Immune System Management

Optimal Health
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ISM's Monthly Newsletter for Your "Optimal Health"
June 2010

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Take Control of Your Own Healthcare – *Keep a Balanced Perspective*

Doctors today commonly assert that they practice "scientific medicine," and patients think that the medical treatments they receive are "scientifically proven."

Sadly and strangely, many physicians do not see that there is something fundamentally wrong with the present medical model ... for the large majority of people facing day-to-day chronic illnesses, it provides short-term results, serious side-effects, and stratospherically high costs.

Defining efficacy as "getting rid of symptoms," as many studies do, is asking the wrong question entirely, and giving similarly flawed results. It is very well established that most prescribed drugs do absolutely nothing to treat the cause of disease. -Dana Ullman, MPH for The Huffington Post

In recently published articles in The Huffington Post, Dana Ullman MPH, and a prominent spokesperson for homeopathic medicine asks the question: Is modern medicine actually "scientific"? Dr. Joseph Mercola, also an ambassador to natural and homeopathic medicine, acknowledges that the gold standard for modern medicine is the double-blind and placebo-controlled trial, but he stresses that the many problems with these studies must also be recognized.

The following is a series of quotations and excerpts from professionals in the fields of science and medicine. Here, they examine the false-validity of science-based medicine and the misleading credibility of medical journal publications. Both of these are contributing factors to a flawed system that places Natural Therapies at a disadvantage.

Medical Journal Publications – To Trust or Not to Trust?

Dana Ullman discusses imbalanced study requirements, in respect to the positive vs. negative results, as they pertain to medical journal publications:

…It's amazing how many studies had negative results but they are almost never published. Only the ones with the positive results are published and according to the FDA, drug companies only need to have two positive studies. They can have 18 negative studies but if you have just two positive studies, that's enough for acceptance. That's a serious problem. *– The Huffington Post: May 25, 2010*

Dr. Marcia Angell, former editor-in-chief of the New England Journal of Medicine (NEJM), believes that research published in medical journals gets the golden star of approval in the media, yet many, if not most, of the findings are incredibly misleading:

"Trials can be rigged in a dozen ways, and it happens all the time." *-Dr. Marcia Angell from The Truth about Drug Companies: How They Deceive Us and What to Do About It.*

Dr. Mercola agrees that most medical studies only examine a drug's effect in isolation and for a very short period of time. Its claims of efficacy or safety are therefore null and void if a person intends to take a drug for a longer period or in combination with other drugs, but this mistake is ignored by the medical community

This sentiment is echoed in the findings of Dr. John Ioannidis, an epidemiologist at Ioannina School of Medicine in Greece:

- There is less than a 50 percent chance that the results of any randomly chosen scientific paper will be true.
- Much of scientific research being published is highly questionable
- Simulations show that for most study designs and settings, it is more likely for a research claim to be false than true
- Typical problems with experimental and statistical methods are the main culprits, including factors such as small sample sizes, poor study design, researcher bias and selective reporting

-Dr. John Ioannidis "Contradicted and Initially Stronger Effects in Highly Cited Clinical Research"

The Shortcomings of the "Scientifically Proven"

Dr. Mercola remarks that many natural therapies are often discredited because they are not "scientifically proven" and are, as a result, believed to be either unsafe or ineffective. Interestingly, he notes that 85 percent of "conventional" therapies have never been formally proven.

Dana Ullman asserts that there is a difference between science and scientism, of which we must be aware. Scientism expects us to only accept and understand information when it's double-blinded and placebo controlled. But what about surgery; virtually no surgery is double-blinded, placebo controlled, yet it is practiced and accepted in the medical community.

Therefore, according to Ullman, we have to respect some part of what's called empiricism; the empirical use of therapies - just as we have empirical use of surgery. There is room in our healthcare system to respect both double blind studies and empirical practice.

ISM encourages clients to consider all possible variables when working with your team of healthcare providers.

> "Use all of the resources available to you - your common sense and reason, true experts' advice, and other's experiences, to determine what medical treatment or advice will be best for you in any given situation." *– Dr. Mercola*

When it comes to your health, there is no singular approach. Most often, it takes a combination of complementary therapies, even a team of healthcare providers, to reach the desired results—keep an open mind, and a balanced perspective.

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- *Ionnandis, John P. MD. "Contradicted and Initially Stronger Effects in Highly Cited Clinical Research" The Journal of the American Medical Association. Vol. 294. No. 2.: July 13, 2005.*
- *Mercola, Joseph. MD. "How Deeply-Flawed Medical Studies Lie About Drug Safety" May 2010.*
- *Ullman, Dana. MPH. "How Scientific is Modern Medicine Really?" April 20th, 2010 and "Lies, Damn Lies and Medical Research" April 30th, 2010. The Huffington Post.*

Optimal Health *Special Supplement*

Sunscreen - To Wear or Not to Wear?

Introduction
The debate has raged on and on. Does sunscreen help prevent melanoma, the deadliest form of skin cancer? Or, as some have theorized, does it actually cause the disease? Unfortunately, the jury may still be out awhile.

Safest Approach:
The latest skin-cancer prevention advice is to stop trusting sunscreen as the front line of defense against harmful rays. Instead, wear sun-blocking clothing or stay out of the sun altogether.

But this advice will not likely sit well with many sun-loving, outdoorsy people - so the following article is intended to give you background and advice so you can make an informed decision on whether or not to use sunscreen and what type to use if you choose that route.

Note: For a further detailed review of sunscreens and options go to www.aminomics.com/what's new

A. Why is sunscreen used?

Most of the chemical reactions that UVR [ultraviolet radiation] causes in the body are harmful...a sunburn is only the most immediately visible negative effect of UVR exposure. At the molecular level, UVR can damage DNA. Damaged DNA impairs cells' ability to grow and divide, and as more and more such impaired cells build up in the skin, skin cancer can result.

Sunscreens are chemical agents that help prevent the sun's ultraviolet (UV) radiation from reaching the skin. Two types of ultraviolet radiation, UVA and UVB, damage the skin and increase your risk of skin cancer. Chemical sunscreens are formulated to absorb UVB radiation, they let most of the UVA rays through. UVA rays penetrate deeper into the skin and are strongly absorbed by the melanocytes which are involved both in melanin production (sun tanning) and in melanoma formation. UVA rays also have a depressing effect on the immune system.

UVB is the chief culprit behind sunburn, while UVA rays, which penetrate the skin more deeply, are associated with wrinkling, leathering, sagging, and other effects of photo-aging. They also exacerbate the carcinogenic effects of UVB rays, and increasingly are being seen as a cause of skin cancer on their own. Sunscreens vary in their ability to protect against UVA and UVB.

Therefore, it is important to choose a sunscreen that is protective against UVA as well as UVB, as both hurt the skin (UVB causes sunburn and skin cancer over time, while UVA causes skin cancer and premature aging of the skin).

B. So, What's the Issue?

Although groups like the American & Canadian Cancer Society recommend sunscreen use to protect against skin cancer, some of the chemicals that show up in most sunscreen products may be just as dangerous as sunburn.

Some researchers have gone as far to say that sunscreens cause more deaths than they prevent. Various studies have linked sunscreen usage with high incidence of melanomas, birth defects, sterility, and uterine conditions such as endometriosis. It is suspect that the countries promoting heavy sunscreen usage (Australia, USA) have the biggest increase in skin cancers.

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…… Sunscreen - To Wear or Not to Wear - *cntd*

Whether some or all of the ingredients found in sunscreens are toxic remains controversial and there are studies on either side of the issue. However a study in the April 2004 Journal of Chromatography found that there is significant penetration of all sunscreen agents they studied into the skin, and oxybenzone and metabolites across the skin. For that matter, anything you put on your skin will be absorbed into your body.

The most dangerous of the common ingredients found in sun blocks are suspected to increase the risk of malignant melanoma, the more dangerous form of skin cancer. Melanoma is responsible for three quarters of deaths related to skin cancer, and appears to be more common among people who use sunscreen.

The Garland brother doctors *(Dr Cedric Garland, professor of family medicine at the University of California, and Frank Garland, director of Naval Health Research Center)* strongly believe that the increased use of chemical sunscreens is the primary cause of the skin cancer epidemic. They emphasize that people using sunscreen tend to stay longer in the sun because they do not get a sunburn - they develop a false sense of security.

C) The Bottom Line

The saga of sunscreens and skin cancer is far from over. Research is continuing and new findings are being published at an accelerated pace. But until we know the whole story, it would seem prudent to take precautions based on what we do know.

So what should you do to protect yourself as much as possible?

- DO NOT rely on the use of sunscreens to protect you against skin cancer.
- DO NOT try to get a tan by visiting a tanning studio. The rays from their UV lamps are extremely harmful and the tan produced does not have the protective effect of a sunlight-induced tan.
- DO try to develop a moderate natural suntan unless you have extremely sensitive skin and burn easily. Regular and moderate unprotected sun exposure in the early morning or late afternoon will help maintain a protective tan and keep your vitamin D stores at an optimum level.
- DO wear protective clothing and a wide-brimmed hat when you are outside. Avoid sun exposure between 10 AM and 3 PM if at all possible. Remember that UV rays, particularly UVA, are present even on cloudy days.
- DO remember that sunlight is strongly reflected from sand, snow, ice, and concrete and can increase your direct sunlight exposure by 10 to 50%.
- DO make sure you get enough vitamin D3 and beta-carotene. Recent research has shown that taking 30 mg of beta-carotene a day protects against the suppression of the immune system by UVA rays.
- DO make sure to supplement your diet with antioxidants. i.e., vitamin C, vitamin E, and selenium are used as a protection against the damages of excessive ultraviolet radiation.
- DO wear a physical sunscreen with a SPF of 15 if you absolutely must be out in the sun for extended periods of time. Physical sunscreens containing titanium dioxide, zinc oxide, or talc work by reflecting the UV radiation rather than by absorbing it. Even "broad-spectrum" sunscreens are not very good in filtering out UVA rays. A natural suntan is probably more effective.

For a further detailed review of sunscreens and your options go to www.aminomics.com/what's new

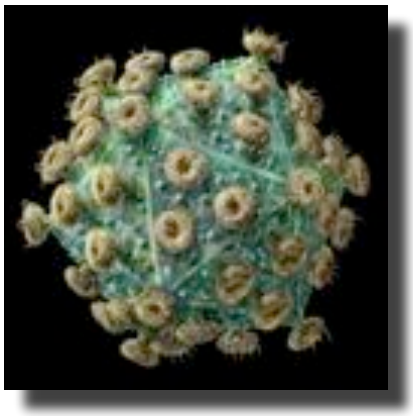
ISM PROFESSIONAL CORNER: RESEARCH NEWS

The assumption made by many people is that malignant potential is irreversible.

Immune System Management Inc. recognizes that the malignant behaviour of tumors (i.e. cancer) can be modified. Thus, in our cancer patient advocacy work, we advise nutritional supplementation to help render the tumors benign and at the same time to balance the disturbed biochemisty and associated immuno-suppression. Our research, based on a large patient database assembled from clinical information collected for over a decade, focuses on what best reverts malignant tumors to benign and what best rebalances the biochemisty of individuals. If it is indeed true that malignant tumours can be rendered benign, then targeted supplementation should have the ability to extend the lifespan of individuals diagnosed with cancer.

The following article by Marian Laderoute, PhD, Medical Sciences (Immunology) discusses the concept of the reversibility of cancer using nutriceuticals and/or natural products.

'Malignant Potential as a Phenotype and not a Genotype' *M P Laderoute*[1]



The war against cancer was launched in 1972, and despite millions of dollars invested in cancer prevention and control, little real progress has been made. One aspect of tumor transformation long suspected to be shared with viral infections is nuclear Factor- kappa beta (NF-kβ) activation which is involved in the transcription of genes.

Note: (NF-kβ) is a protein complex that controls the transcription of DNA. (NF-kβ) is found in almost all animal cell types and is involved in cellular responses to stimuli such as stress, cytokines, free radicals and bacterial or viral antigens. NF-kβ plays a key role in regulating the immune response to infection. Nuclear Factor- kappa beta (NF-kβ appears to be involved in several aspects of oncogenesis including apoptosis resistance (cell death resistance) and metastasis (the spread of cancer) as well as in inflammation which can also contribute to oncogenesis (reviewed in Wu and Zhou, 2010).

The activation of NF-kβ requires the phosphorylation of its inhibitor (IkBą resulting in the translocation of NF-kb to the nucleus. Based on the combination of subunits, it then regulates the transcription of genes. In a recent article published in the British Journal of Cancer, (Koumakpayi et al 2010) discuss the various synergies and/or redundancies among signal transduction pathways of the EGFR family members leading to the activation of NF-kβ as may be found in prostate cancer tissues. For example, the expression of EGFR, Her-2 or ErbB3 alone, was correlated with the activation of Akt, but not with the nuclear expression of p65, an activated NF-kβ subunit. On the other hand, combined EGFR and Her-2 significantly correlated with the presence of nuclear p65 as demonstrated immuno-histologically. Furthermore, nuclear p65 correlated with Gleason scores and disease stage. Despite volumes of evidence for amplified oncogenes in tumour progression, single receptor antagonists such as for the EGFR have not shown therapeutic efficacy.

Accordingly, the Montreal researchers propose that therapies able to block these combined EGFR family pathways may help lead to tumor remission based on inhibition of NF-kβ. In essence, Koumakpayi et al are indirectly suggesting malignant tumours can be reverted to benign by pharmacological agents able to block the activation of NF-kβ which involves as a minimum, a series of phosphorylation events. Thus, the notion that malignant potential is solely determined by genetics seems inadequate to explain tumour progression.

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A unified theory of cancer published in 1994 may have been first to suggest that the malignant potential of tumours involving apoptosis resistance, immunosuppression of the host, and an increased propensity for metastasis could be reversed by pharmacological agents (Laderoute, 1994). The cumulative research on the role of the 67 kilodalton alpha-fetoprotein receptor by 1994 was pointing towards the "concerted deregulation" of c-myc and alpha-fetoprotein in malignant potential for at least the common adenocarcinomas (Laderoute, 1994). This thesis was not well accepted when many of the singular genetic alterations in cancers were being described and were associated with tumor progression.

The first real clinical evidence that it may be possible to reverse the malignant phenotype of cancers came from the tamoxifen (anti-estrogen) randomized prevention trial published in 1998 (Fisher et al). In this large trial on 13,388 women followed cumulatively for 69 months, there were 97 non-breast, non-uterine cancers diagnosed in both the placebo and in the tamoxifen arms (of 6707 and 6681 participants, respectively). Tamoxifen was not expected to prevent non-estrogen mediated cancers, which was found. However, in the tamoxifen arm there were 20 deaths (21%) in patients diagnosed with non-breast, non-uterine cancers and in the placebo arm, there were 35 non-breast, non-uterine cancer related deaths (36%). This outcome may have been first to provide proof-of-concept that anti-estrogens may have therapeutic value surprisingly, across a wide variety of cancers. It should be noted that about 70% of the patients in the tamoxifen arm and who were diagnosed with other tumours, stopped taking tamoxifen immediately, suggesting the differences in mortality may have been underestimated by inadvertent therapeutic drug withdrawal.

By 1998, Immune System Management (ISM) had been noting relative (anecdotal) success in breast cancer patients being nutritionally supplemented with genistein (an isoflavone), a naturally occurring nutraceutical with similar but not identical properties to anti-estrogens like tamoxifen. At this time ISM noticed apparently improved survival rates as compared to the 5-year survival rate for breast cancer patients with stage IV cancers. Following the Fisher et al (1998) report, genistein was added to the custom nutritional supplements for all cancer patients seeking nutritional support with or without concomitant traditional cancer therapies, and was empirically found to improve survival. As well, genistein has been added to custom nutritional support at ISM for a variety of immunological and/or infectious diseases with notable improvement in relapses and overall health.

In addition to the Koumakpayi et al (2010) work, which implies tumour progression is associated with NF-kβ activation, other evidence suggests that genistein may improve survival in cancer patients potentially through blocking NF-kβ. For example, genistein can abrogate apoptosis resistance in viral infected or tumour transformed cells so that cytotoxic T cells can kill them (Baritaki and Bonavida, 2010), and can help potentiate chemotherapy killing of tumour cells (Mohammad et al, 2003, Ali Et al, 2009, Gadgeel et al, 2009). Moreover, genistein has been demonstrated to inhibit the NF-kβ and TNF-alpha pathways in human peripheral blood mononuclear cells in vivo in asthma patients (Liu et al, 2010). Therefore, since genistein is readily available, inexpensive, and may have a safety profile superior to tamoxifen, its use may be one of the most important advances made to date on the war against cancer and possibly, immunological and/or infectious diseases. At the very least this newer work provides substantiation of the rational, evidence-based approach taken by ISM since 1998.

[1] *MP Laderoute, PhD Medical Sciences (Immunology) is a voluntary consultant for ISM - Immune System Management, Ottawa, Ontario Canada. No conflicts of interest are declared.*

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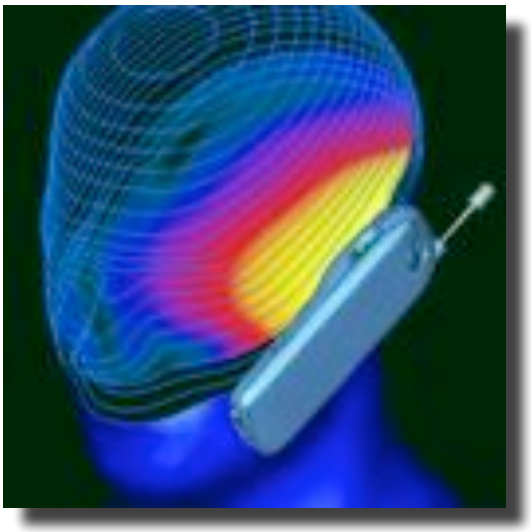
Dial A Cancer

President Obama's recent Cancer Panel (PCP) has produced a momentous 240 page report that suggests that the percentage of cancers directly caused by environmental factors has been "grossly underestimated."



There is one issue that really stands out - the panel clearly notes cell phones as a potential for great concern. In 2009, North Americans spent almost 3 trillion minutes on mobile phones –this number has been steadily increasing every year.

"It is not known exactly what percentage of all cancers either are initiated or promoted by an environmental trigger … Some exposures to an environmental hazard occur as a single acute episode, but most often, individual or multiple harmful exposures take place over a period of weeks, months, year, or a lifetime." *– President's Cancer Panel: "Reducing Environment Cancer Risks, What We Can Do Now" 2008-2009.*

The induction period for brain tumors can be at least 30 years. As cell phones have only been widely used for a decade or so, and usage is increasing at exponential levels, the real effects of regular cell phone usage will not begin to show for another 10 or more years, and by then it may be too late. "The 10-year-old who starts using a cell phone today may not realize the impact until he's diagnosed with a brain tumor at age 40." *–Dr. Joseph Mercola "What is the Real Cancer Threat from Cell Phones?" May 27, 2010.*

There are numerous reports indicating a direct relation between cell phone use and cancer. In fact, the danger may be even greater than what these researchers found because many cancers need a minimum of 10 years to develop.

ISM urges clients to use the "precautionary principle" -- not only for cell phones but for all potentially cancer-causing substances. Here are a few cell phone safety tips:

- Reduce your overall cell phone use.
- Turn your cell phone off more often - as long as your cell phone is on it emits radiation.
- Children should not use cell phones
- Use a land-line at home and at work whenever possible.
- Reduce your use of other wireless devices.
- Use your cell phone only where reception is good - the weaker the reception, the more radiation it emits.
- Keep your cell phone away from your body whenever it's on.

References:

- President's Cancer Panel: "Reducing Environment Cancer Risks, What We Can Do Now" 2008-2009.
- Mercola, Joseph. MD. "What is the Real Cancer Threat from Cell Phones?" May 27, 2010.

ISM believes - and is supported with overwhelming scientific evidence - that synergistic nutrition has a direct and fundamental bearing on the quality of our health. Thousands of epidemiologic studies have consistently shown that nutrition plays a crucial role in the prevention of chronic diseases.

ISM's nutraceutical research database "Nutraview" - is a portal into hundreds and hundreds of abstracts, from peer-reviewed literature, on the positive impact that nutraceuticals have on various diseases and chronic conditions.

Go to: **www.aminomics.com/nutraview.htm**

Optimal Health

"Optimal Health" is released by staff, associates and friends of Immune System Management Inc. We aim to share up-to-date news, information and diverse views for the growing integrative, alternative and complementary medicine movement, particularly as it applies to cancer and other chronic diseases.

It is our philosophy that diverse health care modalities can work in conjunction with each other as part of a unified team rather than in competition. Such an integrated approach ultimately will lead to safer and more effective healthcare.

Your comments and article contributions are welcome.

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