceral fat that reduces inflammation.

Less visceral fat decreased C-reactive protein (CRP), fibrinogen and even the amount of white blood cells the body has to pump out to fight inflammation. And it all happened because of increased oxygen to the tissues... which, by the way, also shot HDL through the roof!¹

1. Giallauria F, et. al. "Inflammatory markers and visceral fat are inversely associated with maximal oxygen consumption in women with polycystic ovary syndrome (PCOS)." Clin Endocrinol (Oxf). 2009;70(3):394-400.

That's when you start to produce the stress hormone cortisol, you burn yourself out with adrenaline, and your capacity actually shrinks instead of increasing.

That's where Paleo PowerFit comes in. With Paleo PowerFit I show you how to build back your reserve in only 12 minutes. Then your workout is done and you have plenty of time left over to enjoy yourself.

Because it makes sense to work out. But you want to use your workouts to build lung capacity. Then you'll have more fun during recreational activities when you play a sport or do something fun.

To return a healthy reserve capacity to your heart, you want to train for lungpower. That means changing your focus. Instead of working out longer and longer, you fix your intent on increasing the challenge to your lungs a little bit more each time, and your lungs will respond to the challenge.

You continually challenge your peak of intensity, never quite reaching it. Those small increases in intensity are called progressivity. It's what makes Paleo PowerFit so effective for increasing your ability to deliver oxygen.

Jogging or exercising for long periods of time is not progressive. Those kinds of long-term, low-power exercises wipe out your ability to deliver great amounts of oxygen, because they don't challenge your current capacity.

With Paleo PowerFit, you challenge that capacity with each period of exertion. As you raise your level of intensity, you up the challenge, and grow your lungpower.

This gives you the extra capacity your lungs need to do the things you want to in your everyday life. Like take a long walk with your dog. Roughhouse with the kids. Have an intense session in the bedroom with your partner.

The secret is pushing yourself in your workouts so that you have to catch your breath.

When you breathe hard, your body is trying to get more oxygen faster. By increasing the intensity of your workouts, your body responds. Your lungs get stronger and your capacity increases so that you can be ready for the next challenge.

If all you ever do is "aerobics," you work out for longer, but you never challenge your heart and lungs, and your oxygen delivery disappears.

Having greater lung capacity means you have the ability to get more oxygenated blood faster to the tissues that need it the most, and deliver life-giving oxygen to your whole body. Having that kind of renewed strength and stamina will:

- ▶ **Keep You Active All Day Long:** Imagine doing all the "big" chores like doing all the yard work, cleaning out your garage and still having plenty of energy for a night out.
- ▶ **Stop You From Getting Sick:** Super-sized lungpower fights infection and keeps you disease resistant – even the common cold is no match for blood that's full of fresh oxygen.
- ▶ **Stop You From Getting Tired:** When your lungs shrink, your oxygen supply plummets. This makes you tired, sluggish and ready for a nap. With a robust set of lungs, you'll make it through your day without a single break.

You can choose any exercise that will make you stop and pant for breath. It could be as simple as going up and down the stairs, jumping rope, or performing traditional body weight exertion.

I design conditioning programs for my patients with this goal in mind. And it's how I designed Paleo PowerFit.

Let me show you how using its principles can get you an incredible boost of oxygen to all your tissues by doing the opposite of what all the fitness “gurus” have been saying for years.

First, keep your total exertion time to no more than 12 minutes. Endurance exercises that last for an hour at a time or more mimic stress. In your native environment, this would signal your body that times are not good, and you have to conserve energy, store fat and slow your metabolism.

By keeping the challenge brief, you tell your body that the environment is healthy, and it’s OK to melt off the fat and build lean muscle.

Second, copy natural movement as much as possible. Forced, man-made exercises like training for endurance or individually training one muscle at a time with weights won’t rebuild your heart and lung capacity. They rob you of it.

And running on a treadmill is worse. It undoes your neuromuscular wiring because you’re not moving, it’s moving under you. It’s not natural. Instead, use body weight movements, sprints, or swimming to exert yourself. Even an elliptical machine is better than a treadmill. It more closely resembles sprinting or climbing.

Exercises that put your body through natural patterns of movement train your body from thought to action. This is essential if you want that new muscle to be capable of doing anything. When you call on your muscles in real life, they move against the resistance of your own body weight. They are the best way to build functional strength.

Body weight exertion is also much more effective in strengthening ligaments and tendons. Bottom line – nature didn’t build your muscles to lift weights or run for hours. To build strength that you can use, work against your own body weight.

Third, incrementally increase the intensity of the challenge. When you focus on how intensely you’re exerting yourself, and increase it bit by bit, you’re forcing your heart and lungs to adapt to what you’re asking of them. You’re using your body’s natural adaptive response to boost oxygen delivery.

Just like our bodies adapted – for the worse – to an environment without predators, you can change it back by mimicking the challenge our predators presented. Brief periods of exertion followed by rest. We’ve discovered that three sets of exertion is best.

As you get more fit, your ability to deliver oxygen will increase. What felt like moderate intensity for your first set a little while ago will become easy fairly soon. So you have to be progressive with your intensity to keep building lungpower.

Fourth, accelerate the changes. When you’ve regained your native capacity, it’s time to get more energy and retrain your metabolism so you melt fat off naturally.

You can accelerate in a few ways. You might rest and recover between exertion sets for 30 seconds less than you're used to. Then a minute less. Eventually, you'll need little recovery time as your heart and lungs regain their power.

And when you accelerate and get to your target level of intensity faster, you send your body the signal to store energy in your muscles for quick use. Especially in your heart. It's energy you can feel – horsepower on demand.

Even if your current lifestyle is relatively inactive, Paleo PowerFit will help you dramatically reverse the effects of our modern environment.

Just use these simple techniques and the workouts that follow, you'll recreate the naturally fit and lean state of health you were designed for and give yourself the ability to drive oxygen to all your cells and beat inflammation and modern disease.

Chapter 5: Drive Oxygen Into Every Cell for Complete Healing

The Oxygen Therapy that Saved Ronald Reagan's Life

In 1985, President Ronald Reagan was scheduled to attend the G7 economic summit in the town of Bonn, Germany...

And the media created a huge firestorm when Reagan added a visit to a German war memorial cemetery at Bitburg to his schedule...

But what no one knew at the time was that Reagan had another, secret appointment...

You see, Reagan had colon cancer.

I know what you're thinking. "Wait a minute... colon cancer kills fast. But Reagan didn't die of colon cancer. He lived to the age of 93 even though he had Alzheimer's..."

You're right. Colon cancer didn't kill Ronald Reagan.

He beat it.

But not with the cancer surgeries and chemotherapy that were standard at the time.

Oh, he had those... Reagan's medical history reveals that he had colon cancer surgery in the U.S. in

1985. A Dr. Oller performed the surgery, and Reagan's doctor, John E. Hutton, "participated" in the operation.

Yet in 1985, Reagan still visited Dr. Hans Nieper.

There are no official records of Reagan's visit, and no reports on what he was treated for.

But in 1987, Dr. Nieper, who was famous for curing patients of cancer using a special, natural therapy that didn't require surgery, and that saved 50% of "terminal" patients, was interviewed by videographer Jeff Harsh.

Dr. Nieper talked about his colon cancer work.

He told Harsh that he wouldn't divulge the name of his patients ... but said, "President Reagan is a very nice man."

Then he added: "You wouldn't believe how many FDA officials or relatives or acquaintances of FDA officials come to see me as patients in Hanover. You wouldn't believe this, or directors of the American Medical Association (AMA), or American Cancer Association, or the presidents of orthodox cancer institutes. That's the fact."

Reagan was already an advocate of natural therapies to fight cancer.

In 1982, President Ronald Reagan declared April "Cancer Control Month."

He issued Proclamation 4919, and wrote:

"Research has demonstrated that lifestyle and environment play a crucial role in the development of cancer ... We have developed greater understanding of the effects of exposure to carcinogens and ... have also learned the importance of diet and nutrition as factors in the development and prevention of cancer."³⁹

In the same year, 1982, Reagan also fired the entire U.S. Cancer Advisory Board.

The deposed doctors fired back at Reagan in a letter complaining that they were all active doctors and researchers, but were replaced by people who weren't part of the accepted cancer treatment establishment.⁴⁰

If you remember, Reagan also had surgery to remove some polyps on his colon in 1987 ... but they were benign.

Reagan had been saved by a therapy that is not FDA approved for any use, yet over 8,000 MDs and licensed health practitioners in Germany use it in their practices.

15,000 European practitioners use it as well, either alone or as a complement to other therapies. Russian doctors have been using it successfully for the last 15 years, and it's been used for years in Cuba, the Caribbean, and Mexico.

What is this radical therapy that attacked Ronald Reagan's cancer so effectively?

Ozone therapy.

Ozone therapy was practiced in the USA from the late 19th Century through the 1940s. But since the 1940s, the FDA and the American Medical Association have come down hard on ozone treatments.

They want you to think it's wacked-out craziness, to be put in the same category as snake oil and healing crystals. But the truth is that ozone is simply O₃ instead of O₂. That means there's an extra bit of oxygen that the molecule can diffuse into your tissue when it gets inside your body. Not exactly crazy stuff, despite what the mainstream wants you to think.

Scientific research and "double-blind placebo controlled" clinical trials that have been accepted for publication in professional medical journals have led to the term "Evidence Based Medicine." This means that the medical conclusions made in a published study are generally objective, real, and to be trusted. Ozone therapy has been formally studied, and published in medical journals, and is also "Evidence Based Medicine" – meaning the mainstream is contradicting itself on ozone's effectiveness.

Two excellent studies that appeared in the *American Journal of Neuroradiology* evaluated oxygen and ozone therapy for treating lumbar disk herniation. Three hundred patients were given a single injection of ozone. Six months after this single injection, over 70% of the people treated had either an

The Amazing 11: Ozone's Most Powerful Healing Properties

1. Ozone stimulates the production of white blood cells, increasing immunity and disease-fighting ability.
2. Ozone increases interferon levels. Interferons are globular proteins that inhibit viruses from reproducing.
3. Ozone stimulates the production of Tumor Necrosis Factor. TNF is produced by the body when a tumor is growing, and helps kill tumor cells and inhibit the spread of the tumor.
4. Ozone stimulates the secretion of Interleukin-2, which helps you produce more and more powerful T-cells, the "killer" immune cells your body uses to fight the worst diseases.
5. Ozone kills most bacteria even at low concentrations. Very few types of bacteria can live in an environment composed of more than two percent ozone.
6. Ozone is antineoplastic, which means it inhibits the growth of cells that rapidly divide, like cancer cells.
7. Ozone breaks down arterial plaque and can clear blockages in even very small blood vessels.
8. Ozone increases the flexibility and elasticity of red blood cells, allowing oxygenated blood to deliver its benefits for days in your body.
9. Ozone accelerates the Krebs Cycle, helping you burn off carbs as energy instead of storing them as fat.
10. Ozone makes the antioxidant enzyme system more efficient.
11. Ozone degrades petrochemicals and helps chelate them from your body.

excellent or good outcome.

A later study looked at ozone therapy for back and sciatica pain ... the authors wrote that ozone “has proved highly effective in relieving acute and chronic low back pain and sciatica. Therefore we suggest the administration of t[ozone] as a first-choice treatment to replace epidural steroid infiltration to avoid surgery.”

Ozone produces miracle healing once it gets inside because it initiates unique metabolic processes. Both healing and detoxification occur very quickly, as I’ve shown you.

There are a few different ways of getting ozone into your body.

At home, you can breathe ozone in, get it through a bath, a steam cabinet or sauna, or in your drinking water.

You can also buy an ozonator and set it up in your bedroom so that when you sleep at night you are breathing ozonated air all night long.

Simply place the ozonator high up to distribute the ozone better. Ozone has a slight odor that most people don’t even notice. But if you find it a bit acrid, all you have to do is turn the ozonator down a bit.

Remember, like some detoxifying agents, ozone can cause a healing reaction. What that means is if you feel a slight irritation of even cough a bit after turning on the ozonator, it could be that you have a slight bronchial infection or other condition. Ozone prompts a healing reaction and once that begins, the irritation goes away shortly.

You can also buy an ozonator for your home drinking water.

Simply ozonate water for 5 minutes and drink within about 20 seconds to get the full effect. One glass a day is a good place to start, You can get excellent ozone systems inexpensively from Nature Kleen, Clean Stream, and oxygenorchard.com.

The *o3 Pure* and the *Atlas Ozone Boy* attach to your faucet if you don’t want to install a system under the sink.

You can also get bubbling ozone for your bath. Most will have either a mat that goes in the tub, or a hose with a diffuser at the end of it to ozonate the water.

The ozone works immediately to oxidize dead skin and other waste products. At the same time, it gives you a huge amount of activated oxygen. And it creates negative ions in the air at a greater rate than air ozonators, which can improve your mood, lower stress and help you breathe better.

Of course, for more serious concerns, you may want an ozone therapy that's more like the one Ronald Reagan got. In that case, here are the most-used ozonating therapies employed by doctors around the world:

Ozone IV (Direct Injection). Doctors use a butterfly needle inserted in the vein and infuse 20 - 50 CCs of ozone gas directly slowly, at the rate of perhaps 1 – 2 CCs a minute. This is the correct way of doing it and the safest method. However, it takes a lot of time, and the practitioner must have a lot of expertise, so if you want to get this kind of ozone, make sure you know and trust the practitioner for your own peace of mind.

Ozone MAHT (Major Autohemotherapy). What is done with MAHT is that the practitioner will take out 200 - 250 CCs of blood from a vein. Then they'll mix it with ozone outside the body in a sealed containing unit with an equal amount of ozone and some heparin (an anti-coagulant). The mixture is reinfused back into the body.

Ozone Minor Authemotherapy. Basically the same as MAHT, but a much smaller amount of blood is ozonated and it's re-injected into the muscle rather than the vein.

Ozone Rectal Insufflation or RI. A doctor will use a standard catheter and introduce ozone into the rectal area. Usually around 200 - 1000 CCs are suffused for about 20 min. or so and it's then released by the patient. You can also use the same method to deliver an ozonated water enema.

Ozone Therapy RHP. This uses a large gauge needle for a vein in each arm, one going out and one going in. Then the practitioner will use a specialized pump that moves the blood from one arm to the other, simulating normal blood flow. In between is another component with a very fine filter to mix the blood and ozone, filter out some unwanted blood components like uric acid, and to allow excess oxygen and ozone to escape if it's not used by the blood.

This method is supposed to cleanse the blood of viruses, bacteria, parasites, and also uses a very small amount of heparin to keep blood flowing from one arm to the other. It allows the ozone to react with the blood before it's reintroduced, meaning that no gas is introduced into the body. It's also very fast and safe.

For a list of resources you need to find an ozone therapy practitioner near you, there are a few places you can go to find information:

- ▶ Start with the American Academy of Ozone Therapies:
<http://www.aaot.us/>
- ▶ You can also visit Oxygen Healing Therapies:
<http://www.oxygenhealingtherapies.com/>
- ▶ And here's a fairly comprehensive ozone therapy doctors and clinics directory:
<http://www.o3medicalozone.com/ozone-clinics>

The Oxygen Healing Miracle: HBOT

I've just received approval on our plans to add two new large rooms onto my wellness center here in South Florida. One will be for the DEXA machine that can measure bone mineral density and body composition. But the other will be for hyperbaric oxygen.

It's the most exciting therapy I've even introduced at my center and here's why:

Surrounding the body with oxygen at high atmospheric pressure cause rapid and very substantial angiogenesis. You get new blood vessel formation in areas that are very poorly perfused.

How does it happen? The lining of your blood vessels – the endothelium, which produces nitric oxide, if you recall – as well as your arteries and capillaries, have stem cells. And when they are stimulated by oxygen, they know there is more oxygen available and they want to get it out to the tissues that need it. So the stem cells proliferate, and build new channels.

This is the solution for healing all of those poorly perfused tissues that can't heal. When you get a shoulder or knee injury, the reason it seems to never heal is you don't have good circulation there. You can't get nutrients to the area. You can't get the waste products removed. If you use hyperbaric oxygen, now you have a channel for delivery of glucosamine, magnesium, and the minerals you need to lay down new cartilage.

And, HBOT is the best thing you can use to heal neurological injury. It makes the brain heal after stroke, spinal cord injuries... imagine what we'll be able to do when we put together hyperbaric oxygen (HBOT) with stem cell therapy and nutrients.

In fact, Dr. Ron Rothenberg is injecting stem cells into the carotid artery to treat Alzheimer's disease...

What does that have to do with oxygen?

Alzheimer's is reversed by oxygen therapy alone because it helps get more circulation to the brain to remove the waste that builds up and causes the disease. You put HBOT together with stem cells and it's going to be very powerful, especially for anti-aging.

And here's what gets me the most excited ...

We've been able to prove that we can decrease the number of critically short telomeres in the white blood cell population of lymphocytes and polymorphonuclear leukocytes. But they're in the blood where we've proven you can get telomerase activators in good concentrations.

We don't know about telomerase activators' ability to get into hard to perfuse tissues... but what if you put a telomerase activator together with hyperbaric oxygen? Now you get a decreasing number of

critically short telomeres in a place that's never been able to benefit from that before... And we know that at the site of injuries, the tissue has critically short telomeres.

Hyperbaric oxygen seems to cure most of the diseases of aging. Imagine if you put it together with supplying the nutrients that you need to rebuild the tissue, and with stem cells that can provide the genesis of new cells, along with telomerase activators? We're going to be able to do major things in anti-aging that have never been possible before.

In the simplest terms HBOT primary benefit is that treatments saturate all fluids in the body; Blood plasma, Spinal fluid, Urine, Saliva... even joint fluid. No breathing technique, exercise regimen or supplementation can even come close to the efficacy of HBOT. It can get everywhere...

Making Tumors Shrink in Fear

My colleague Dr. Mark Rosenberg, who spoke at my "State of the art Anti-Aging" seminar, teaches an integrative cancer fellowship. He reminded the attendees that the more hypoxic a cancer is – meaning the lower its oxygen concentration – the more aggressive it is.

We know that when a cancer does not have much oxygen, it releases a substance called hypoxia-inducible factor-1 alpha. That turns on the cancer's ability to utilize glucose and become more aggressive.

For example, in a recent study published in the *Proceedings of the National Academy of Sciences* they found that hypoxia-inducible factors allow breast cancer to spread, and then metastasize throughout the body.

Researchers from Johns Hopkins University looked at breast cancer cells and saw that low oxygen triggers the increased production of two proteins – RhoA and ROCK1. These proteins are known to give cancer cells movement and the ability to easily spread.⁴¹

You see sometimes when breast cancer cells spread, they change quite a bit to allow movement. One of the changes is that they produce "filaments" and "hands" allowing them to contract and reach, pulling themselves along and latching onto other body tissues and surfaces.

RhoA and ROCK1 play an important role in producing the filaments and hands.

What causes tumors to adapt to a lack of oxygen? It turns out that the centers of tumors run out of oxygen because they don't have enough blood vessels. This induces hypoxia-inducible factors that help tumor cells operate without oxygen.

This allows them to develop the ability to break away and invade other tissues.

However, studies show that if you saturate a tumor with hyperbaric oxygen, it turns that aggressive

nature off. That's why hyperbaric oxygen is used as an adjunct treatment for cancerous tumors.

Hyperbaric oxygen therapy can also:

- ▶ relieve painful migraine and cluster headaches⁴²
- ▶ regenerate brain cells⁴³
- ▶ reduce inflammation and oxidative stress⁴⁴
- ▶ mobilize sleeping stem cells⁴⁵

You can get hyperbaric oxygen therapy at many hospitals and at famous healing centers like Johns Hopkins and the Cleveland Clinic, but at those places, they use it mostly for post-surgical wound healing. You can't go there electively.

However, fortunately, there are a few places you *can* go to get hyperbaric therapy if you choose to do so.

The Duke Center for Hyperbaric Medicine is one (dukedivmedicine.org). Duke is the only hyperbaric facility in the Mid Atlantic Region staffed with physicians who are all board certified in the specialty of Hyperbaric Medicine.

Here are all the resources you need to find a hyperbaric therapy provider near you. Each of these sites has links, resources, providers and information:

- ▶ Undersea and Hyperbaric Medical Association – uhms.org
- ▶ International Hyperbaric Medical Association – hyperbaricmedicalassociation.org
- ▶ International Hyperbarics Association – ihausa.org
- ▶ International Hyperbaric Medical Foundation – hyperbaricmedicalfoundation.org
- ▶ American College of Hyperbaric Medicine – hyperbaricmedicine.org
- ▶ Baromedical Nurses Association – hyperbaricnurses.org
- ▶ European Underwater and Baromedical Society – eubs.org
- ▶ Center for Hyperbaric Publications – viriniamason.org/CenterforHyperbaricPublications
- ▶ Hyperbaric Oxygen Therapy Association (HOTA) – hotaweb.org
- ▶ National Baromedical Services, Inc. Scientific Literature – baromedical.com

Flush Your Entire System with Oxygen

There is an immensely useful magnesium compound releases nascent oxygen, or mono-atomic oxygen, progressively upon coming into contact with the acids present in water.

Magnesium peroxide (MgO_2) is “oxygenated magnesia.” When it contacts the fluid in your stomach, the water releases the oxygen from the magnesium.

It is 43.17% magnesium and 56.83% oxygen. That helps out the friendly bacteria in your gut which help you make vitamins, and helps get rid of the unfriendly anaerobic bacteria that are undesirable.

This also has an alkalizing effect on your body. That’s a good thing. Our bodies like to be slightly alkaline, but processed foods and toxins are constantly making us more acidic, so anything you can do to restore a natural balance is good.

Magnesium peroxide also helps remove any undigested or impacted matter in the intestines or colon.

The spent magnesium peroxide is converted to magnesium hydroxide ($\text{Mg}(\text{OH})_2$). The safety of this material is easily conveyed by the fact that a suspension of magnesium hydroxide in water is ordinary Milk of Magnesia, which explains its gentle, yet reliable laxative effect.

Just one tsp. generates about 7.5 liters of available oxygen for your cells. This oxygen is made bioavailable to the stomach ... which might not seem like the best place for oxygen. But the stomach is actually pretty good at absorbing oxygen through its capillaries.

How much is 7.5 liters of oxygen? Quite a lot. A casual breath gives you about 0.1 liters of O_2 , and a deep breath can give you around 0.5 liters.

You can find magnesium peroxide combined with some cleansing products, or bound with other minerals, but it’s more effective as an oxygenator on its own in capsules.

You can also get powdered magnesium peroxide. Just a few sprinkles in a glass of water is enough to give you an oxygen boost, but you can use up to a spoonful a day.

Boost Your Body’s “Miracle Molecule” That Delivers Huge Amounts of Oxygenated Blood Directly to Your Tissues

As you age, your blood vessels start to harden and lose their elasticity. This causes restricted blood flow and poor oxygen delivery.

When it gets bad enough, your cells starve for oxygen.

Your doctor probably won’t tell you this, but this lack of oxygen delivery is the underlying cause of fatigue, heart attack, lack of focus and trouble performing in the bedroom.

Oxygen is the power source that fuels your muscles, and boosts your performance. It gives you a combination of strength, desire, muscle mass and readiness. It’s a feeling of extraordinary potential,

available to you when you need it.

But to get more oxygen, you need to “open up your pipes.”

That means getting oxygen-rich blood to every part of your body at a moment’s notice. It’s easy for young people because their veins and arteries easily expand to handle the extra flow.

But as you get older, your veins and arteries get narrow and stiff. And the resulting drop in oxygen makes you feel limp, weak and tired.

But you can restore maximum oxygen flow at any age.

When researchers discovered a signaling system that sends a rush of energy through your body, they won a Nobel Prize for their efforts.

This “miracle molecule” is a gas produced by a single layer of cells that line your blood vessels. When it’s released, it causes your blood vessels to relax and expand, sending a rush of oxygen through your body.

This expansion of your blood vessels, and the increased flow of oxygen that follows, is essential for life. *You couldn’t live without it.*

And here’s the best part: You can trigger the release and give yourself this energy whenever you want.

I must admit that even with my lifelong commitment to nutrition I was humbled and surprised to discover the power of this molecule, **nitric oxide** (NO).

NO function is critical because it inhibits the smooth muscles of your arteries from squeezing shut, and stops blood clotting, which can cause sudden stroke and heart attacks.

NO also contributes to growing new blood vessels, and is the most powerful compound in your body for protecting your heart cells from harmful attackers. In fact, newer studies show us that it’s NO that regulates the function of the cells your heart is made of, called myocytes.⁴⁶

In hundreds of clinical trials, researchers found that people with heart disease had a lack of nitric oxide production. In fact, one study found that for those with heart disease, the risk of death skyrockets as your production of nitric oxide decreases further.⁴⁷

The secret to healthy blood flow is nitric oxide (NO). It’s the chemical released by the lining of your blood vessels that makes them expand.

NO is one of your body’s “blood flow signals” that tells your blood vessels to relax and expand.

Also, nitric oxide is an important oxygen regulator. It's a sensor for how much oxygen you have in your tissues. If you don't have enough oxygen, nitric oxide knows, and tells your hemoglobin to drop off oxygen into your tissues. If you don't have enough nitric oxide, you can't get the signal to "please bring more oxygen" to your tissues.

And, the blood vessels that produce NO are like balloons. They can expand and contract rapidly. When they're relaxed and open, they can move tremendous amounts of blood and deliver lots of oxygen. But when they're too stiff and narrow, your energy and oxygen levels plummet.

This is a problem as you get older. Your supply of NO drops off. That makes it much harder for your blood vessels to expand.

And if your blood vessels can't expand, blood and oxygen delivery becomes restricted. And this lack of oxygen accelerates aging, drains your energy, and makes sex difficult, if not impossible.

Ironically, the drugs designed to improve blood flow may also damage it. And this zaps your strength and potency even more.

But there is good news. You can safely and naturally make more NO.

Here's What I Give My Patients for Better Oxygen

The first step to more NO and healthy blood flow is a simple amino acid called l-arginine. Your body uses this amino acid to create NO.

Body builders use l-arginine because it gives them a "muscle pump" by getting more blood and oxygen to their muscles.

I've been using l-arginine with my patients for years. It's one of the most reliable, fast-acting tools for increasing nitric oxide.

When your blood vessels are relaxed and flexible, you get more blood to your brain, your heart, your lungs, and your muscles.

This kind of extra blood flow gives you more endurance, more stamina, better performance... it even helps your memory and helps prevent heart disease.

Maintains Healthy, Supple Blood Vessels for Better Oxygen Delivery

In your arteries, arginine increases NO. And this helps keep your endothelial cells healthy. Without NO, your vessels become constricted and less flexible. Healthy endothelial cells allow your vessels to

dilate so your heart can move oxygenated blood easier.

Recent studies show that arginine increases the elasticity of your blood vessels. Arginine gives you a much safer alternative.

Arginine helps blood vessels function better in chronic heart failure. In one study, vessel dilation increased from 2.2% to 8.8% with an arginine supplement.⁴⁸ Another study found that taking oral arginine helped arteries dilate better for people with high blood pressure.⁴⁹

To maintain healthy muscles and suffuse your body with oxygenated blood, you can take arginine in a capsule form. Take a 500 mg cap each day for prevention.

To fix a specific problem that has already occurred, you'll get the most from arginine if you take it in powder form. To build lost muscle, improve sexual performance, or reduce chest pains, start with a loading dose of 5 grams daily for two weeks. Then take 2.5 grams daily for maintenance.

Never exceed 10 grams a day.

Because arginine is an amino acid, proteins compete with its absorption. For this reason, you will absorb more of it if you take it between meals on a relatively empty stomach. Simply take a teaspoon of powder and mix it with water.

Support Better Blood Flow Longer

L-arginine on its own is effective, but it produces NO for about an hour after you take it. But you can add something to arginine that gives you a lasting boost throughout the day.

In my clinic, I combine standard l-arginine with a specialized form of arginine called Arginine Alpha-Ketoglutarate (A-AKG). It gives you a "time release" effect. Instead of getting a quick boost and then fading fast, you get a sustained NO release that lasts much longer.

A-AKG is remarkably effective. The combination is far superior to anything else you'll find out there.

Chapter 6: Use Nature's Secrets for More Oxygen

Get a Cellular Boost from the Roof of the World

Shilajit is an ancient remedy in Indian medicine. Found in the soils of the Himalayas, it's recently become the subject of intense study.

Eastern herbalists use shilajit for a whole laundry list of health problems. It's considered an "adaptogen" – a substance that helps your body adjust and normalize under stress. And it turns out

shilajit contains several substances that have exactly this effect.

One of the most intriguing is called DBP, and your body uses this same compound to support CoQ10 in energy production.⁷ This led scientists in India to test shilajit's effect on energy in animals.

The scientists measured the drop in ATP – cellular energy – in animals before and after a swim test. Exercise caused ATP levels to drop by 82% in their muscles, and by 33% in their brains.

When the animals were given shilajit first, the post exercise levels dropped 20% less in their muscles. In their brains, the loss was cut by a full third. This was similar to the results they achieved by giving the animals CoQ10.

Then the scientists gave the animals both CoQ10 *and* shilajit. The combination worked *even better* than either supplement alone.⁵⁰

In another animal study, published in 2012, researchers found that shilajit appears to preserve healthy mitochondrial function – which backs up the findings of the earlier study.⁵¹

Shilajit has been in use for centuries, and Indian herbalists report a similar energizing effect. So I'm inclined to believe these studies indicate humans could expect a similar effect.

SunFoods and Ojio Superfoods make good raw shilajit powder, and there are capsules you can get, too. A 400mg per day supplement should be plenty for an oxygen boost. They're standardized at 5% fulvic acid, the main active compound.

And shilajit isn't the only substance that may help "rejuvenate" cellular functions.

Ancient Herb Improves Oxygen Use

You've probably heard of ginkgo for its use in improving memory. It's a tree used by the Chinese for thousands of years. Even Germany's Commission E, which rigorously regulates supplements, officially endorses ginkgo. Ginkgo improves blood circulation and allows the brain to tolerate low oxygen levels.

Ginkgo biloba increases the amount of oxygen that reaches the extremities. Studies show it helps increase the distance patients with poor circulation can walk without pain.⁵²

Two major studies show that ginkgo has powerful effects for treating low oxygen.

One study called the Pike's Pike study – because they conducted it high in the mountains of Colorado – involved 40 men who previously had experienced AMS. The men were taken rapidly from 4,957 feet to 14,110 feet. Five days earlier, half of the men took a placebo and the other half took ginkgo. Those who took ginkgo had half the incidence of AMS symptoms.

People who took ginkgo and still experienced AMS had far milder symptoms.⁵³

In another study, twenty-six people who lived at sea level like I do took ginkgo or a placebo 24 hours before ascending Mauna Kea, in Hawaii. They were taken to the summit (13,700 feet) in 3 hours. Those taking ginkgo had significantly less intense low-oxygen symptoms than those taking the placebo.⁵⁴

I recommend ginkgo extracts to improve oxygenation. If you're going into higher altitude, take a bigger dose – 325 to 500 mg. of ginkgo for five days before. For regular use, take 60 mg. a day for five days on and two days off.

You can get ginkgo biloba in extract form, but be sure to look at the label. Make certain it contains a standardized amount of ginkgo's active ingredients, flavone glycosides and terpene lactones. There should be at least 24% flavone glycosides and 6% terpene lactones.

And remember, one of ginkgo's mechanisms of action is blood thinning. If your doctor has prescribed a blood thinner, talk to him before taking ginkgo. Better yet, question him on why you are taking harsh drugs when there are natural alternatives.

Can a Garden Flower Boost Oxygen to Your Brain?

Your brain isn't like the rest of your body.

Without a constant fresh supply of oxygen to your brain cells, they die. Plain and simple.

And the longer it goes on, the greater your chances are of suffering from forgetfulness and brain fog.

When that happens, you'll start to cover your refrigerator with sticky notes – because you can't remember anything without writing it down. You'll pick up the phone, like you have a thousand times, to dial your daughter and suddenly forget her phone number. You'll talk to someone and lose your train of thought in mid-sentence.

But there's good news. You can develop a rock-solid memory and eliminate all those “senior moments.” All you have to do is one simple thing ... *let your brain breathe*.

Let me explain...

Oxygen: Your Brain's Miracle Memory Cure

Oxygen is the MOST important thing your brain needs. And each and every time your heart beats, oxygen-rich blood is pumped through your blood vessels to your brain. In fact, your brain uses 25 percent of your body's total blood flow alone.

But as you get older, blood flow to your brain drops and starts to flow less efficiently. Your brain also loses its volume. And as you age, it's important to continue to support the flow of blood to your brain, so it can carry vital nutrients that help nourish it.

A clinical trial from the Framingham Heart Study demonstrated this. Researchers examined more than 1,500 middle-aged and older people, and found that people whose hearts pump more blood to the brain are less likely to experience brain shrinkage than those with hearts pumping less blood to the brain.⁵⁵

Because your blood vessels deliver oxygen to the brain, you want to keep your arteries healthy to support healthy blood flow.

Help Your Brain Take a Deep Breath

You may have this beautiful blue flower in your garden. It's a powerful natural ingredient that helps increase blood flow. I'm talking about *periwinkle*. The flower contains a compound called **vinpocetine**, which has been found to work miracles for the mind.

Twenty years ago, the *European Journal of Clinical Pharmacology* published an amazing study. They tested the effect of vinpocetine on the short-term memory of a dozen women. After taking the herb twice a day, the women scored 30 percent higher on short-term memory tests than the group taking a placebo.

And today, doctors in 50 countries – including Hungary, Poland, Russia and Japan – recommend this amazing memory herb to support cognitive health.⁵⁶ But here in the states, we've only just begun to discover the power of this herb.

Vinpocetine works in two keys ways.

1. It boosts blood circulation in your brain.
2. It also keeps your brain cells charged up by helping to increase oxygen levels.

A three-month trial confirmed that vinpocetine actually speeds up the rate of blood flow in your brain – even when you're just sitting there. Of two groups, the one on vinpocetine got smarter, tested better and appeared more steady and calm.⁵⁷

Another study published by the *European Journal of Ultrasound* showed that a single dose of vinpocetine increased oxygen to the brain compared to taking a placebo.⁵⁸

And this oxygen boost works wonders for your memory.

For example, a study of older adults published in the *Journal of the Nutraceutical Association*

showed vinpocetine significantly improved performance on attention, concentration and memory tests compared to taking a placebo.⁵⁹

Vinpocetine is available at some health food stores. Make sure you get vinpocetine from the vaca minor seed, if you can. I suggest first-time users start out with about 2-5 mg with meals daily to make sure they're not hypersensitive to it. You can increase the dose from there to 10-20 mg a day.

More Altitude, More Oxygen, More Energy

The first of these oxygenation powerhouses is something I first used when I climbed in the Andes Mountains in Peru, in an area the locals called Puna, over 10,000 feet up.

It's a native root that helped me get used to the thin mountain air.

I was the only one in our party who didn't get what the locals call soroche, or altitude sickness. I used it again when I climbed Mount Kilimanjaro in Africa, and I was the only one on that expedition who didn't get altitude sickness.

The root I used is called maca, and it turns out that not only does the plant it comes from adapt to high altitude, but when you eat it, the root passes that ability on to you.

It does more than just help you adjust to altitude, though. Peruvian maca has the remarkable property of improving oxygen transport in your body. This increases endurance, energy levels, and mental clarity.

Part of the reason maca is so effective at improving the way you use oxygen is its malic acid. It helps cells use sugar for fuel when oxygen levels are low. Living high up in the Andes is tough, and oxygen is scarce. At 14,000 feet, your oxygen levels are going to be low. Maca is also rich in iron, which you need to make blood and facilitate oxygen transport.

But even if you're not climbing up into high altitude, you can benefit from maca during other activities. Maca would be great to use before you go skiing. Or you can use it before you work out. Ancient Peruvians fed maca to their armies to improve endurance and stamina.

Or how about if you go snorkeling? If you take maca, you can go down deeper in the water because your body is going to get better oxygenation. Even if you're just going on vacation with the kids, maca will help you keep up.

Athletes are starting to use maca. It helps you not only use oxygen better to improve performance, but it helps you produce stable energy for long periods of time, instead of just a temporary lift like you get from caffeine.

In one study, they gave trained male cyclists a 40-km time trial before and after 14 days of

supplementation with maca. The cyclists were able to significantly improve on their initial time after taking maca.⁶⁰

I found that the locals in Peru eat the root as food now. They bake it and roast it... it's considered a treat. But during the height of the Incan empire, maca was considered so powerful it was reserved exclusively for royalty. In fact, Incans would often pay their royals in maca.

When the Spanish colonized the Andes, their livestock was not doing very well until the locals suggested feeding the animals maca. The results were so dramatic that the Conquistadors gave it to their horses.⁶¹

Maca seems to have been forgotten by the rest of the world since then, even though the locals still grow it and use it to survive up there in the mountains where most people wouldn't stand a chance.

Peruvian medical doctors – some of whom I met while I was there – say that maca can also regulate your hormones. This helps you recover from tired glands that try to produce energy in the absence of enough oxygen – critical for your health, energy and stamina.

And you can now get raw, organic maca root at specialty stores and on the web. They also sell maca powder extract.

Be sure to get Peruvian maca, grown in high altitudes in the Andes Mountains, or it will not have the oxygen-facilitating properties the root develops when it grows in its native environment.

You can add the dried and crushed maca powder to rum or other alcoholic drinks to give them a bit of a butterscotch flavor.

My favorite way to use maca extract is in a homemade fruit smoothie. Some frozen bananas, strawberries, ice, a little orange juice and some maca powder makes an incredible morning drink. Maca supplements are also available as liquid extracts.

You can mix them into your favorite drink, or put the drops directly on your tongue. To supplement with maca extract in capsule form, I recommend up to 500 mg per day.

Three Easy Steps for Better Oxygen Every Day

- 1. Practice Deep Breathing.** Even for the sick and elderly, this is an easy way to get the healing benefits of oxygen. It can be done sitting or lying down. Just place your hands on your belly and feel it expand as you inhale. Then expand your breath into the sides of your lower chest pushing your side ribs out. Finally, lift your upper chest and let it fill with air. Exhale in the same order, from your abdomen to your ribs to your upper chest. Start with 5 minutes a day and work up to 15 minutes. In no time at all, you'll be boosting your oxygen throughout the day without even thinking.

- 2. Open the Windows.** You can't get a good supply of oxygen from stale, recycled air. Whether it's your home or office, crack a window to let fresh air circulate. But if you live in an area with lots of smog and fumes, you may want to consider a good air filtration system instead.
- 3. House Plants.** Another way to boost your room's oxygen is to keep lots of potted green plants. They take in carbon dioxide and pump out fresh oxygen. Good choices are English ivy, spider plants, and heartleaf philodendron. NASA uses them in the Space Station not just to produce oxygen but to filter out toxins in the air like benzene and formaldehyde.

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