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Radiation: How Much is Too Much?

No one wants to talk about radiation. Yet it is the second-leading cause of lung cancer in America, right behind smoking.¹

Doctors and even radiation experts don't want to talk about it – not because they're afraid you'd panic, but because many of their medical cash cows use radiation.

I'm referring to X-rays, CT scans, barium enemas, mammograms and others – all of which pose the risk of cancer and other health problems, including genetic mutations that could wreck future generations.

Over the years, I have successfully treated a number of patients who had radiation poisoning, and later I will let you know how I healed them.

I'm also going to let you know how to protect yourself against the increasing doses of radiation that have become a fact of everyday life.

But let's start by talking about exposure to radon, the natural, colorless, odorless and intensely radioactive gas that escapes into the atmosphere from rocks in the earth. The gas is a decay product of radium, which in turn is itself a radioactive decay product of thorium and uranium.

It is no more possible to avoid breathing radon into your lungs than breathing air.

Radon also enters our homes from the soil and rocks beneath the foundation. Small amounts can enter through the water supply. But thanks to draft-proofing, attic insulation and thermal windows, the problem is made worse because once it's in your house, restricted ventilation stops it from getting out.

And make no mistake: There is no safe level of radon – and any exposure poses some risk of cancer.

According to the U.S. Environmental Protection

Agency, around 21,000 Americans die annually from lung cancer caused by exposure to radon.

The EPA says that one in three homes in America have about 35-times more radiation than the Nuclear Regulatory Commission would allow for you if you lived next to a nuclear waste site.

The risk of death from radon is **a thousand times** greater than any other known carcinogens... and the exposure is never high. It's the buildup of little doses every day that does the damage.

And statistics reveal you have a better chance of dying from radon than from a drunk-driver.



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The typical "it's all safe" or "just routine" lines you hear from doctors and hospital workers when it comes to the X-rays, CT scans, barium enemas, etc, reminds me of the experience of Mae Keane, one of the last of the "Radium Girls," who died earlier this year.²

The "Radium Girls" worked for U.S. Radium Corp. back in the early 1920s, painting glow-in-the-dark numbers on watches with a special paint called Undark. It glowed because it contained radium, the highly radioactive element that results from uranium-238 decay.

To keep their brushes sharp, these women were encouraged to lip-point, or put the brush between their lips after each number to put the point back on the brush. With each lip-point, they swallowed a little radium.

The business owners and on-site scientists gave them the "it's all safe" line... although the dangers were already suspected, which was why the managers and scientists wore protective clothing. Marie Curie, the discoverer of radium and radon gas, in fact, died from aplastic anemia as a result of her long-term radiation exposure.

It didn't take long before the effect of radiation-exposure took its toll on these young women. Teeth fell out, cancers developed and tumors formed.

Mae Keane lived as long as she did because she didn't like the taste and quit soon after starting. Those who stayed were dead within a few years.

The Danger is Far Greater Than Previously Thought

Radioactive particles from radon are forms of ionizing radiation. Now radiation also exists in a non-ionizing form.

You may have heard concerns about non-ionizing radiation from cell phones, wireless routers, wireless towers and smart meters. While the jury is still out about the effect of radiation from these devices, there's no question about the danger of ionizing radiation itself.

These particles ionize and work a lot like free radicals, stripping away electrons from atoms in tissue. But a radioactive particle strips off more, which disrupts a cell and leads to three possible results...

• The cell gets damaged, but can repair itself;

- The cell dies;
- Or the cell mutates and becomes cancerous.

As an anti-aging specialist, I was particularly interested in a recently published Russian study, which found that exposure to radiation accelerates the aging process. The study authors found those exposed to any amount of radioactivity from Chernobyl aged at a much faster rate than the rest of the population.³

This supports what I've been saying for years. Age doesn't have anything to do with the number of birthdays you celebrated. It has everything to do with the health of your cells.

Chromosomal damage from exposure to radiation can be significant.

Recent research has revealed that the previous understanding of the risk of genetic damage by radiation, which was based on what happened to survivors of the atomic bomb blasts on Hiroshima and Nagasaki in 1945, was not complete.

We now know that radiation can also damage cells in ways that cannot be detected until they have divided several times.

Researchers have now proved that even weak doses of radiation – weak enough to affect just one cell – can cause chromosome aberrations and also a chain reaction of DNA damage in surrounding cells.⁴

It's still unclear how this happens, but the evidence suggests the cells communicate chemically with each other and that chromosomal mutations are caused even where there was no direct radiation exposure to DNA.

Their findings also suggest that the risk of cancer from naturally occurring radiation may be greater than previously thought.

While the degree of radiation exposure near Chernobyl was extreme, we have learned three important facts from the experience of its victims.

- **1.** Exposure of any dose speeds aging at the cellular level;
- **2.** All ionizing radiation is dangerous;
- **3.** Bioantioxidants reverse radiation damage.

I'll share some of the most powerful bioantioxidants with you in a moment.

Firstly, let's take a look at the sources and how much radiation we are exposed to each year.

Americans Get Twice as Much Radiation as Everyone Else

Radiation exposure is measured in units called millisieverts (mSv). Expose yourself to 1,000 of them at one sitting, and you will become very ill, probably with cancer. A few thousand mSv will ravage your cells and almost certainly kill you.

The typical American receives around 6 mSv of radiation every year.⁵ That's nearly twice as much as the world average.

But many of us are exposed to much more.

And while there has always been "natural" radiation from cosmic and environmental sources, exposure over the past 100 years has increased by around 20 percent, with a big chunk of that coming from medical radiation.

In the last 30 years or so, the number of CT scans conducted in American hospitals, for example, has jumped 20-fold. Nowadays, it's hard to enter an ER anywhere in the U.S. or Europe without undergoing one.

When it comes to ionizing radiation – the higher the dose, the greater the risk. In particular, breast and thyroid tissue are highly susceptible to radiation damage – as are children and pregnant women.

And neither doctors nor governments make the risks of radiation clear. But we are exposed to radiation...

✓ When we take an airline flight. A six-hour flight exposes passengers to an estimated **5 mSv of radiation**;

✓ In the air we breathe – from both natural sources, like the sun and the ground beneath us, as well as manmade sources, like uranium mining and nuclear-reactor operations;

 \checkmark On top of this, nuclear-weapons testing took place between 1945 and 1980, which means many of the Earth's inhabitants had long-term exposure as result in the release of radioactive material directly into the atmosphere; ✓ Other man-made sources, such as medical scans, airport X-rays and nuclear medicine.

Depending on where you have lived – or live now – radioactive material from major events like atomic-bomb testing, or Hiroshima, Nagasaki, Chernobyl and Fukushima Daiichi may also be a cause of exposure.

The 1986 Chernobyl Nuclear Power Plant disaster sent radioactive material into the air as far away as the UK, Turkey and Japan. Efforts are still ongoing to contain the site, and the death toll from the carcinogenic effects of the nuclear fallout continues.

Meanwhile, contaminated water containing radioactive cesium-134 from the 2011 Fukushima Daiichi nuclear disaster is still being washed up on the U.S. West Coast, and is expected to peak in 2015 and 2016. This has impacted radiation levels in fish and the rest of the marine food web far away from Japan on the other side of the Pacific Ocean.

At the same time, fish from the water near the disaster area still contain high levels of cesium-134 and radiation levels in the sea around Japan are not falling as expected, which shows that radiation is still leaking.

What's worse is that water flowing into the ocean from the Fukushima plant is higher in strontium-90, a radioactive substance that is absorbed in a different way. Cesium tends to move in and out of the body quickly, but strontium heads for the bones, where it embeds itself.

These kinds of radioactive substances are swimming in the Pacific Ocean, impacting the marine habitat and the soil thousands of miles away, which is watered by rain from clouds formed in the atmosphere above the ocean.

Many scientists say there is nothing to worry about... I'm not convinced.

The Perils of Modern Medicine

When you go to the doctor, you expect it to be the beginning of your recovery. And your doctor may tell you that the tests he's prescribing are necessary – or even "just to be sure."

But, in fact, living next to a nuclear power plant is safer than the three most common sources of medical radiation:

- CT scans and PETs (positron emission tomography);
- Radiation therapy for cancer;
- Nuclear medicine (medical exams that use radiation).

Radiation therapy for cancer uses high-energy radiation to kill cancer cells by damaging their DNA. While there is no doubt this treatment can save and extend lives, it can also damage healthy cells in the process. This is a personal choice, but make sure you are armed with all information possible before making a decision.

But most people are unaware of the radiation risk from "routine" medical tests. CT scans, for example, which use a series of X-rays from a number of different angles to provide cross-sectional body images, deliver upwards of 70 times the radiation of normal X-rays.

Millions of Americans undergo these tests every year. In 2007 alone, more than 72 million CT scans were performed – that's one in every four Americans.

And these scans rake in big bucks. So it's no wonder they are prescribed so often.

These "just-to-be-sure" CT scans allow your doctor to bill your insurance company more than \$2,000 per scan. At 72 million scans, that amounts to \$144 billion a year!

Abdominal CT scans expose you to the most dangerous levels of radiation. Recent studies have found these deliver up to four times more radiation than previously thought.⁶

According to a report by the European Commission, an abdominal CT scan exposes you to the equivalent of between 350 and 500 chest X-rays or 3.3 years of natural background radiation in one exposure.⁷

A study by National Cancer Institute estimated 29,000 of future cancers will result from CT scans performed in 2007. That's nearly 2% of all cancers diagnosed every year!⁸

With radiation, it comes down how much and how frequently.

- How much radiation were you exposed to in a single dose?
- How frequently are you exposed to it?

Remember that the average annual dose of radiation for someone living in America is six mSv.

Here's a list of exams with their typical exposures.⁹

Exam	Dose (mSv)
Chest X-ray	0.04
Pelvis X-ray	0.7
Mammogram (four views)	0.7
Dental X-ray (panoramic)	0.09
Abdominal X-ray	1.2
Barium swallow (24 images)	1.5
CT Scan – head	2
Coronary angiogram	4.6-15.8
Barium enema (10 images)	7
CT Scan – abdomen	10
Angioplasty (heart study)	7-57

If your doctor wants to prescribe any of these, ask for an MRI or ultrasound as an option. If appropriate, seek a second opinion.

Three Bioantioxidants that Beat Radiation

Given that radiation exposure in today's world is pervasive and unavoidable, it has never been more important protect yourself.

That's why I recommend three particular nutrients – not just to my patients who were exposed to radiation, but to all my patients – as a protective measure for all.

#1. Ginkgo: This extract is my absolute favorite for defending yourself against the ravages of radiation.

Six ginkgo trees survived the atomic bomb blast at Hiroshima.

And shortly after the blast, they began to bud again. Now, 70 years later, these trees continue to thrive.

Ginkgo trees were around before dinosaurs. And their secret is now out... they have an amazing healing power against radiation.



Looking dead after the A-bomb hit Hiroshima on August 6, 1945, this ginkgo tree at Shukkein Garden sprang back to life.

In 1986, ginkgo extract was put to the test by treating a number of the salvage and emergency workers after the nuclear disaster at Chernobyl. It only took 12 doses of ginkgo biloba to cut the chromosomal damage done by radiation in half.

After two months of treatment, the damage experienced by salvage personnel had regressed to safer levels, and in some cases it had completely disappeared.¹⁰

But ginkgo does more than reverse the damage of radiation:

 \checkmark A Korean study observed ginkgo actively protected 95% of white blood cells during exposure to radiation;^{11,12}

✓ Its antioxidants neutralize free radicals;¹³

 \checkmark It's most effective against deadly gamma-ray radiation. ¹⁴

✓ It provides extended protection for as long as 48 hours against cell mutations and chromosomal damage caused by radiation.¹⁵

Ginkgo is my number one choice to protect against the effects of radiation damage. But it's not my only choice...

#2. Chlorella (Spirulina): This nutrient is usually associated with health benefits including balancing blood sugar, lowering cholesterol, weight loss and immune-system support. But it is also the superfood that saved the children

of Chernobyl, matching Ginkgo's success at counteracting the effects of radiation.

Five grams of chlorella were given to children exposed to radioactivity from the Chernobyl's explosion and fire. After 20 days, their radioactivity levels dropped by 50 percent. Another Soviet study found beneficial hormones increased in these children, while radioactivity in urine decreased by 83 percent.¹⁶

And five grams of chlorella taken for 45 days normalized levels of the protein marker IgE for high allergy sensitivity, which is a common side effect of radiation exposure. ¹⁷

Chlorella protects against radiation in three ways:

✓ Its phytopigments – phycocyanin, chlorophyll, and beta-carotene – protect cells from radioactively created free radicals;

 \checkmark It supports the immune system's T-cells, which prevent abnormal cells from taking over;

✓ Its metallo-thionine compounds (proteins combined with metals) bind to heavy radioactive isotopes and eliminate them from your body.

This incredible superfood often comes in a powder that can be mixed with water or juice. You can find it online or in any natural food store that sells supplements. But make sure to buy organic chlorella.

#3. Tocotrienols: I've been telling my patients for years how this form of vitamin E reverses fatty liver disease and protects the brain's white matter cells.

It also reverses damage caused by ionizing radiation, even when given 24 hours after exposure. In one study, gamma tocotrienol, one of the four tocotrienols, protected intestinal cells against radiation.¹⁸

This nutrient extinguishes free radicals at cell membranes before they get the chance to cause cellular damage. This is especially important in the protection of red and white blood cells.

You can easily add tocotrienols to your diet. Natural dietary sources include nuts, eggs, and dark leafy greens. Coconut and palm oil are also excellent sources.

I personally recommend annatto oil because it is the densest source of tocotrienols.

When it comes to supplements, look for natural vitamin E that specifies tocotrienols. And avoid dl-tocopherol, the synthetic form may do more harm than good.

If it combines both tocotrienols and tocopherols, look for a mix that contains less than 200 IUs of alpha-tocopherol.

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Restore Your Body's Natural Sleep Trigger

THERE is nothing more natural than sleep... yet I know people who have gone their entire lives without a good night's sleep.

I have a lot of sympathy for you if you have broken, sleepless nights – or worse, insomnia.

I've dealt with a lot of sleep problems at my practice. Sometimes, my patients feel like they have no hope and many are prepared to do or take anything for a little shuteye.

I prescribe a number of natural sleep remedies to my patients, and today I want to talk to you about a special "sleep trigger" that could be the missing link you've been looking for.

This "sleep trigger" is completely natural, and it's one of the signals that tells your body it's all right to rest and drop off for an entire night

Most doctors you go to for help are sincerely trying to help, but they have nothing in their armory but Big Pharma's powerful "relaxants" and nasty benzodiazepines.

In fairness, the drug companies have not been completely transparent in what they tell doctors. And doctors have very little time and knowledge of natural help for sleeplessness.

Mainstream medicine has many theories about what causes sleeplessness. And their solutions tend to make people feel worse.

They'll tell you that you have too much stress... You need to exercise longer... You need to take naps... You go to bed at the wrong time... etc.

Those are hard things to change, and it doesn't happen right away. So you're often prescribed one of those scary drugs in the meantime.

Often, people are so desperate for sleep, they'll take anything.

But if you can't sleep, it's not because you're broken. It's not because nature took a wrong turn.

Nature is on your side. You see, sleeplessness can set in because you're missing the proper signals you need from our environment.

The trick is to return to what triggered healthy sleep in the first place... And, today, I'm going to show you how to do it.

Finding What's Missing

Whenever I see something happening in the modern world that doesn't fit with human experience, I don't point the finger at our bodies – like standard doctors do.

Modern medicine does a lot of good. But most doctors continue to make the same mistakes. They assume nature has somehow got it wrong and that they can "fix it" with some device or a drug.

Instead, I look for what's missing. Then I try to figure out how we can restore what nature intended for our bodies.

You can restore restful sleep with the natural "sleep trigger" I'm about to show you.

It's the simplest amino acid and, in my opinion, it should be classified as "essential."

And you can use it to restore healthy, restful sleep no matter your worries, stress level, work schedule, or any other "interference."

The Forgotten Ingredient

Dr. William Kaufman is widely regarded as one of the finest doctors of the 20th century. He was a pioneer at curing patients with nutritional therapy and he was the first to use high doses of vitamin B3 to treat arthritis sufferers.

He passed away in the year 2000, but I've always remembered what he wrote in his remarkable book, *The Common Form of Joint Dysfunction*:

"The lack of only a single nutrient can cause diverse problems in the human body."

I think about this profound statement whenever patients come to me with their sleep problems, because the special natural sleep trigger I'm talking is also a "single nutrient."

And this nutrient I'm talking about is the amino acid, **glycine**.

Glycine isn't a cure-all – but it's cheap, easily available, and it not only **triggers sleep**, but helps you **think faster and more clearly** during the day, too.

In clinical trials, this nutrient has been shown to...

- ✓ Wash away fatigue;
- Make people feel more "lively" with a pep to their step;
- ✓ Provide clear-headedness;
- ✓ Sweep away daytime sleepiness;
- ✓ Improve memory and alertness;
- ✓ Enhance nighttime sleep signals.

Let me show you why this nutrient is so powerful...

A Clue from Ancient Nutrition

Did you know that first form of "sleeping" may have evolved 700 million years ago?

I recently read a study in the journal *Cell* that suggested that our sleep cycles may have evolved hundreds of millions of years ago from our tiny oceanic ancestors.

Prehistoric zooplankton swam to the sea's surface while it was light, and then sank back down in a sleepy descent during darkness.¹



Prehistoric zooplankton were the first creatures to "sleep."

That makes sleep one of the oldest activities of Earthly life.

What could have broken something so basic to our bodies as the sleep cycle?

My research into my patients' sleep troubles, along with my research into basic primal nutrition has led me to believe that we're not just what we eat. *We also act how we eat.*

In today's world, we are suffering from a particular deficiency that contributes to poor sleep.

Before I tell you what it is, let me ask you a question...

When was the last time you made soup stock from buffalo tail? And have you had a stew made with the joints, stomach and skin of a fresh kill? How about making real bone broth?

My guess is you've rarely had these, if ever. And you wouldn't be alone.

The Western diet discards everything but the flesh of an animal, because it believes those things aren't fit for consumption.

But they were the basics of our Paleo ancestors' food.

When we throw away these basics – or even worse, avoid animal products altogether – we're missing out on collagen, the most abundant protein in our bodies.

More than a quarter of all the protein in our bodies is collagen. It's in our bones, skin, joints, tendons, blood vessels and organ linings. And it's in all of the animal parts that are thrown away.

The main ingredient used by our bodies to make collagen is **glycine**.

When patients come to my wellness clinic with sleeping problems, the first thing to do is to try to put glycine back into their diet.

Given our modern dietary habits, you're likely to be glycine-deficient. And that's literally something you will lose sleep over.

Why Glycine is an "Essential" Nutrient

One of the biggest fallacies of mainstream nutrition is the notion that you can get enough proteins from things like wheat, soy, and milk.

Sometimes, these mainstream nutritionists will tell you there's no reason to eat animal meat at all – never mind the skin or bones from a turkey or chicken.

They say if you want protein, just take brewer's yeast.

Well, here's what's missing: When we don't eat the right proteins, we deprive ourselves of the number one ingredient in the number one protein that makes up our bodies... we deprive ourselves of the glycine in collagen.

Glycine is the amino acid that powers your immune system by helping to build glutathione, one of the strongest antioxidants we know.

Glycine is considered a non-essential amino acid. But don't tell that to your brain, because it has receptors specifically for glycine that help your neurotransmitters keep you calm and balanced – instead of stressed.²

And that's how glycine affects sleep. It triggers your brain to relax, so you can rest and fall asleep soundly.

But it does much more. This amino acid also sends neuro-signals that reduce core body temperature. We know that when we begin to sleep, our body temperature decreases, and that we maintain that low temperature when we're sleeping.

Glycine triggers this important start to the sleep cycle.

In one study – one of the first ever done on glycine and sleep – researchers in Japan used a randomized doubleblinded cross-over trial to be sure it was glycine caused the effects.

They gave 15 women with quality-of-sleep complaints either 3,000 mg of glycine or a placebo before bed. The next morning, they evaluated how the women felt using two standard sleep questionnaires, the St. Mary's Hospital Sleep Questionnaire and Space-Aeromedicine Fatigue Checklist.

The glycine group shook off their fatigue and scored much higher than the placebo group for "liveliness and peppiness," as well as "clear-headedness."

These results suggest women in the glycine group slept much more soundly than their counterparts.³

In another study, researchers from the Ohta Memorial Sleep Center in Japan also gave people complaining of unsatisfactory sleep 3,000 mg of glycine before bedtime.

Then they used polysomnography to record brain waves, blood-oxygen levels, heart rate and breathing, as well as eye and leg movements.

The researchers also looked at the impact of glycine on daytime sleepiness and daytime cognitive function.

For all the subjects, glycine improved sleep quality, increased sleep time, and it also shortened the time it took to fall to sleep.

Plus, it also improved the subjects' "slow-wave sleep" – the deepest, most restful stage of sleep.

The big surprise was that glycine also lessened daytime sleepiness and improved memory.⁴

So not only did this important amino acid improve sleep, but those who took it also performed better during the day.

In another study, 12 volunteers (six women and six men) who had no sleep problems at all took glycine during the day. They took 9 grams ... 3 times as much as the sleep studies.

The glycine did not induce sleepiness during the day ... but it did have one side effect. Their memories improved!⁵

Improving Sleep and Memory

In the November issue of *Confidential Cures*, I showed you my Nutrition Pyramid. At the base of this pyramid is Primal Nutrition, or the foods and nutrients you would have had in abundance in your primal environment.

Our ancient ancestors regularly consumed the best food sources of glycine – bones, ligaments, skin and cartilage. Today, we never eat these foods – although many of you may have had parents or grandparents, who made soup with bones. (See the recipe in the box on the next page).

It may not be a coincidence that the quality of our sleep has gone haywire.

Grandma's Soup: An Important Primal Source

You can easily reintroduce important primal sources into what you eat. Try making a true bone broth. And eat the skin of that holiday turkey and ham.

In fact, here's a recipe for bone broth that I use.

Before I tell you what it is, remember NOT to use only bone. They contain too much marrow and not enough collagen.

You want to include an even mix of joints, bones and feet. Some people like to roast the ingredients first but I like them to cook with the broth.



• Put bones in pot and add enough water to cover the ingredients. This will be around 2 cups of water for each pound of animal ingredients.

• To draw out the collagen, you'll need something acidic. Apple cider vinegar is a good choice. Use 4 tablespoons.

• Let sit for around 60 minutes.

• Bring the pot to boil and then reduce to a simmer.

• The impurities are going to rise to the top, so skim them away. You'll have to do this several times.

• When nothing else rises to the top, add water to keep the level just above the bones.

• After about 15 hours for chicken and 35 hours for beef, turn up the heat just a bit for the final simmer-down. This will concentrate the nutrients and gelatin.

- Let simmer for another hour or two.
- Strain your broth and cool it down to use right away for soup, stew, sauce or meat gravy.

Glycine is key for improved for sleep and memory, but also an important and therapeutic anti-aging nutrient.

It's also on the list of nutrients that make up the base of my nutrition pyramid, Primal Nutrition. And that means your body requires much more than we currently get through the typical Western diet.

So how do we put glycine back into our bodies to help restore proper sleep?

If you don't want to make a bone broth, the next best source is gelatin.

Of course good, old-fashioned Jell-O is made with gelatin, but all that sugar isn't great for you. So if you like to cook at home, you can render gelatin for use in aspic or other dishes. It's easy to do.

- **1.** Simmer collagen-containing animal or fish bones
- **2.** Strain and cool the liquid.
- **3.** Refrigerate.
- **4.** The gelatin will congeal when the liquid gets cold.

Other good food sources are:

✓ Pork

- ✓ Whitefish, smelt cod
- ✓ Turkey, chicken
- ✓ Sesame seeds
- ✓ Spirulina
- ✓ Egg whites
- ✓ Beef, veal, brisket

You can also supplement with glycine. It's available - very inexpensively - from most health food stores.

No serious side effects have been observed in people taking as much as 31 grams (31,000 mg) a day of glycine.⁶

That means that just the 3,000 mg used in the studies will help restore your sleep and provide other huge benefits without worry.

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Give Your Body and Mind a Breath of Fresh Air

OXYGEN is the single most important element of our Earthly existence. At my wellness clinic, I regularly coach my patients on simple ways to get enough oxygen – so that every cell in their body can thrive. Without it, we cannot breathe and the cells in our body die.

In spite of its essential presence in the air we breathe and the water we drink – when you don't get enough oxygen, your body sends you an SOS.

You feel fatigued. You get aches and pains. You gain weight, get headaches and brain fog.

Oxygen is also the primary substance your brain is deprived of in a stroke. And most doctors will tell you that if you've had a stroke, that area of the brain is dead and that's the end of it.

But neurologists now also accept there is a much larger area known as the *ischaemic* (blood-starved) *penumbra* that isn't dead, but is physiologically traumatized – and because so few doctors know how to treat this condition, eventually it does die.

But given the right, intense doses of oxygen, damaged brain tissue can function for up to eight hours after death.

Back in the late 1990s, three Dutch neuroscientists in a pathology laboratory in Amsterdam proved it by doing what no one had previously thought possible – they brought brain cells from 30 dead people back to life by suffusing these cells with oxygen.¹

Such is the startling healing power of oxygen on human cells.

At my wellness clinic, I see all kinds of patients with oxygen-deficiency disorder – the worst of which is hypoxia, a serious condition of oxygen, whose conditions include mental decline, chronic wounds and cancer.

But low-oxygen and its complications are preventable.

And there are also extraordinary benefits to breathing this tasteless, odorless gas with the chemical symbol O in its purest and most effective form.

Oxygen restarts the same growth processes you enjoyed as a child. It encourages the regeneration of tissues, blood vessels and nerves. Increasing the intake of oxygen loads the red blood cells, thus promoting healing and all manner of regeneration.

This is why I'm adding a special, new room at my wellness center to provide my patients hyperbaric oxygen therapy – but more about that in a moment.



A hyperbaric oxygen chamber. Source: Hyperbaric Therapy of the Low Country

Hyperbaric oxygen therapy now has 30 years of clinical success under its belt – and its fans go well beyond soccer superstar David Beckham or fashionable Hollywood health faddists, like Uma Thurman, Sharon Stone and Woody Harrelson.

Each Breath Should Nourish Every Cell

Researchers have also put acute stroke patients, children with cerebral palsy, as well as victims of chronic and slowhealing medical conditions in hyperbaric chambers to breathe oxygen at 1.5 times normal atmospheric pressure – and the results have been astonishing.

The reason for this begins with a number: 100 trillion.

That's roughly the number of cells in your body. Every breath you take needs to provide enough oxygen to feed and nourish every single cell.

Each mitochondria, a "power plant" inside every cell, "breathes" oxygen with you as part of the energy production cycle. This oxygen is used to repair DNA and damaged structures within the cell, and also to create new healthy cells.

The explanation is simple. An injury – whether it's a blocked artery, a wound or inflammation – reduces the amount of blood flow (and therefore oxygen) to the damaged area. Then the affected cells are put into a sort of suspended animation, because they only get enough oxygen to survive, not to function.

But breathing pressurized oxygen raises the concentration of oxygen in the blood, thereby increasing the number of oxygen molecules getting through without having to increase the flow of blood to the area. The oxygen jolt can wake the cells and get them working again, allowing their repair mechanisms to go into action.

This is one more example of something we already know – that oxygen is our life-giver. It is the body's essential power source, the firelighter without which we'd be unable to turn food into the energy that drives the muscles and the nervous system that maintain our life.

But oxygen does even more...

• It's hands down the best detox agent around, because your white blood cells use oxygen to zap dangerous bacteria and viruses;

• It's the fuel needed by the brain and nerve cells to keep thoughts clear and muscles moving smoothly;

- Your cells use it to flush toxins and other heavy metals;
- Oxygen stimulates new blood vessel growth.

The problem today is that most Americans suffer from chronic hypoxia – without even realizing it. This is because it has symptoms that can be easily dismissed as part of the aging process.

But I can tell you that I've been breathing pure oxygen for many years. I'm now 58 and, only a few years ago, I climbed to the top of Mt. Kilimanjaro – and I smiled all the way to the top. No, age is not the issue.

Getting Enough Oxygen

When I reached the 19,350 ft peak of Mt. Kilimanjaro, the view was breath-taking but the air was thin.



Here I am at Gilman's Point, en route to the summit of Kilimanjaro.

At high elevations, this thin air makes it hard for the body to get enough oxygen.

Later on, I'll share with you how I got the most out of every breath, as well as a secret used by Himalayan sherpas to prevent altitude sickness.

Lack of oxygen – whether you're suffering from hypoxia or standing on the summit of Mt. Kilimanjaro – often triggers nausea, dizziness, and headaches. It catches many hikers, skiers, and unsuspecting vacationers by surprise. For some, the symptoms are much worse.

Many people suffer oxygen deprivation even at sea level, where the air is at its most dense.

And the causes for this are remarkably similar to altitude sickness... either the body can't make use of the oxygen it's getting, or there's not enough oxygen to get.

I've seen numerous cases of oxygen deprivation at my wellness clinic, and most often it is the result of:

• **Inactivity** – The average American sits for more than five hours a day; this encourages shallow breaths that reduce lung capacity;

• **Stress** – Anxiety, tension and stress cause short, shallow breaths and a quickened pulse;

• Location – Living in a city or its suburbs means that you are breathing roughly double the amount of carbon monoxide into your lungs than you would if you lived in the countryside. Carbon monoxide binds to red blood cells and prevents them from carrying oxygen;

• **Smoking** – Smokers inhale carbon monoxide with every drag and have levels nearly four times that of someone living in the city;²

• Anemia – Low iron reduces the number of red blood cells available to transport oxygen to your cells;

• Alcohol – Excessive alcohol consumption reduces hemoglobin's ability to carry oxygen molecules and disrupts red blood cell production.³

The good news is that it's easy increase your oxygen exposure.

But sometimes that's not enough. You need to absorb oxygen into your blood to get it where it is needed most.

Your Body Needs This to Stay Young

The metabolic process that produces new cells is the same when you are 80 as it was when you were 18.

What changes most over those years is your activity level.

When you're young and active, you require more oxygen. And your body knows it, because you're always moving.

This keeps the body focused on what it needs most to remain young. Every heartbeat pushes oxygen-rich blood to the farthest reaches of your body.

In turn, this initiates repairs on damaged blood vessels and builds new ones when needed – a process called *angiogenesis*.

Your arteries transport blood to your capillaries.

And these tiny little blood vessels connect with every cell in your body.

When you're young, your body forms capillary buds to feed new cells as you grow.

When you're injured, cells become separated from the blood supply. The body causes inflammation while it breaks down the damaged tissue.

But once the damaged tissue is removed, the body gets to rebuilding. To feed cells, it needs to rebuild the capillaries, so it forms these capillary buds.

In other words, healing and growth are the same process.

For many diabetics and cancer patients, their wounds often heal very slowly, because they're unable to build new capillaries.

For diabetics, high blood sugar causes blood vessels to constrict and become stiff. This naturally limits or sometimes even cuts off blood flow, thus decreasing the amount of oxygen that gets to surrounding cells.

Oxygen can't feed new cells if it can't get there. And when this happens, healing is either limited or it simply stops.

Push 'Restart' and Heal Faster

Numerous studies have shown that if you can grow new blood vessels, you will heal – regardless of whether you have diabetes, brain injury, cancer, arthritis or anything else.

And the speed of healing and recovery doesn't depend on your age.

It depends on getting the body's natural growth and healing processes going – and this means getting essential nutrients, including oxygen, to the areas of the body that need it most.

While deep breathing can increase oxygen levels, oxygen alone won't trigger the 'restart button' needed to stimulate capillary growth.

You need to add pressure.

I'm not talking about pressure that causes stress.

I mean the gentle pressure that's applied with **hyperbaric oxygen therapy** that produces increased muscle capacity.

Your body increases its reserve capacity, and the increased energy requirement in turn stimulates cell – and capillary – growth.⁴

30 Years of Success the FDA Can't Ignore

The research – and success – has been so overwhelming the FDA has even approved **hyperbaric oxygen therapy**. Even insurance companies now accept it as part of a treatment protocol.

Pressurized oxygen delivered in this way means that oxygen is taken into the bloodstream in far greater quantities triggers the body's natural healing process ⁵ by:

Turning on DNA and genes associated with growth... the same ones needed to encourage healing;

➢ It turns off inflammation and cell death.

This effect occurs throughout the entire body. So the whole body experiences healing not just the area of the wound.

Recent research has demonstrated it can also regrow brain cells and reduce brain swelling,⁶ as well as limit radiation damage to soft tissue.⁷

The accepted wisdom in mainstream medicine says that if you have a stroke, the area of the brain which has been deprived of blood and therefore oxygen – usually by a clot – will die in four minutes.

Yet those Dutch scientists back in the late 1990s managed to persuade brain cells to fire up again, eight hours after the brain's bodies were certified dead.

What these scientists demonstrated is that brain cells don't die completely for a considerable time. For eight hours, they're just 'sleeping.'

Many hospitals and healing centers now also use hyperbaric oxygen therapy as a standard protocol for postsurgical wound healing.

And while I'm glad I'll be able to provide hyperbaric oxygen therapy to patients who need it most, I hope you won't find yourself needing it.

What I Tell My Patients

Here are **three simple**, **natural ways** to get the oxygen 'restart' in a way that helps blood cell formation:

#1 Increase Your Lung Capacity

I always advise my patients to do this first step, which involves two parts.

So, **firstly**, take a moment to notice how you breathe. And then ask yourself:

Are your breaths deep, filling your lungs down to your abdomen? Or are they shallow, filling your lungs only as far as your solar plexus, right below where the ribs meet?

Deeper breaths increase your oxygen intake and provide a calming effect.

The **second part** is to work your lungs and your cardiovascular system.

The best exercises challenge your lungs to get blood and oxygen to your tissues. Progressive, intense exercise allows your body to adapt to the increased oxygen demand and grow a little stronger every day.

You may already know that I call this style of exercise PACE, which stands for Progressively Accelerating Cardiopulmonary Exertion.

#2 Take Fish Oil for Oxygen Intake and Delivery

You may already know the **omega-3 fatty acids** in fish oil are good for the heart and the brain.

Fatty acids play a role in the structure of all cell membranes in your body. Omega-3 fatty acids hold their shape better. This makes red blood cells more 'flexible,' so they move more easily between the capillaries and cells, delivering oxygen and removing carbon dioxide.

But fish oil does more than ease oxygen delivery, it also improves oxygen intake in the lungs and promotes angiogenesis.

 \checkmark A study from the University of California observed fish oils relaxed arteries in the lungs and led to an overall increased oxygen intake into the lungs.⁸

✓ Another study from the University of Indiana noted fish oil supported continuous blood flow to and from the lungs in asthmatic patients, who often experience constricted breathing and shortness of breath after exercise.⁹

Continued on the next page...

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✓ Diets enriched with fish oil increased the number of endothelial progenitor cells which play a role in new capillary growth.¹⁰

Fish-oil supplements can be found just about everywhere these days, but it's important to choose a brand with the highest purity.

I also recommend brands that use molecular distillation. You can also ask for a Certificate of Analysis to confirm the testing and safety of a supplement.

#3 The Herbal Secret of Sherpas

One of the most powerful natural remedies I recommend at my anti-aging clinic is **rhodiola rosea**, a golden flower that grows natively in high elevations of mountain ranges around the world.

But it's also great for oxygen intake.

Tibetan sherpas use rhodiola for energy, physical endurance and to protect against altitude sickness. For centuries, sherpas have lived at high altitudes in the Himalayas and have aided climbers in ascents up Mt. Everest without the need for supplemental oxygen.

Modern research supports what these sherpas have always known. Rhodiola increases oxygen intake in the lungs and helps saturate the blood at high elevations. ^{11,12}

This herb also stimulates red blood-cell production, an essential component to keep blood vessels healthy and growing.

While you may not live at an altitude of 10,000 feet, you can enjoy the benefit of rhodiola's effect on blood-oxygen saturation.

And as a powerful antioxidant it helps optimize oxygen use by reducing free radical activity.

You can enjoy rhodiola in a tea, the way the sherpas do. Or you can find it in capsule form. But always make sure you're getting a high-quality supplement. I recommend daily doses of 200 mg for the best effect.

Keeping a Clear Mind

The other benefit to better oxygen intake is the affect on your mind. More oxygen boosts alertness.

The brain is a tremendously active organ. In fact, it uses 20 to 30 percent of the body's energy and that's when you're just sitting around. You don't have to be doing calculus or playing a chess grandmaster.

Your brain uses two fuels – glucose and oxygen. The problem is that it can't store either of them.

An oxygen-boost can give your brain extra fuel at a time when it needs it. ■

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Share Your Story With Me

I've made it my personal mission to bring you back hidden and forgotten cures from around the world, and return to your body what's missing from our modern environment so you can live a full life without worry.

I often hear great things about my books, special reports, and products from patients who come in to my clinic.

But I'd love to hear from you, too. Just email me at alsearsmd@alsearsmd.com, and put My Story as the subject.

The information and material provided in this letter are for educational purposes only and any recommendations are not intended to replace the advice of your physician. You are encouraged to seek advice from a competent medical professional before acting on any recommendations in this publication.

AI Sears, M.D.

Al Sears M.D.

Al Sears, M.D., is a medical doctor and one of the nation's first board-certified antiaging physicians. As a board-certified clinical nutritionist, strength coach. ACE-certified fitness trainer and author, Dr. Sears enjovs a worldwide readership and has appeared on more than 50 national radio programs, ABC News, CNN and ESPN.

In 2010, Dr. Sears unveiled his proven antiaging strategies in **Reset Your Biological Clock.** As the first U.S. doctor licensed to administer a groundbreaking DNA therapy that activates the gene that regulates telomerase, Dr. Sears made history by bringing

telomere biology to the general public.

Dr. Sears shocked the fitness world by revealing the dangers of aerobics, "cardio" and long-distance running in his book, *PACE: The 12-Minute Fitness Revolution.*

In 2004, Dr. Sears was one of the first doctors to document the true cause of heart disease and expose the misguided and often fatal drugs-and-surgery approach to heart health.

In *The Ageless Heart Manual: Advanced Strategies to Reverse Heart Disease and Restore Your Heart's Pumping Power*, Dr. Sears outlines the easy-to-follow solution that effectively eliminates your risk of heart disease, high blood pressure and stroke.

An avid lecturer, Dr. Sears regularly speaks at conferences sponsored by the American Academy of Anti-Aging Medicine (A4M), the American College for the Advancement of Medicine (ACAM) and the Age Management Medicine Group (AMMG).

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