# The Blaylock Wellness Report.

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#### by Russell L. Blaylock, M.D. Vol. 16, No. 7

## **Key Points**

- Most important risk factor for prostate cancer is what you eat
- Hereditary association exists between prostate cancer and breast cancer
- Prostatitis is associated with cancers that are more likely to be fatal
- Aluminum contained in antiperspirants linked to higher breast cancer risk
- Natural compounds that decrease inflammation benefit both prostate and breast cancers

#### **PLUS**

• Berberine works as well as Type 2 diabetes drugs

#### ASK DR. BLAYLOCK

- How do you treat bladder cancer?
- What is mannitol?

# Better Strategies for Treating Breast and Prostate Cancers

Breast cancer is the most common malignancy among American women, with more than 200,000 new cases diagnosed and 50,000 deaths from the disease each year.

Worse yet, the incidence appears to be increasing significantly. It is now estimated that 15 percent of women will develop breast cancer at some point in their life.

Meanwhile, prostate cancer is the most common form of the disease for American men, with 200,000 cases diagnosed and 45,000 deaths each year. (Remarkably similar to breast cancer incidence and death rates.)

And like breast cancer, the incidence of prostate cancer is rising in developed nations.

These two cancers share a number of other common features, such as being related to steroidal sex hormones, as well as having hereditary links, common dietary etiology, and being caused by exposure to common environmental toxins.<sup>1</sup>

While genetics plays a role in both breast and prostate cancers, lifestyle and environmental exposures are of greater importance in most cases. We see this when peoples known to have a very low incidence of these cancers — such as the Japanese — move to countries that have a very high incidence, such as the United States.

In most cases, it takes two to three generations before the immigrants' rates of these cancers increase significantly, because the first generation usually maintains the traditional diet of their native country.

But their offspring tend to assume the terrible standard American diets, which makes them more susceptible to developing breast or prostate cancer.

In addition, environmental exposures are having a significant impact on the incidence of breast and prostate cancers, mainly because of endocrine disruptors, such as dioxin, BPA, phthalates, atrazine, PCBs, DDT, perfluorooctanic acid (PFOA — nonstick cookware), and certain pesticides and herbicides (Roundup/glyphosate).<sup>2</sup>

In this month's issue of The Blaylock Wellness Report, I will tell you

about some of the characteristics these breast and prostate cancer share, and explain how you can prevent them as well as how treat to them should they develop.

#### **Understanding Prostate Cancer Risk Factors**

The major risk factors associated with prostate cancer include older age, ethnicity, family history, and high levels of the hormone dihydrotestosterone (DHT) — a converted form of testosterone.

On average, African Americans have 10 percent higher testosterone levels than Caucasians, and also have the highest rate of prostate cancer.

Japanese people, who have lower testosterone levels, have the lowest prostate cancer rate.

But genetics plays a major role in only a very small number of prostate cancer cases, with mutations in the androgen (sex hormone) receptor genes being the most common cause within this group.

As with breast cancer, we also see mutated BRCA1 and BRCA2 genes in a rare number of prostate cancer patients.

In most cases, the genes are not actually mutated, but rather overactive. For example, overactivity of the enzyme that transforms testosterone into the much more powerful dihydrotestosterone (5-alpha-reductase enzyme) significantly increases the risk of developing prostate cancer.

Men with a deficiency in this enzyme never develop prostate cancer.<sup>3</sup>

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In fact, the relatively low activity of this enzyme in men of Asian ethnicity may account for the low rate of prostate cancer among Asians.

Other important risk factors for prostate cancer include:

- Having a vasectomy
- Early first-time intercourse
- Large number of sex partners
- History of one or more sexually transmitted diseases
- Unprotected anal sex

The element that links all of those risk factors together is that they cause chronic inflammation of the prostate.

For instance, one study found that men who had extramarital sexual affairs had a significantly increased risk of developing prostate cancer.<sup>4</sup>

High levels of sexual activity, as well as intercourse with multiple partners, increases the risk of prostate infections, and therefore inflammation.

While most realize that high levels of testosterone are a risk factor for prostate cancer, high levels of estrogen — either alone or in combination with testosterone — also increase the risk.<sup>5,6</sup>

#### **Diet Can Prevent or Cause Prostate Cancer**

Of all the factors related to prostate cancer risk, the most important one is what you eat. A diet high in omega-6-fats (n-6 fats), carbohydrates (especially sugars),

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and seared meats — while low in fruits and especially vegetables — puts a person at significantly high risk for the disease.

Several natural nutrients and plant-based compounds protect against prostate cancer, including:

- Lycopene
- Astaxanthin
- Vitamin A
- Proanthocyanidins
- Flavonoids

Plant-based estrogens — such as quercetin, genistein, curcumin — are also protective because they have very weak estrogenic effects that block estrogen receptors and prevent access to the more powerful forms of estrogens, such as estradiol.

And they have a great number of other anticancer benefits.

In the past, there was a lot of talk about saturated fats and prostate cancer risk. But it's now understood that saturated fats play a very minor role, if any, in prostate cancer.

The strongest dietary link is ingesting large amounts of omega-6 fats, which are polyunsaturated and easily oxidized.

That makes them powerful generators of free radicals, lipid peroxidation products, and inflammatory compounds.<sup>7-9</sup>

Omega-6 oils include corn, peanut, soybean, safflower, sunflower, and canola oils. When exposed to air — and especially when heated — these oils become heavily oxidized.

Unfortunately, recent studies have found that most restaurants reuse their omega-6 oils over and over for weeks or even months, which makes anything cooked in these oils intensely inflammatory.

Low vitamin D3 levels also increase prostate cancer risk. This may explain why the disease is more common in the Northern part of the United States than in the South, which tends to get more intense sunlight. (Vitamin D is produced in the skin when exposed to sunlight.)<sup>10</sup>

One study implied a higher risk of prostate cancer with vitamin D3 supplementation, but in that study the subjects were also given a high-dose calcium supplement — and calcium supplementation is a known risk factor for the disease.<sup>11, 12</sup>

In fact, all cancers are strengthened by high calcium

#### **Prostate-Breast Cancer Links**

In 1954, it was recognized that there was a significantly higher frequency of prostate cancer among relatives of female breast cancer patients.<sup>2</sup> This has been confirmed in a number of modern studies. For example, a study that examined cancer rates in 21 countries known to have accurate cancer registries found that the highest correlation of types of cancer was between prostate and breast cancers.<sup>3</sup>

Another study, which examined 1,539 Icelandic women who had breast cancer, found a significantly higher incidence of prostate cancer for male relatives, as well as first- and second-degree relatives of these women.<sup>4</sup>

intake, including calcium from dairy products.13,14

Exposure to certain pesticides, especially in chlorinated forms, dramatically increases prostate cancer risk for men, particularly those with a family history of the disease.<sup>15</sup>

One study confirmed significantly higher rates of prostate cancer in men who are exposed to organochlorine pesticides.<sup>16</sup>

In addition, glyphosate (the chemical in the pesticide Roundup) has been linked to a severe reduction in sperm count and abnormal sperm, and impaired fertility in experimental animals.<sup>17</sup> Glyphosate, which is found all over the environment, has also been associated with a number of other cancers.<sup>18</sup>

Recent research has found a link between insulin resistance (metabolic syndrome) and higher rates of prostate cancer.

In one study, 16,209 men — ages 40 to 49 years at the beginning of the study — were followed for 27 years. The researchers found that insulin resistance in the form of metabolic syndrome significantly increased the men's risk of developing prostate cancer.<sup>19</sup>

Metabolic syndrome is diagnosed when a person has high blood pressure, elevated blood glucose, elevated triglycerides, and obesity in combination. The incidence of metabolic syndrome has increased astronomically in the past 30 years, even among adolescents and young adults.

Ingestion of high fructose corn syrup, which is used in an enormous number of processed foods and drinks, has been shown to induce metabolic syndrome, as well as individual components of it. That means it can lead to hypertension, obesity, insulin resistance, and lipid abnormalities, either alone or in any combination.<sup>20, 21</sup>

This is because ingesting high fructose corn syrup causes widespread inflammation.<sup>22</sup>

Therefore, consuming a diet of foods prepared with or containing omega-6-oils as well as eating foods that contain high fructose corn syrup would greatly increase a person's risk of a number of diseases, including prostate cancer.

And because prostate cancer is driven by inflammation, such a diet could very well convert a slow-growing, contained prostate cancer into a highly aggressive, invasive, and deadly malignancy.<sup>23,24</sup>

It is also known that elevated levels of the inflammatory cytokine interleukin-6 (IL-6) indicate the presence of a very aggressive tumor that is likely to be fatal.<sup>25</sup>

#### Chronic Prostate Inflammation Becoming an Epidemic

As noted, chronic inflammation is the major driving force for development of most cancers, especially prostate cancer.

Therefore, it stands to reason that a history of chronic or repeated prostate infection or prostate inflammation should be a real concern for anyone who suffers from them.

In fact, persistent prostate inflammation (prostatitis) is a major factor associated with advanced, highly aggressive prostate cancers that are more likely to be fatal.<sup>26-30</sup>

It also has to be understood that the prevalence of both prostate cancer and prostate inflammation have in recent decades reached epidemic proportions in advanced nations.<sup>31</sup>

Even following treatment of prostate infections, significant inflammation can continue within the prostate gland for up to a year. And in some cases, an autoimmune inflammation may develop in the prostate following an infection.

Immune cells and cytokines within the chronically inflamed prostate stimulate overgrowth of cells, which can eventually lead to the development of prostate cancer.

There are four types of prostatitis:

- 1. Acute bacterial prostatitis
- 2. Chronic bacterial prostatitis
- 3. Chronic nonbacterial prostatitis
- 4. Asymptomatic inflammatory prostatitis

The third type, chronic nonbacterial prostatitis, is the most common, comprising 90 percent to 95 percent of all cases.

But the name is actually a misnomer, as most cases show evidence of infectious organisms within the prostate, but not in the seminal fluid expressed from the prostate.

Infectious organisms associated with this type of prostatitis include:

- Chlamydia trachomatis
- Trichomonas vaginalis
- Neisseria gonorrhoeae
- Herpes simplex types 1 and 2
- Cytomegalovirus

In fact, a high percentage of prostate cancer specimens that were examined contained cytomegalovirus,<sup>32, 33</sup> an organism that prevents cancer cells from undergoing apoptosis (the normal process of cell death), thus preventing cancer cells from being killed.<sup>34, 35</sup>

Because few symptoms accompany this form of prostatitis, elevation of prostate-specific antigen (PSA) or infertility is usually what sends the patient to a urologist.

An elevated PSA early in life puts a person at much higher risk of developing prostate cancer over the next several decades.

Elevated PSA indicates inflammation within the prostate early in life.

Cytomegalovirus infection is very common, but cancer-linked infections appear to contain mutated forms of the virus. That's why not everyone infected with the virus will develop cancer.

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We know that viruses such as cytomegalovirus greatly increase cancer cell proliferation, enhance angiogenesis, and suppress anticancer immunity. They also stimulate cell signaling in cancer cells, making the cancer much more aggressive and deadly, as well as worsening inflammation in the tumor microenviroment.

In essence, cytomegalovirus significantly worsens the prognosis of a prostate cancer patient by making the tumor much more invasive, therefore more likely to metastasize.

A recent study examined prostate secretions from surgically removed prostate glands of 40 men with prostate cancer.<sup>36</sup> The specimens were either prostate glands with minimal prostate cancer or extensive prostate cancer.

The researchers identified 174 cytokines, and found that a powerful type of inflammatory cytokine called hepatocyte growth factor (HGF), was 6.57 times higher than normal — but only in the glands of people with extensive prostate cancer.

It was also shown that cancers with high levels of an immune suppressing cytokine (IL-10 from Tregs) have a significantly worse prognosis.

Interestingly, cytomegalovirus produces a compound that mimics the cytokine IL-10 (cmvIL-10).<sup>37</sup> This dramatically increases the growth and invasive potential of cancer.

#### Breast Cancer Linked to Inflammation Caused by Aluminum

Like prostate cancers, breast cancers are linked to high levels of a sex steroid — in this case estradiol, which is a potent estrogen hormone.

And like androgens (especially dihydrotestosterone), estradiol in high concentrations can worsen inflammation in the breast.<sup>38,39</sup>

Also like prostate cancers, diet, persistent infections, obesity, sedentary lifestyle, pesticides/herbicides, genetics, and certain toxic metals greatly increase a person's risk for breast cancer.

One of the more interesting links to breast cancer is the toxic metal aluminum.

Several studies have shown a relationship between use of aluminum-containing antiperspirants and breast cancer, especially in women who began using them before age 30.<sup>40</sup>

### **Prostate Cancer Starts Early**

Age is the most relevant risk factor for prostate cancer, with men over the age of 60 being at greater risk. In fact, by age 70 approximately 70 percent of men will have detectable cancer cells in their prostate — even though most will never develop prostate cancer before they die.

You would think that the initiation of cancer would occur within a decade or so of its appearance. But recent studies based on tumor-doubling times suggest that, in fact, these cancers begin sometime very early in life — most likely at puberty.<sup>29</sup>

If this is indeed true, then we should be changing our diets very early in life, avoiding milk, sugar (especially high fructose corn syrup), foods containing or fried in omega-6 oils, and seared meats, while increasing our intake of vegetable fiber, fresh vegetables, some fruits, purified water, and white tea, and exercising regularly.

A sedentary lifestyle is associated with a higher risk of prostate cancer — the opposite being true for regular exercise. Yet, it is never too late to make these changes.

Measures of aluminum in nipple secretions have confirmed that it accumulates within breast tissue.

In one study, researchers collected nipple aspirant from 19 breast cancer patients and 16 control subjects with no cancer. They found that the women with breast cancer had a higher number of inflammatory cytokines (which is evidence of oxidative damage), as well as higher levels of aluminum in nipple secretions.<sup>41</sup>

Aluminum induces high levels of inflammation in tissues — which is the same process that is seen with cancer induction.

Other sources of aluminum include:

- Public drinking water
- Vaccines
- Processed foods and beverages
- Many medications (both over-the-counter and prescription)
- Food dyes

#### Traditional Cancer Treatments Can Do More Harm Than Good

Inflammation is such an important factor in carcinogenesis that measures of certain inflammatory

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cytokines can now determine which breast cancer patients will have a worse chance of survival.

For example, triple-negative breast cancer has the worse prognosis, and those are the cases that have the highest levels of two cytokines called interleukin-6 (IL-6) and interleukin-8 (IL-8).<sup>42</sup>

In fact, high levels of IL-6 predict poor chances of survival in most types of cancer.

All cancers are driven by activation of cancer stem cells. Cytokines protect and stimulate cancer stem cell proliferation.<sup>43</sup>

Ironically, the traditional cancer treatments chemotherapy and radiotherapy — dramatically increase inflammation in the body, and especially within the tumor microenvironment.

This means that if those traditional treatments are unsuccessful in controlling the cancer, they will actually lead to proliferation of surviving cancer cells — especially cancer stem cells — making the cancer metastasize much faster and more extensively.

That means the patients who are not cured by the chemotherapy will probably die faster than if nothing had been done.

As is the case with prostate cancer, infectious agents are now being suggested as a source of breast cancer progression, invasion, and metastasis — as well as causing many cancers. And as we saw with prostate cancers, a high percentage of breast cancers also contain the cytomegalovirus, which grows mostly in the breast cancer stem cells.<sup>44</sup>

Cytomegalovirus releases some 200 proteins that can stimulate every phase of cancer, making it much more deadly. This is called oncomodulation.<sup>45</sup>

Incredibly, just one of these viral proteins (US28) can induce a tumor when injected into a mouse.<sup>46</sup> And one of the deadliest forms of breast cancer (inflammatory breast cancer) has the highest incidence of cytomegalovirus infection within the tumor.<sup>47</sup>

#### Using Natural Compounds to Treat Prostate and Breast Cancers

Many prostate and breast cancers behave more like benign tumors than malignant tumors. And a high percentage of cancer cells found in breast and prostate glands will never develop into full-fledged cancers. Rather, they remain localized and harmless.

For example, it is estimated that 80 percent of in situ breast cancers will never become deadly.

Unfortunately, oncologists treat these cancers as if they will progress like malignant tumors, meaning a great number of women will undergo harmful and unnecessary treatments, including postoperative radiation of the breast.

Of course, the women with benign in situ breast cancers will think that these orthodox treatments are what saved them, which makes the oncologists look good.

Keep in mind that both chemotherapy and radiation therapy induce intense inflammation — the very thing that drives all stages of cancer growth.

Remember, things that prevent and improve prostatitis (prostate inflammation) reduce the incidence of prostate cancer.

Likewise, things that reduce breast inflammation reduce breast cancer.

The main weapons against prostatitis — besides antibiotic treatment of prostate infection — are natural compounds such as:

- Nanoquercetin
- Saw palmetto
- Pygeum africanum
- Nettle root
- Pumpkin seed oil

Especially effective is beta-sitosterol, which inhibits prostate cancer cell growth and induces cell death.

Nettle root has been shown to improve urine flow in cases of benign prostatic hypertrophy (BPH), and when combined with saw palmetto it worked even better.<sup>48</sup>

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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.

#### **Tattoos: Another Source of Cancer-Causing Inflammation**

Another source of aluminum that is growing by leaps and bounds is tattoo ink.<sup>48</sup> Of the some 200 or so tattoo inks used, researchers have found a number of toxic metals and even known carcinogenic compounds such as polycyclic aromatic hydrocarbons, primary aromatic amines, and similar such compounds.

Researchers have also demonstrated the presence of these compounds in regional draining lymph nodes, along with aluminum and iron.<sup>49</sup> High levels of iron in these draining lymph nodes is of major concern because iron drives cancer toward increased aggressiveness.

With women increasingly getting tattoos — especially those being tattooed on or near the breasts, shoulders, and other skin areas sharing lymph nodes with the breast — there should be major concerns about cancer development.

The brightly colored tattoos

have the highest levels of toxins. These metals increase inflammation within the lymph nodes and breast tissues, a major mechanism of cancer induction.

Approximately 25 percent of Americans now have tattoos, and extensive tattooing is becoming more and more popular.

When you combine foods, vaccines, and municipal drinking water, one can see disaster in the making. Add tattooing and things can only get worse — much worse.

Nettle root also has been shown to inhibit prostate cancer cell proliferation.<sup>49</sup>

Beta-sitosterol has been shown to be a mild inhibitor of the 5- $\alpha$  reductase enzyme, which converts testosterone into the powerful androgen form dihydrotestosterone (DHT).

While studies indicate that beta-sitosterol did not shrink the prostate, it did reduce residual bladder urine volume and increased urinary flow.<sup>50,51</sup>

Several studies have shown that a combination of resveratrol and beta-sitosterol significantly inhibited breast cancer growth and spread, and inhibited prostate cancer growth and invasion.<sup>52-54</sup>

But in one study, resveratrol alone increased the growth of the Her2/ER positive breast cancer.<sup>55</sup>

Flaxseed lignans have been shown to increase the concentration of enterolactone, a potent inhibitor of hormone-sensitive prostate and breast cancers.

Studies have also shown that women with high levels of a compound called 16-alphahydroxyestrone have a higher risk of developing breast cancer.

Flaxseed lignans can lower this compound. The dose is 10 grams a day.

Flaxseed lignans also inhibit insulin-like growth factor-1 (IGF-1), which stimulates the more aggressive, hormone-independent prostate cancer growth as well as breast cancer.

Boron has been shown to significantly lower risk of prostate cancer and other cancers.<sup>56</sup>

In one study, high intake of boron cut prostate cancer risk by half.<sup>57</sup>

One important way boron inhibits cancer cells is by inhibiting their utilization of calcium for signaling. The usual dose is 3 mg a day with meals.

In addition, a diet high in omega-3 fats and low in omega-6 fats will raise levels of a protective compound called 2-hydroxyestrone.

I discuss these treatments in more detail in my newly revised book, "Natural Strategies for Cancer Patients."

#### **Anticancer Therapy From Nano-Extracts**

Curcumin has been shown to be one of the most powerful natural anticancer compounds we know of. The advantage it has over chemotherapy is that it attacks cancer cells in so many ways that the cancer is overwhelmed and dies.

And unlike chemotherapy, curcumin inhibits cancer stem cells, which are the source of cancerous tumors.

The main problem with curcumin — as with so many plant flavonoids — is that it is poorly absorbed, and only enters cells with difficulty.

Newer formulations, such as lipid micelles and forms bound with piperine, have increased absorption, but are still not ideal.

The greatest innovation is nanosizing. In this process, curcumin powder is broken down into tiny particles that are maximally absorbed and distributed to all tissues.

#### Why Deficiencies Are Dangerous

A person's nutritional status makes a great deal of difference. Deficiencies in the B vitamins and C are very common, especially among the elderly. Such deficiencies can impair the body's detoxification systems and magnify sensitivity to toxic substances.

What that means is that a product that normally would not cause a person harm can lead to significant damage if his or her detoxification system is weak or impaired. Deficiencies of the carotenoids, vitamin E, and certain amino acids can also impair the body's detoxification ability.

Certain people inherit deficiencies in detoxification. They will suffer significant damage when exposed to even low levels of toxic substances. These genetic defects are not uncommon and can vary from mild to quite severe.

This means that assurances by federal regulatory agencies for safety cannot be relied upon.

Unlike other forms of curcumin, it can easily enter cells — especially cancer cells.<sup>58-62</sup>

Nanocurcumin also boosts anticancer immunity and protects the immune system from tumor inhibition.<sup>63</sup> And unlike other, mostly oil-soluble forms, nanocurcumin is water-soluble.

I know firsthand of several cases in which cancer metastasis (including in the brain) was eradicated in advanced, Stage 4 cancer patients simply by taking high doses of nanocurcumin.

These were patients who had been sent home to die by their oncologists.

I have also used nanocurcumin to treat lymphoma patients in the same advanced state of disease — again with excellent results.

Most anticancer plant extracts have a dosedependent effect, meaning that the higher the dose, the better the result. These patients were taking 12 grams of nanocurcumin a day in divided doses.

The most dangerous aspect of any cancer is its ability to invade surrounding tissues, enter blood vessels and/ or lymphatic vessels, and travel to other parts of the body (a process called metastasis).

It does this by making cells within the tumor microenvironment release enzymes that destroy surrounding tissues and tissue barriers. The most important of these enzymes are a class called metalloproteinase enzymes (MMPs).

A number of natural compounds that are extracted from plants can inhibit these eroding enzymes, including:

- Curcumin
- Quercetin
- Berberine
- Ellagic acid
- Boswellia
- Naringenin
- Resveratrol<sup>64-69</sup>

Nanocurcumin has a high margin of safety and can be mixed with water or other juices. It has very little taste itself, but absorption in this form is far better than prior forms.

Some people may experience nausea or gastric upset with higher doses of nanocurcumin, but for most it is well-tolerated.

A number of studies have shown that curcumin protects normal cells and tissues from being damaged by chemotherapy agents and radiation therapy, while greatly increasing the cancer-killing power of those same treatments.<sup>70-73</sup>

Like nanocurcumin, nanoquercetin controls cancer by a number of mechanisms, all acting in concert.<sup>74</sup> Traditional chemotherapy only attacks one or two mechanisms, which is likely why cancer cells can so easily overcome traditional therapy.

Also like curcumin, quercetin enhances the effectiveness and safety of the traditional cancer treatments.<sup>75,76</sup>

Nanosilymarin plays a major role in inhibiting both prostate and breast cancers, and like nanocurcumin and nanoquercetin, does so by a great number of mechanisms, including inhibiting:

- Tumor growth
- Tumor invasion
- Angiogenesis
- Metastasis
- Tumor-induced immune suppression77

Silymarin is the active compound in the milk thistle plant. Silibinin, which is used in many cancer studies, is derived from silymarin.

Silibinin has been found to inhibit prostate cancer cells in a number of ways, and dramatically lowers PSA levels.

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The most aggressive prostate cancer is the androgenindependent form, which, rather than being driven by androgens, is driven by insulin-like growth factor-1 (IGF-1).

Silibinin has been shown to prevent this factor from increasing in prostate cancers, thus inhibiting the growth and invasion of the cancer.<sup>78</sup>

Silymarin also inhibits androgen-sensitive prostate cancer by suppressing inflammation and androgen receptor function.<sup>79</sup>

Nanosilymarin dramatically enhances the absorption of silymarin, increasing the concentration within the cancer. One Planet Nutrition makes a high-quality nanosilymarin.

Nanoboswellia has also been shown to kill prostate cancer cells.<sup>80</sup>

These nanoproducts are also effective against breast cancers, especially the more aggressive types of breast cancers such as the triple-negative breast cancer and inflammatory breast cancer.<sup>81-83</sup>

All of these natural anticancer compounds powerfully inhibit inflammation by several specific mechanisms. This is why they are more effective when used in combination.

Several of these compounds also suppress infections known to be associated with prostate and breast cancers, including cytomegalovirus, herpes virus type 1 & 2 and other organisms.

Baicalein is the most powerful inhibitor of the cytomegalovirus, which is known to play such a complex and important role in prostate and breast cancers.<sup>84-88</sup>

In fact, baicalein inhibited the virus more effectively than powerful antiviral drugs.

All of these compounds work for prevention as well as treatment, especially in conjunction with an anticancer diet, avoiding food toxins (especially excitotoxin additives), regular exercise, a higher intake of DHA, avoiding omega-6 oils and sugars (especially high fructose corn syrup) and avoiding high-risk sexual behavior.

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# Health and Nutrition Updates

#### Berberine Offers Improvement for Type 2 Diabetes

It has been estimated that 382 million people worldwide suffer from Type 2 diabetes, a form of the disease characterized by insulin resistance. Most patients are treated with oral hypoglycemic medications such as sulfonylureas, metformin, or pioglitazone. Yet only 41 percent of these patients attain long-term disease control. Worse yet, sulfonylureas are associated with cardiovascular damage and pioglitazones can increase the risk of developing bladder cancer. And metformin can cause gastrointestinal discomfort.

A number of recent studies have shown that the plant extract berberine works as well as any of these drugs, and with far fewer complications. Berberine also protects the liver and reduces cardiovascular disease risk; and it has anticancer, antibacterial, and antiviral properties.

The mechanisms by which berberine achieves these incredible results include correcting insulin resistance, reducing glucose absorption, increasing insulin release from the pancreas, lowering blood lipids, benefiting glucose handling in the liver, reducing inflammation, and inhibiting free radicals.

Berberine has also been shown to stimulate the growth of beneficial bacteria and suppress harmful bacteria in the colon. The latter organisms are suspected of causing chronic inflammation that leads to insulin resistance and Type 2 diabetes.

Importantly, berberine has also been shown to be effective for treating organ damage seen in diabetics, including nephropathy (kidney damage), neuropathy (nerve damage), and heart damage.

Several clinical studies have shown berberine to be as effective for controlling Type 2 diabetes as oral hypoglycemic medications — and with far greater safety.

Researchers found that diabetics using berberine alone in a dose of 500 mg three times a day lowered their blood glucose levels, HbA1c levels (measure of long-term glucose control), and triglyceride levels.

A second study using patients with poorly controlled diabetes found that berberine was as effective as

metformin, but also protected the liver. Other studies have confirmed these results.

Additional studies combined berberine with lower doses of traditional diabetes medications and found superior results using the combination compared to using the drugs alone. An additional benefit is a loss of fat weight in obese individuals.

Studies in animals found berberine to be very safe, even at doses as high as 9 grams per kilogram. Human safety studies have also shown a wide margin of safety, with the only side effect being occasional occurrence of gastrointestinal upset at higher doses.

Nanoberberine (One Planet Nutrition) is significantly better absorbed and distributed, and therefore can be effective in a dose as low as 100 mg to 250 mg three times a day with meals.

#### **Cell Phone Use Increases Cancer Risk**

Over the years, I've become concerned about people's obsession with cell phones. Besides the deleterious effects on brain function, such as a loss of the ability to focus attention, my main concern is the ability of microwaves to induce cancer.

A great deal of research has shown that 2G and 3G cell phones can damage chromosomes, increase brain cancer rates, and possibly induce other cancers. We are now into 4G technology — and the race is on for 5G technology, which uses much higher microwave energy and has not been studied adequately.

I've also noticed that young girls are putting their cell phones in their hip pockets, which is radiating all the structures in their pelvis, including the bladder, colorectum, and most importantly the ovaries.

All of these structures are sensitive to cancer induction. Radiating the ovaries not only raises the risk of ovarian cancer, but also chromosomal damage in future babies.

The guys often put their cell phones in their front pocket, which also radiates all these same structures, with testes substituted for ovaries. This puts them at a high risk for testicular cancer and chromosomal damage to their sperm.

Cell phones should not be kept near the body. ■

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### 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.

What Do You Think of Steroids?

Q: I took prednisone for what might have been poison ivy or sumac and developed tightness in my chest. At this point I looked up the side effects. What are your thoughts about taking steroids? — Pam W., Asheville, Tenn.

**A:** Long-term steroid use can be quite harmful, even when applied topically, which can cause extreme thinning of the skin and broken blood vessels.

There are a number of flavonoids that work better. There is also a cream called Wrinkle Cream #9, which contains a mixture of natural ingredients for such conditions. It is sold by Specialty Pharmacy in Flowood, Miss. I have seen a number of dermatological conditions greatly improved or cured with this cream.

#### How Do You Treat Bladder Cancer?

Q: I was recently diagnosed with a high-grade papillary urothelial carcinoma. I had surgery to remove it, but the urologist explained that it would come back at some point. Is there anything I can do to prevent this?

- Rebecca C., Las Cruces, N.M.

A: Papillary urothelial carcinoma is a type of bladder cancer. A number of natural compounds can reduce the risk of recurrence: nanocurcumin, nanoquercetin, nanoboswellia, baicalein, D-mannose, and beta-glucan (a high-quality brand).

High-dose buffered vitamin C will also inhibit growth of the tumor.

Diet plays a major role in these cancers. Diets high in sugars, omega-6 oils, and excitotoxins will promote the cancer. You should also avoid Splenda and aspartame sweeteners. What Treats Autoimmune Conditions?

Q: My 12-year-old granddaughter has PANDAS with tics, anxiety, OCD, and fear of separation from her parents. Can you recommend anything to reduce the symptoms, especially the anxiety? Thank you. — Linda Shrago., Denver, CO

A: Pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS) is an autoimmune condition initially triggered by strep infections, which disrupts a child's normal neurologic activity. The main treatment is using antibiotics to cure the strep infection, but a number of natural products can reduce anxiety. These include hesperidin, acetyl-L-carnitine, nanosilymarin, naringin, luteolin, apigenin, taurine, and magnesium.

Most children recover completely from PANDAS following antibiotic treatment. DHA also helps to calm the nervous system. It would be best to start with one compound, such as nanosilymarin. Others can be added as needed.

**Can Supplements Help Breast Cancer? Q:** I have been diagnosed with HER2-positive breast cancer. What are the best supplements? Is it true that resveratrol fuels HER2- and ER-positive breast cancers?

- Susan F., Stockholm, Sweden

**A:** According to a study from Italy, resveratrol does enhance the growth of HER2 and ER-positive breast cancer tumors. Using human breast cancer stem cells, researchers recently demonstrated that a combination of curcumin and EGCG significantly reduced breast cancer stem cell survival. The highest purity and concentration of EGCG comes in a product called Teavigo (94 percent). Liver damage can (rarely) occur Page 12

in some people who use EGCG. It is reversible when the supplement is stopped. Nanocurcumin has been shown to be more effective against breast cancer than plain curcumin. Another recent study found that naringenin and hesperidin potently inhibited HER2 associated with breast cancer aggressiveness.

#### Can OTC Medication Cause AFib?

**Q:** My husband was hospitalized for atrial fibrillation that I believe was induced by a course of Flonase for a sinus infection. Could an over-the-counter medication cause AFib?

— Mary B., Flanders, N.J.

A: Flonase is a fluoride-containing compound; these types of compounds can have severe, and sometimes permanent side effects. Atrial fibrillation is an irregular rapid heart rate that can increase your risk of stroke, heart failure, and other heart-related complications. It is a very dangerous condition.

Things that improve atrial fibrillation include magnesium, taurine, grape seed extract, baicalein, hesperidin, and saffron. Taurine has been very successful in many cases, and magnesium reduces heart muscle excitability. The combination of taurine and magnesium is even more effective.

#### Do You Know What Mannitol Is?

Q: I was diagnosed with Parkinson's disease three years ago. I have speech and balance problems, constipation, and fatigue. I came across a product called mannitol. Do you know what that is? — Bob C., Madison, Wis.

A: Mannitol is a sugar that has little effect on blood glucose levels and is generally considered safe for consumption. There is some clinical evidence that it can improve some of the symptoms of Parkinson's disease, but no careful studies have been conducted.

Curcumin, the active compound in turmeric, is effective for Parkinson's. The best form of curcumin is nanocurcumin. Nanosilymarin may also be of use as it quiets microglia in the brain, which play a major role in causing the damage from this disease.

Regular exercise, healthy diet, magnesium, and DHA also benefit. A number of other flavonoids are also beneficial, such as baicalein, hesperidin, transferulic acid, apigenin, and luteolin. ■

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### 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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