The Blaylock Wellness Report®
Living a Long, Healthy Life
by Russell L. Blaylock, M.D.
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Key Points

- Cytokine storms occur when immune system turns on the body
- Be careful increasing nitric oxide production
- Genetic mutation triggers immune response that makes flu deadly
- Low vitamin D3 is linked to risk of viral infections, including flu
- Vitamin C supplements dramatically reduce deaths from viruses
- Curcumin decreases the inflammation that causes cytokine storms

PLUS

- Legal marijuana a disaster

ASK DR. BLAYLOCK

- Can silver prevent viral infections?

Save Yourself From Immunity 'Storm'

Death from the flu is a real threat. However, it is not the ominous menace that public health authorities, and others, make it out to be. And what is most deceptive is the way in which the media, the Centers for Disease Control and Prevention (CDC), and other state and federal agencies attempt to capture the moral high ground by leading the charge for mandatory mass vaccinations against influenza.

It's axiomatic that people do not make good decisions based on fear, or during periods of high emotion. The purveyors of fear — secretly influenced by the makers of vaccines — use carefully selected cases of death from the flu, especially involving young children, to convince us that we should accept mandatory vaccination.

Of course, the death of even a single person from the flu is a terrible thing. But we cannot let that drive us to accepting a policy that could destroy the health of millions of innocent people — and worst of all, do nothing to solve the problem.

What most people, including many medical doctors, do not know is that new studies are showing that in most cases people are not killed by the flu virus itself. Rather, the damage is done by the body's reaction to the virus, which can cause the immune system to overreact with something that has been named a "cytokine storm."

The way to face the danger posed by influenza is to discover why certain people react immunologically in such a way that it can kill them. And then we can figure out what to do about it.[1, 2]

In this month's issue of The Blaylock Wellness Report, I will tell you how cytokine storms endanger your health, and what you can do to prevent them and save yourself from these deadly immune reactions.

How the Flu Makes People Sick

Flu viruses primarily target the tissues lining air passages and lungs. The site infected varies with the strain of the virus. Deep lung infections present the greatest risk.

Special cells called epithelial cells, which line respiratory passages and the lungs, are where the body first comes in contact with a flu virus. As the virus invades, the cells react by releasing high concentrations of

communication chemicals for the immune system. These chemicals are called cytokines and chemokines, and they get the immune system rolling into action.

The pro-inflammatory cytokines — including IL-1ß, IL-2, IL-8, TNF-α and interferon-gamma (IFN-γ) — not only play a role in killing viruses, they also do considerable damage to the lungs.

Chemokines mainly attract immune cells such as monocytes, neutrophils, and lymphocytes to the site of the infection — which in the case of influenza are the lungs and respiratory passages. These immune cells are the first line of defense against viral infections. But they're not antibodies, which are what the vaccines produce.

In fact, vaccines can suppress this first line of defense, making the infection worse.

Within the lung tissue (especially around air sacs called alveoli) there are special immune cells call macrophages, which offer the next line of virus resistance. These important cells produce antiviral immune compounds, but if overactivated they can cause the type of severe lung damage seen in lethal cases of the flu.

Both the epithelial cells and the macrophage cells release chemokines that then attract an array of immune cells to the lungs to battle the virus. This all occurs very rapidly, within hours of the infection.

The pro-inflammatory cytokines make the blood vessels in the lungs leaky to allow immune cells entry into the tissues of the lungs, where viruses have collected. If this leakiness persists or is excessive, the lungs can fill with fluid, interfering with the ability to breathe.

If a person's immune system works as designed, the virus will be killed and minimal damage will be done to the lungs. That damage can be quickly repaired, returning the person to good health.

Unfortunately, that's not always the case. For some people, the immune system becomes an enemy — a kind of traitor within the body.

Cytokine Storm: Immunity's Turncoat

One of the great dangers in any kind of war is the turncoat — an individual or a group working for the enemy to bring about the defeat of their own country.

In the past, it was assumed that viruses were either lethal (killer viruses) or mild based on the ability of the virus itself to do damage. For instance, the Spanish influenza virus (1918 H1N1) killed more than 40 million people worldwide, while most seasonal flu epidemics kill several hundred to several thousand people.

What is now understood is that the ability of a virus to do extensive damage or even kill is based on its ability to make the body overreact — that is, it causes the immune system to do damage.[3,4]

Killer viruses trigger an intense inflammatory response by activating special sets of genes that

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control inflammation.[5] As a result, immune cells release massive amounts of pro-inflammatory cytokines that cause severe damage to lungs and other tissues in the body.

Importantly, the inflammatory genes activated by a mild seasonal flu virus H1N1 differ from those activated by the deadly H5N1 flu virus (bird flu) or the 1918 H1N1 virus.[6]

In addition, the activated genes release chemokines to attract other immune cells from distant lymph nodes and bone marrow. This makes the immune reaction even more intense.

Thick protein-filled fluids also pour in from leaky blood vessels in the lungs. Mixed with the massive numbers of immune cells, this thick substance fills the lungs' air sacs, preventing oxygen from entering the capillaries. As a result, a person can literally drown in his or her own secretions.

In extreme cases, these immune factors spill out through the circulatory system and trigger even greater immune overreaction all over the body. This can cause failure of other organs, including the heart, kidneys, or liver. In fatal cases, we may see multi-organ failure. Death soon follows.

We call this extreme immune overreaction a cytokine storm.

The fact that the virus is not the direct cause of the damage is evident in such cases because there are low concentrations of viruses in the lungs, where the most intense damage occurs.

In some cases, blocking excessive inflammation can improve survival and reduce lung damage, even when the concentration of viruses is unchanged or increases. In fact, we see cytokine storms in cases where there is no infection at all, such as acute pancreatitis, autoimmune diseases, burns, and severe trauma.

It is also important to appreciate that a strong inflammatory response doesn't necessarily imply effective control of a virus.[7] On the contrary, it has been shown that reducing the inflammatory response improves outcomes against highly virulent infections.[8]

Learning More About Cytokine Storms

Two studies in particular reveal some important lessons about cytokine storms.

In the first, researchers examined 74 hospitalized patients in Hong Kong who had tested positive for the 2009 H1N1 influenza virus.[9] While the most severe cases occurred in the elderly, the obese (especially the morbidly obese), smokers, and those with chronic illnesses, one unusual aspect of this virus was that it produced a higher rate of severe infections among younger patients.

The researchers divided the patients according to the severity of their illnesses. Twenty-three developed acute respiratory distress syndrome (ARDS), a condition in which a person has great difficulty breathing. In flu infections, ARDS is caused by a cytokine storm.

Some of these patients survived, but some eventually died.

The vast majority of the patients were given an antiviral medication (oseltamivir) on average five days after their infection. In most, the viral load (the amount of virus in their secretions) were the same, which tells us that the outcome was not related to the amount of virus within their respiratory systems.

When the researchers compared the patients with ARDS who went on to recover to those who died, the latter group had significantly higher levels of major cytokines and chemokines — that is, they had inflammatory chemicals in their lungs.

Five of those who died suffered myocarditis, and 69.6 percent experienced multi-organ failure, meaning the cytokine storm had spread throughout their bodies The median time of death was 10 days after infection; most died of respiratory failure.

The strongest correlation between the people who died as a result of the infection was having the highest IL-6 levels, a condition that has also been seen in infected experimental animals.[10]

Be Careful Taking Nitric Oxide

I want to offer a word of caution for people taking supplements to increase nitric oxide production. In some instances, raising nitric oxide levels can be quite harmful. High levels of nitric oxide within infected lung tissues plays a major role in lung tissue damage. This is because inflamed tissues have high levels of reactive oxygen radicals (free radicals), especially superoxide, which combines with nitric oxide to produce a very destructive radical called peroxynitrite. This free radical does a great deal of the damage in cytokine storms.

Along with advanced age, obesity and a history of smoking are the two most common risk factors for cytokine storms. Of course, both of those factors can be controlled, which would drastically lower the death rate among people infected with influenza.

It's also important to appreciate that a young person who participates in physically demanding sports when he or she is sick is at a much higher risk of a fatal outcome than a person who rests when sick. Stress, such as continuing working while sick, also increases a person's risk of a poor outcome, even death.

The second study is even more interesting.[11] Pigs that are exposed to the highly virulent, deadly H5N1 virus (bird flu) rarely get sick; if they do, it is mild and they recover quickly.

Humans, on the other hand, have an alarming mortality rate of 50 percent to 60 percent. The question is, why the difference?

In humans, the H5N1 infection is characterized by an intense cytokine storm. Researchers studied the immune reaction in H5N1 viral infected humans versus the immune reaction in infected pigs and discovered some startling things.

First, they found that the virus entered the same tissues in the pigs and the humans equally well (the epithelial, macrophage, and endothelial tissues). However, the pigs did not form any of the inflammatory cytokines associated with the cytokine storm effect — TNF-α, interferon, and chemokines.

In humans exposed to two different types of flu viruses — one highly virulent and one quite weak — the researchers saw intense generation of these inflammatory cytokines with the highly virulent infection and less so with the weaker virus.

The pigs did form one inflammatory cytokine, IL-1ß, which was responsible for killing the virus and preventing its further spread.

One other difference that accounted for the divergent responses to the flu viruses was that the pigs formed high levels of a cell-signaling compound — called SOCS3 — that helps to dampen inflammatory reactions. This compound suppresses inflammatory cytokine release and protects against harmful inflammatory reactions, such as are seen in severe cases of influenza.

In humans, the worst of the flu viruses (H5N1) actually lowers the level of protective SOCS3. Interestingly, the seasonal flu raises the level of SOCS3, which may explain why the cytokine storm is rare with weaker seasonal flu viral infections.

It is suspected that TNF-α is one of the prime suspects in the cytokine storm, and activating SOCS3 lowers this inflammatory cytokine.[12]

Interferon is also suspected to play a part in the cytokine storm; SOCS3 lowers it as well.

Genetic Mutation Makes Flu Deadly

One of the big questions facing us is why do some people — especially young, seemingly healthy people — die from contracting the flu virus? We know they die as a result of a cytokine storm, but why does that happen only to certain people?

It appears that these unfortunate people have a genetic defect that makes the viral receptors on their epithelial tissues and macrophages (called pattern recognition receptors or PRRs) significantly more sensitive than normal. This triggers a powerful immune response that causes a hyperintense inflammation within the lungs.[13]

Interestingly, this hyperintense inflammatory response does not kill the virus any better than a normal response.

These genetic mutations are called single nucleotide polymorphisms, or SNPs. Normally, the response to viruses is a carefully controlled release of inflammatory chemicals. But with these SNPs, we see a massive amount of inflammatory chemicals released.

Studies have identified people with this set of gene abnormalities, and have shown that when they are infected they are much more likely to die from a cytokine storm.[14]

And vaccinating such people may not protect them from cytokine storms because the viral reaction with

the over-responsive receptors will still take place.

Most importantly, we do not know what harmful effects may occur when these people are vaccinated. They could possibly overreact to the vaccine as well.

In fact, it's known that some people do have a mutation of the gene controlling an immune receptor that could cause a cytokine storm when it comes in contact with certain vaccine components.[15]

Unfortunately, no one has studied this important effect in the general population, and we don't really know just how many people have this gene mutation.

But it does explain why some young, seemingly healthy people die when exposed to the flu virus — especially if it is a virulent strain.

Controlling Immune Response

You might be thinking that the answer to this problem would be to block inflammation, because that is what's doing most of the lung damage — not the virus itself. But studies have shown that if you completely or substantially block inflammation, the body gets no protection.[16] People need a controlled immune attack to eliminate the virus and recover.

Normally, when the immune system is activated, it also activates special anti-inflammatory compounds at the same time. Those compounds help control the immune attack and prevent excessive damage to the lungs.

In the case of a cytokine storm, this system is overwhelmed.

Current treatments for people affected by cytokine storms are at best ineffective, and may actually worsen the problem.[17] In most hospitals, patients are given high doses of corticosteroids on the reasoning that the anti-inflammatory effect will reduce the damage from immune overreaction. Unfortunately, those steroids reduce not only the harmful cytokines, but also the ones needed to kill the virus.

As a result, the increased viral load overrides the anti-inflammatory effect of the steroid, and the condition gets worse.

Some clinical studies suggest that treatment with corticosteroid may actually increase long-term mortality in these cases.[18]

Newer treatments are designed to selectively lower the harmful cytokines and chemokines without interfering with the ability of the immune system to clear a virus. One such treatment uses a compound that stimulates a special immune receptor called sphingosine-1 phosphate (S1P1). Stimulating that receptor has been shown to stop cytokine storms.

Tests in mice using such a compound reduced death in the test animals exposed to a lethal flu virus by 80 percent. When combined with an antiviral drug, it lowered mortality by a whopping 96 percent.

A number of less effective methods have been tested as well, including statins, COX-2 inhibitors, TNF inhibitors, intravenous immunoglobulins, ACE inhibitors, and angiotensin blockers.

What we've learned is that the best way to protect people from the severe effects of viral infections is to control the immune response, but not block it completely. The best thing would be to selectively dampen the components of immune-induced inflammation that cause the harm to the lungs — that is, a cytokine storm.

Vitamin D3: Neurohormone Protector

It has been proposed that the reason we see viral infections increase during the winter months and early spring is because that is when humans have the lowest levels of vitamin D, which is produced in the skin during exposure to the sun.[19, 20]

'Flu-Like' Viruses Prevalent

Each year during the winter months, we are visited by a different strain of influenza virus. One of the least talked about secrets is that most viral respiratory infections are not caused by the influenza virus. In fact, if you visit the CDC's website you will see they refer to the flu season's "influenza-like syndromes."

What this coded set of words means is things that make us sneeze, develop fever, cough or develop other respiratory symptoms, are flu-like but not flu.

For example, during the 2009 H1N1 flu season, it was shown that in each state the incidence of actual infections by H1N1 varied from 2 percent to 10 percent. That meant most of the infections were ordinary colds (rhinoviruses), adenoviruses, picornaviruses, enteroviruses, coronaviruses, and or asthma — all of which were counted as "the flu." And none of which responded to the flu vaccine.

Even for the seasonal flu itself, the vaccine's actual effectiveness varied from 0 percent (in children less than age 2) to as high as 30 percent in adults.

Studies have confirmed that low vitamin D3 levels correlate with the incidence and risk of several viral infections, including influenza.[21, 22]

Again, it is important to emphasize that a strong inflammatory response to the flu virus — or even antiviral antibodies — does not necessarily imply effective virus control. This is important because promoters of flu vaccines base their claims of effectiveness on antibody responses, not actual viral clearance. In effect, their claims are just smoke and mirrors.

There are vitamin D3 receptors located on all immune cells, which are the first and most important line of defense against infections.[23, 24] But vaccines don't enhance this form of immunity. In fact, they can cause prolonged suppression of such cell-mediated immunity.

One of the primary immune cells needed to clear flu viruses are T-lymphocytes (also called T-cells). During the summer months, these cells increase in number because of increased sun exposure, thus protecting against viral infection.

People with chronic infections undergo a fall in functional T-cells, and therefore are at a higher risk of severe complications with other infections.[25]

Vitamin D3 has shown a number of beneficial effects for resistance to infectious diseases, inflammation, and cancer.[26] These benefits include:

- Regulation of monocyte/macrophage activation
- Enhancement of antimicrobial protein production
- Enhancement of antigen presentation
- Balance of immune system function
- Enhancement of regulatory T-cells (Tregs)
- Suppression of excess T-cell proliferation

But the most important thing that vitamin D3 does is reduce inflammation.

One of the most analyzed anti-infectious benefits of vitamin D3 is the presence of antimicrobial peptides, the most abundant of which is LL-37. Vitamin D3 generates peptides in epithelial cells, macrophages, and endothelial cells.[27] These peptides form the first line of defense against infections.

Antimicrobial peptides such as LL-37 and defensins reduce the severity of flu infections, decrease viral replication, inhibit the ability of the virus to infect, and aid in neutralizing the virus. They also reduce the risk of secondary bacterial pneumonia, a major complication in severe flu infections.

Macrophages — which are a major source of LL-37 — are critically important for protecting the body from severe cytokine storm damage. They not only help kill a virus, they also clean up the debris that collects in the lungs' air sacs during such infections.

When the macrophage cells were removed from experimental animals exposed to flu viruses, many of the animals were found to have died from respiratory failure. Because vitamin D3 enhances the ability of macrophages to clear debris from the lung's air sacs (alveoli), having more of the vitamin would benefit flu-exposed animals.

It has been noted that in some people — usually the young — there is a mutation of the viral receptor system on immune cells that makes them overreact to viral infections. This is what causes a cytokine storm.

Vitamin D3 has been shown to calm this receptor, thus reducing the likelihood of a cytokine storm reaction.[28]

Specifically, vitamin D3 decreases chemicals associated with cytokine storms (TNF-α, IL-2, IL-17, IL21, INF, and chemokines) and enhances the killing of the viruses at the same time.[29]

Taking less than 1,000 IU of vitamin D3 a day will not improve blood levels at all. In general, it takes 2,000 IU to 5,000 IU a day to keep vitamin D3 blood levels at optimal concentrations.

I suggest that everyone should have their blood tested for vitamin D3 levels. The normal value for optimal health is between 65 ng/mL and 75 ng/mL. A level higher than 100 ng/mL is detrimental. After

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Please note that this advice is generic and not specific to any individual. You should consult with your doctor before undertaking any medical or nutritional course of action.

supplementing for a month, repeat testing to see if you have attained these levels.

From the scientific data, it is obvious that the greatest protection against serious illness from the flu is not vaccination, but optimizing vitamin D3 intake.

Vitamin C: Another Miracle

I have written before about the case of an elderly New Zealand farmer who developed a cytokine storm after contracting the 2009 H1N1 flu virus. He became seriously ill, lost consciousness, and had to be placed on life support. His doctors were trying to convince the family to end the life support because they were convinced his case was hopeless. But the family convinced the doctors to try administering high-dose intravenous vitamin C.

To make a long story short, he rapidly improved and within a couple of weeks he was able to leave the hospital, fully recovered.

It is known that vitamin C enters endothelial cells and can affect the genes that control inflammation. It also inhibits an enzyme that generates a powerful type of free radical.

Another important way vitamin C fights a cytokine storm is reducing leakage from blood vessels, which is the source of suffocating fluid in the lungs.

Animal experiments have also shown that vitamin C can prevent death from sepsis. In one experiment, researchers injected animals with fecal material to produce intense sepsis.[30] Approximately 91 percent of the animals not given extra vitamin C died, while only 35 percent of those given vitamin C died.

Vitamin C also dramatically reduces deaths from viral infections. In poverty-stricken areas of Africa, the death rate from measles is around 15 percent. Researchers who gave children vitamin C cut the death rate in half. When they also added zinc, the death rate fell by 80 percent.

People living in Third World countries die at much higher rates than those in developed countries because they have poorer nutrition and they are frequently infected with parasites such as malaria, leishmaniasis and schistosoma. Both bad nutrition and parasite infection increase the risk of a cytokine storm should a person contract a viral infection.

People can absorb only a certain amount of vitamin C when it is taken orally — around 200 mg to 500 mg per day. But that is far too low a dose to reverse a cytokine storm. High-dose vitamin C, from 10 grams to 100 grams a day, can be given intravenously with great safety. At that dose, the effects of a cytokine storm that can prevented or reversed include:

- Blood vessel leakage
- High levels of free radicals
- Elevated pro-inflammatory cytokines (IL-6 and TNF-α)

That much vitamin C can also inhibit a cell mechanism that controls inflammation (NF-κB).[31, 32] And high-dose vitamin C has no effect on the cytokines that actually kill the virus.[33]

In patients with severe infections or trauma, vitamin C levels fall rapidly within a matter of hours. In fact, vitamin C in those patients' blood is either significantly depleted or not detectable at all.[34, 35]

Levels of IL-6 and TNF-α can predict the outcome of septic patients, with high levels signaling high potential of mortality.

This shows that depleted vitamin C puts a person at great risk of death, especially from highly active viruses. Unfortunately, most doctors pay no attention to a patient's vitamin C blood level.

Immune cells such as macrophages, lymphocytes, and neutrophils accumulate high concentrations of vitamin C when a person's diet is adequate.[36] It's also understood that a combination of vitamin C and selenium is important for optimizing immune response against the flu and other viruses.[37]

One of the central mechanisms for triggering inflammation is a cell-signaling compound called

D3 Deficiency Raises Risks

People with darker skin are especially likely to have vitamins D3 deficiency, and as a result, babies born to mothers with dark skin are at a greater risk of viral infections early in life.

Some people are born with a mutation of a set of genes that control vitamin D3 receptors, and studies have shown that they have a significantly higher incidence of respiratory infections and bronchiolitis.

Studies worldwide strongly suggest that pulmonary infections, especially secondary bacterial pneumonias and death from flu viruses, is directly related to one's sun exposure — hence, vitamin D3 levels.

Zinc Aids Immune System

Zinc is also critical for immune function. Deficiency in animals causes shrinkage of the thymus gland (a major immune gland), a progressive loss of T-cells and macrophages, impaired B and T-cell function, reduced antibody recall, and other immune deficiencies.

Zinc is not stored in the body, so must be regularly replaced through diet or supplementation. NHANES, a very large, long-term study, found that the greatest risk for zinc deficiency was in children ages 1 to 3, adolescent girls ages 12 to 19, and the elderly over age 71.

Zinc can reduce the duration and severity of colds and cough, but only if the ionized form of zinc is used. Zinc gluconate had no beneficial effect when combined with chelating substances such as citrate, tartrate, amino acids, aspirin, or EDTA.

Pure zinc acetate was very effective, as it releases the ions — especially when it is dissolved in water Other manufacturers offer pure ionic zinc.

NF-κB, which activates the gene that controls inflammation. This cell-signaling compound also triggers the production of TNF-α — the main culprit in cytokine storms.

Vitamin C has been shown to powerfully suppress NF-κB, thus lowering TNF-alpha.[38] That makes vitamin C a powerful weapon against cytokine storms.

High-dose vitamin C has also been used to treat cytokine storms related to other conditions, such as acute pancreatitis.[39] In one study, researchers gave the patients 10 grams (10,000 mg) of intravenous vitamin C for five days. They found that the treatment significantly lowered the inflammatory cytokines TNF-α, IL-6, and IL-8.

Except for abdominal pain, all other symptoms disappeared, and serum and urine amylase levels returned to normal.

Even in lower doses, vitamin C greatly improves the ability of the immune system to kill invading viruses and bacteria, which is important in preventing the cytokine storm.[40] Elderly people have decreased vitamin C plasma levels along with low levels in their immune cells. Supplementation with vitamin C can enhance cell immunity, the first and most important line of defense.[41] And vitamin C can directly kill some viruses.[42]

Curcumin: Cytokine Storm Inhibitor

Curcumin, a bright yellow compound extracted from the spice turmeric, has been shown to powerfully suppress the chemicals most associated with cytokine storms: the cytokines TNF-α, IL-6, IFN, and IL-8; and the chemokines MIP1α and MCP1.[43, 44]

Curcumin also reduces the inflammatory response in mouse experiments of induced acute respiratory distress syndrome caused by a virus (precipitating a cytokine storm).[45] In one study, researchers gave curcumin to the animals before exposure to the virus as well as throughout the course of the illness. The animals given the curcumin had a significant reduction of the inflammatory cytokines associated with lung damage, reducing the degree of fibrosis (scarring) in the lungs after recovery.

Other studies confirm the protective ability of curcumin against such damage.[46, 47] This makes it a major weapon against cytokine storms, no matter what the cause.

Importantly, curcumin deactivates the central cell mechanism for triggering the intense inflammatory response seen in cytokine storms — that is, activation of NF-κB.

Curcumin is also known to inhibit a number of other viruses:

- HIV-1 virus
- Herpes simplex virus (HSV)
- Human papillomavirus (HPV)
- Human T-lymphotropic virus-1 (HTLV-1)
- Hepatitis B and C viruses (HBV, HCV)
- Japanese encephalitis[48]

Significantly, curcumin stimulates the activity of SOCS protein, which as noted, play a major role in suppressing the cytokine storm.[49]

So this simple plant extract suppresses the cytokine storm reaction in a number of ways. If taken daily, before an infection occurs, curcumin holds great promise for preventing severe lung damage caused by viruses and bacteria — and greatly lowers the risk of death in a majority of people.

Taking it after an infection could also prevent a cytokine storm.

Studies have shown that stimulating another cell-signaling mechanism called AMPK can reduce inflammation in the lungs. It also increased survival in flu-infected mice.[50]

Curcumin is a powerful stimulator of AMPK as well — yet another way it protects against cytokine storms.[51]

N-Acetyl-L-Cysteine: Powerful Protection

N-acetyl-L-cysteine (NAC) has been shown to inhibit replication of the highly virulent H5N1 bird flu virus and reduce inflammation in the epithelial cells of the lungs.[52] That means it is a powerful weapon against cytokine storms.

A handful of clinical trials have been conducted to see if NAC improves the outcome of patients with acute respiratory distress syndrome, which is caused by cytokine storms. The results are mixed, but they seem to indicate that NAC improves outcome, shortens stays in intensive care units, and reduces collagen and fibrosis in the lungs after the infection clears.[53-55]

Unfortunately, in most of these studies the NAC was given only after patients were already seriously ill.

One of the most important effects of NAC is that it increases the amount of the antioxidant molecule glutathione in all cells. Ironically, taking Tylenol (acetaminophen) during a flu infection drastically lowers glutathione levels, increasing the risk and pathological impact of cytokine storms.

In addition, lowering fever can increase the risk of death from viral diseases.

NAC should be taken with meals. The usual dose is 750 mg twice a day during flu season and twice a week otherwise.

More Compounds That Reduce Lung Inflammation

A number of other natural compounds may also reduce the risk of a cytokine storm reaction. These include:

- Luteolin
- Apigenin
- Magnesium
- Grape seed extract
- Hesperidin
- Resveratrol
- EGCG from green and white teas

The most impressive are apigenin and luteolin.[56, 57]

Avoiding omega-6 oils (corn, peanut, safflower, sunflower, soybean, and canola oils) is critical because they also increase inflammation.

Omega-3 oils, especially DHA, reduce inflammation and protects the lungs and other organs.

Low magnesium has been shown to significantly increase inflammation throughout the body.[58]

A diet low in simple carbohydrates (especially high fructose corn syrup and sugars), high in fruits, and especially vegetables will also significantly lower the risk of encountering a cytokine storm.

As you can see, there are very powerful naturally occurring compounds that can protect people against deadly cytokine storms, which are the primary reason for both serious injuries and deaths associated with influenza infections.

Once this danger is erased, flu infections will be much milder, and there will be no need for forced vaccination — especially with the current dangerous vaccines. ■

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Health and Nutrition Updates

Marijuana Legalization: Disaster Waiting to Happen

The recent mass shooting in Parkland, Fla., has called attention to what I and many others feel is a factor that should be front and center to the debate: the effect of drugs on violent behavior. Prescription drugs for behavioral problems are one of the major causes for violent behavior, but of equal if not greater concern is the recent legalization of marijuana (cannabis) — to one degree or another — in numerous states across the country.

In fact, nine of those states have legalized marijuana for recreational use despite overwhelming evidence that regular use can stimulate psychotic behavior in a large number of people. In a smaller number, that behavior can be permanent and severe.

The psychosis induced by marijuana can include depersonalization, derealization, paranoia, disorganized thinking, persecutory delusions, grandiose delusions, auditory or visual hallucinations, impaired attention, and memory impairment. Most of these symptoms are also common among deranged people arrested for violent crimes — especially young people. Many school shooters reported similar symptoms.

In large studies, 20 percent to 50 percent of marijuana users reported such behavioral symptoms, depending on the frequency of use. These same psychotic symptoms are seen with the use of medical marijuana. In fact, some patients report a loss of self-control, as well as aggressive verbal behavior and thought insertion.

In one double-blind study, delta-9 tetrahydrocannabinol, the active ingredient in cannabis, induced all the symptoms of schizophrenia in healthy test subjects. They also suffered from apathy, a lack of motivation, disturbed judgment, social withdrawal, and impaired learning and memory.

One Swedish study involved a large number of subjects ages 18 to 20 years old, who were followed for 15 years. The researchers found that those who used the drug more than 50 times during the study had a sixfold increase in the risk of developing schizophrenia. When they concentrated on those who used marijuana heavily, the increase in risk rose to 6.7 times greater.

A study of 1,037 people in New Zealand, followed to age 26, found a higher incidence of schizophrenia in those who started using the drug between ages 15 and 18. Those starting marijuana before age 15 had a threefold increase risk of developing schizophrenia.

A recent review of longitudinal studies found a 40 percent higher risk of psychosis in those who used marijuana — and it was even worse for heavy users. A meta-analysis suggested that 8 percent to 14 percent of all cases of schizophrenia are linked to marijuana use.

Other studies have shown that 69 percent of schizophrenics used marijuana at least one year before they were diagnosed. Use very early in life was associated with higher risk of permanent defects in thinking and social behavior.

These studies all agree that marijuana use by individuals with mild, often undetected psychotic symptoms can precipitate full-blown psychosis. In fact, hidden cases of psychosis are 10 times more likely to advance to full psychosis with marijuana use.

Some of the most important parts of the brain do not fully develop until around age 25 to 27. It is these areas of the brain that control violent behavior and risk taking. Because cannabinoids block the main stimulus for development of this part of the brain, use of cannabis before age 27 will mean such people could have great difficulty with impulse control and control of violent behavior.

Even in states where marijuana use is limited to those with medical conditions, children (and pregnant women) exposed to the smoke will suffer the same damage. And having marijuana in the home means one more drug that children can steal from their parents.

Because so many states have now legalized the widespread use of this drug, millions are now at risk of developing major difficulties with self-control and the functioning of the social-control parts of their brain. This will inevitably lead to more mass shootings and other acts of violence and antisocial behavior.

This is another example of government being the problem, not the solution. We have opened Pandora's box once again. ■

Ask Dr. Blaylock

Attention Readers:

Dr. Blaylock welcomes any questions or comments you would like to share. Each month, he will select a few to be published and answered in the newsletter. Please remember that he cannot answer every question. When submitting a question or comment, please include full name, city, and state. Please e-mail the doctor at: askblaylock@newsmax.com.

Do You Recommend Immunotherapy?

Q: My sister was recently diagnosed with Stage 4 breast cancer. Do you suggest she look into immunotherapy?

— Doris M., West Chester, Pa.

A: If conducted properly, immunotherapy can be very helpful against cancer, and holds great promise. High-dose absorbable curcumin at 2,000 mg four times a day, silymarin in a dose of 400 mg three times a day, baicalein in a dose of 500 mg three times a day, and an immune stimulant called BreastDefend have shown significant benefit when used in patients with advanced breast cancer.

What Do You Think of Bone Scans?

Q: My husband is 82. He has heart issues, lung cancer, prostate cancer, diabetes, and is on dialysis. The doctor want to do a radioactive isotope bone scan. What is your position on isotope bone scans?

— Juanita W., Pensacola, Fla.

A: I cannot give specific advice, but I would question the wisdom of doing a bone scan on an 82-year-old man with so many medical problems. The natural treatments should provide the greatest benefit. He doesn't sound like a good candidate for chemotherapy anyway.

Can Silver Prevent Viral Infections?

Q: Is there any evidence that silver solutions are antimicrobial and that they help prevent flu and cold viruses?

— David H., Sarasota, Fla.

A: I do not recommend using silver solution orally, especially nanosized silver. Silver avidly attaches to brain cell components, and there is some evidence of damage. It would be very difficult to remove silver from the brain.

What Can I Do For AFib?

Q: I recently developed atrial fibrillation during radiation for breast cancer. My doctor wants me to take an antiarrhythmia drug, a blood thinner, and beta blocker. I'm not taking all those pills. Any suggestions?

— Jill H., Hot Springs, Ark.

A: There is clinical evidence that taking magnesium can suppress atrial fibrillation.

Are Raisins Healthy?

Q: Do the health benefits of grapes extend to red grape raisins?

— Mitch M., Indio, Calif.

A: Raisins are red grapes, except that as raisins they have very high fluoride levels.

Is Nitric Oxide Dangerous?

Q: My husband says taking nitric oxide has remedied his cold hands and feet. Your February newsletter says it plays a role in brain excitotoxicity. What else do we need to know about nitric oxide?

— Lucy C., Granger, Ind.

A: As I state elsewhere in this issue of The Blaylock Wellness Report, taking things that increase nitric oxide is fine — as long as a person does not have a condition that increases free radical generation.

Elevation of nitric oxide is a part of excitotoxicity, but it is damaging because of the generation of a very toxic free radical called peroxynitrite.

Antioxidants, especially flavonoids, powerfully

block this reaction. These include curcumin, quercetin, ellagic acid, proanthocyanidins, baicalein.

Can Soy Reduce Cancer?

Q: You wrote: "Phytoestrogens from soy may reduce the incidence of both prostate and breast cancers, but at least in cases of breast cancer, soy phytoestrogen stimulates cancer growth, tumor invasion, and metastasis." Aren't these statements in conflict with each other?

— Curtis S., Springfield, Ore.

A: It depends on whether normal or cancerous cells are being exposed to the soy. When taken for prevention, the soy estrogens occupy the estrogen receptor controlling the more active form of estrogen (estradiol), thus preventing it from stimulating the development of breast cancer. If taken by people who already have breast cancer, it stimulates the growth of that cancer because soy estrogen dramatically enhances an enzyme that promotes breast cancer growth and invasion called aromatase.

It should also be noted that GMO soy, in experimental animals, triggers the development of very large breast tumors. Over 90 percent of soy is of the GMO variety.

How Much CoQ10 for Swelling?

Q: In the February 2014 issue of The Blaylock Wellness Report, you referred to a patient with mild swelling in her ankles, and said she took CoQ10 at a dose of 300 mg, three times a day. Is that accurate or did you mean 50 mg three times a day?

— Chris R., Bloomington, Ind.

A: To treat ankle swelling secondary to heart failure I recommended 300 mg a day. In fact, even higher doses can add additional benefit — as high as 600 mg three times a day of the highly absorbable forms of CoQ10.

The L-carnitine dose can be increased to one gram three times a day.

Taurine, curcumin, and other select flavonoids also help heart failure. If the problem is leaky veins, then pycnogenol, hesperidin, vitamin C, and lysine can help. ■

About Dr. Blaylock

Dr. Russell Blaylock is a nationally recognized, board-certified neurosurgeon, health practitioner, author, and lecturer. He attended the Louisiana State University School of Medicine in New Orleans and completed his internship and neurosurgical residency at the Medical University of South Carolina in Charleston, S.C. For 25 years, he has practiced neurosurgery in addition to having a nutritional practice. He recently retired from his neurosurgical duties to devote his full attention to nutritional studies and research. Dr. Blaylock has authored four books on nutrition and wellness, including "Excitotoxins: The Taste That Kills," "Health and Nutrition Secrets That Can Save Your Life," "Natural Strategies for Cancer Patients," and his most recent work, "Cellular and Molecular Biology of Autism Spectrum Disorders," edited by Anna Strunecka. An in-demand guest for radio and television programs, he lectures extensively to both lay and professional medical audiences on a variety of nutrition related subjects.

He is the 2004 recipient of the Integrity in Science Award granted by the Weston A. Price Foundation. He serves as an assistant editor-in-chief for the journal "Surgical Neurology International." He was also a lecturer for the Foundation on Anti-Aging and Regenerative Medicine. At present, he is a reviewer for the journal "Food & Chemical Toxicology" and other journals.

Dr. Blaylock previously served as clinical assistant professor of neurosurgery at the University of Mississippi Medical Center in Jackson, Miss.

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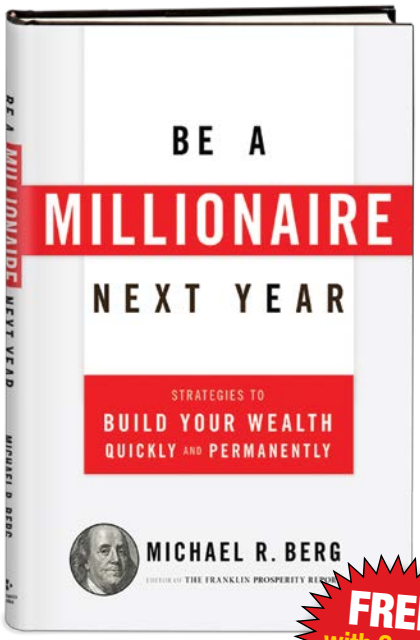

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