

OPTIMAL HEALTH

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"The message of Christmas: We are never alone."

As I reflect on Taylor Caldwell's words, I'm carried back through two decades of interactions with thousands of ISM clients. Many have been with us throughout the years as we challenged the status quo in exploring and developing new and better alternatives to maintaining and improving health.

Being a part of our client's lives is a gift that we receive daily, and I am truly grateful for your support and your friendship.

Have a happy and healthy holiday season!
Kathryn O'Neill, CEO



"We elves try to stick to the four main food groups: candy, candy canes, candy corns and syrup." — Buddy the Elf

ISM POINT OF VIEW: It Depresses Me!

Many of ISM client's are on prescription antidepressants, i.e., SSRIs (Paxil, Prozac, Zoloft, Lexapro, Celexa), SNRIs (Wellbutrin, Cymbalta), TCAs (Elavil) and MAOIs (Nardi). In fact, more than one in 10 Canadians and Americans are on antidepressant drugs. For women in their 40s and 50s, it is one in four. Antidepressants are the second most commonly prescribed type of medication. But did you know:

- Short-term trials show that antidepressants do NOT provide any clinically significant benefits for mild to moderate depression, compared to a placebo.
- Long-term studies indicate that for people with major depression, only about 15 percent treated with an antidepressant go into remission and stay well for a long period of time. The remaining 85 percent start having continuing relapses and become chronically depressed.

The health impacts of anti-depressants are many:

- Disruption of Immune System: SSRIs cause serotonin to remain in your nerve junctions longer, interfering with immune cell signaling. ⁽¹⁾
- Brittle Bones: Studies have found that bone density declined in those taking SSRIs twice as fast as it did in other women. ⁽²⁾
- Stroke: Your risk for stroke may be 45 percent higher if you are on antidepressants, possibly related to how the drugs affect blood clotting. ⁽³⁾
- Increased Cancer Risk: A review of 61 studies regarding breast and ovarian cancer and antidepressant use showed an 11 percent increased risk for breast and ovarian cancer associated with all types of antidepressants. ⁽⁴⁾

Based on the scientific evidence there are many better options. Unfortunately, the importance of approaches like protein and amino acid balance, exercise, stress relief techniques, and gut health for the maintenance of mental and emotional stability is frequently ignored.

All drugs have benefit-to-risk ratios. But if a drug is only as effective as a placebo in relieving symptoms, and comes with an array of hazardous

side effects, it really doesn't make sense to use it as a first line of defense – especially if it raises your risk of chronic depression over the long term!

Can't we trust the pharmaceutical companies to protect us? Decide for yourself...

The British drug maker GlaxoSmithKline (GSK) pleaded guilty to three counts of criminal misdemeanor and other civil liabilities relating to its misdeeds in inappropriately marketing the antidepressants Paxil and Wellbutrin. They paid a \$3 billion fine – the largest fraud settlement in U.S. history. The fine doesn't compare to the revenue the company made from fraudulent marketing. GSK makes annual net profits of about \$8 billion. If pharma companies can flout the law and then simply write a check when they get caught, they're not going to stop. They simply consider this the cost of doing business. ⁽⁵⁾

It depresses me!
- ed.

Sources:

1. *Blood* February 1, 2006; 107(3): 1010-1017
2. *Diem, et al*, June 25, 2007, *The Archives of Internal Medicine*
3. *BMJ* January 29, 2013; 346:f288.
4. *PLOSone: Antidepressants and Breast and Ovarian Cancer Risk: A Review of the Literature* plosone.org/article/info:doi/10.1371/journal.pone.0018210
5. *Forbes: Pharma & Healthcare* 7/12/2012

The average person may have taken 14,000 prescription pills by age 70
- and this doesn't include over-the-counter drugs!

Four Habits that Weaken the Immune System

Certain foods and environmental influences can keep your immune system from doing a good job. Watch out for these threats to your body's defences:

1. Overdosing on sugar

Eating or drinking 100 grams (8 tbsp.) of sugar, the equivalent of one 12-ounce can of soda, can

reduce the ability of white blood cells to kill germs by 40 percent. The immune-suppressing effect of sugar starts less than 30 minutes after ingestion and may last for five hours. In contrast, the ingestion of complex carbohydrates, or starches, has no effect on the immune system.

2. Excess alcohol

Excessive alcohol intake can harm the body's immune system in two ways. First, it produces an overall nutritional deficiency, depriving the body of valuable immune-boosting nutrients. Second, alcohol, like sugar, consumed in excess can reduce the ability of white cells to kill germs. High doses of alcohol suppress the ability of the white blood cells to multiply, inhibit the action of killer white cells on cancer cells, and lessen the ability of macrophages to produce tumour necrosis (tumour death) factors.

Of course, this is the party season! One drink (the equivalent of 12 ounces of beer, 5 ounces of wine, or 1 ounce of hard liquor) won't bother the immune system and it may even help you. Sensible, moderate drinking can protect against coronary heart disease. But remember, amounts of alcohol high enough to cause intoxication are also enough to suppress immunity.

3. Food allergens

Due to a genetic quirk, some divisions of our 'immune army' recognize an otherwise harmless substance as a foreign invader and attack it, causing an allergic reaction. Before the battle, the intestinal lining was like a wall impenetrable to foreign invaders. After many encounters with food allergens, the wall is damaged, enabling invaders and other potentially toxic substances in the food to get into the bloodstream and make the body feel miserable. This condition is known as the leaky gut syndrome.

4. Overweight

Obesity can lead to a depressed immune system. It can affect the ability of white blood cells to multiply, produce antibodies, and rush to the site of an infection.

NATURAL RESPECTIVES: Understanding Integrative Medicine

Carolyn Mercer, B.Sc., N.D.



Integrative medicine combines alternative medicine with evidence-based allopathic medicine. The use of synthetic drugs is typically the more traditional

form of medicine in North America; however, with ever-increasing interest in alternative treatment methods and increased availability of information, people are exploring old and new practices, such as Traditional Chinese

Medicine, homeopathy, and customized nutrition protocols. Integrative methods merge the benefits of allopathic and alternative medicine; integrative medicine combines the critical thought of alternative and conventional medicine, but is inquiry-driven and open to new paradigms. The philosophy of integrative medicine is also quite different. An integrative practitioner examines the system as a whole, and the approach is based on healing the mind, body and spirit. Rather than simply focusing on a symptom-based approach, the practitioner examines how the entire system is

functioning. One imbalance in one system can affect other parts of the body.

The appeal for a more integrative healthcare system comes from a deep dissatisfaction with the traditional healthcare model. With more information and resources available, people are doing more investigation into their personal health and do not necessarily want to be 'prescribed a pill' for every health concern. People are concerned about the side effects pharmaceuticals have on their physiology and are willing to make lifestyle changes to help maintain a decent level of health. Medicine, from an integrative standpoint, is starting to be viewed as a spectrum. Whereas before pharmaceuticals and surgery were the only two options given, now other modalities such as ISM's Aminomics, homeopathy, botanicals, nutraceuticals, bodywork and acupuncture are also viable options in helping with many health concerns. These methods may also be gentler on the system while still providing benefits. When treating various conditions, it is important to understand that each person is an individual. Two people may have the same diagnosis; however, there might be different reasons they have the same condition. The practitioner focuses on the 'root cause' or why a patient may have a condition. The practitioner will want to identify if there is a structural, nutritional, emotional or energetic imbalance that is occurring with the client. As a result of identifying the cause of the problem, the potential solution or treatment modality can be different depending on the individual.

Another appeal of integrative medicine is that it emphasizes the partnership between doctor and patient, whereas before there was a

definite hierarchy in the relationship. Patients in an integrative setting are also encouraged to take responsibility for their own health. Due to time restraints and the excess demands on the traditional medical community, patients are often only allowed to discuss one or two complaints with their doctors. Physicians have become so specialized that it is difficult to recognize the individual as a whole. Patients are moved around from one specialist to another and it is difficult for one doctor to understand the full picture of what is going on with that individual. This suggests a need for patients to be their own health managers, and to have a more team-based approach when examining patient health and wellness.

Integrative medicine is focused on creating a state of health that is more than just the absence of disease; integrative practitioners are focused on 'wellness' and treating the whole person, emphasizing the bio-psycho-social-spiritual dimensions of the individual. ISM-Immune System Management has been preaching and practicing integrative medicine for over two decades. Finally, it appears to be the medicine of the future.

*Contact ISM for further information on food sensitivity testing and associated costs

About Dr Carolyn Mercer

Dr. Carolyn graduated from Wilfrid Laurier University with a Bachelor of Science, studying biology and psychology. At this time she developed an interest in evidence-based research. Since attending the Canadian College of Naturopathic Medicine, she has

integrated her past research-based education with a more holistic avenue of healing. As a Naturopathic Doctor, Dr. Carolyn was trained in several modalities of alternative health including nutrition, botanical medicine, Chinese medicine and acupuncture, homeopathy, bodywork and lifestyle counselling.

With Carolyn's forward-thinking, preventative approach towards health, she believes that no matter what the level of health of the individual, there are always ways to improve the quality of our lives each and every day. Special interests include weight loss, nutrition and exercise, detoxication, fatigue, gastrointestinal health and allergies, mental health and wellness, and infertility.

"Every morning when I wake up I say I'll never be as young as I am today. Today is the youngest day of the rest of my life. Get up and do something fun"
—Rochelle Ford, 78-year-old Metal Sculptor



ISM's SCIENCE CORNER: New Evidence Casts Doubts About High Cholesterol Directly Causing Hardening of the Arteries (Atherosclerosis) in Humans.

Presented at the 2014 Canadian Hypertension Congress Presentation: October 17, 2014
by Marian Laderoute, Ph.D. Medical Sciences (Immunology), ISM Lab Director

It is widely accepted that foamy macrophages initiate hardening of the arteries in humans, but what causes their induction is less clear. Modeling in mice and in human leukemic cell lines have shown cholesterol along with another signal are needed for macrophages to turn foamy. In part these observations are the reason why doctors test for high cholesterol and prescribe medicines to lower cardiovascular risks. However newer evidence released in 2012 by Keyel PA et al ⁽¹⁾, showed human M1 macrophages spontaneously became foamy without the need for lipids and a second signal. How this happens remained an enigma until now.

In a research effort aimed at looking instead at viral disease risks, a local research team led by Dr. Marian Laderoute serendipitously found that the culture of human cord blood cells in a non-traditional media caused the spontaneous induction of an endogenous foamy-like virus which they then identified as human endogenous retrovirus K102 (HERV-K102) ⁽²⁾. Over 8% of the human genome contains these endogenous retroviruses, most of which are inactive. However, HERV-K102 belongs to a more recent and more biologically active family known as HERV-K group HML-2, and accumulating evidence suggests their activity may be protective against viruses and tumors.

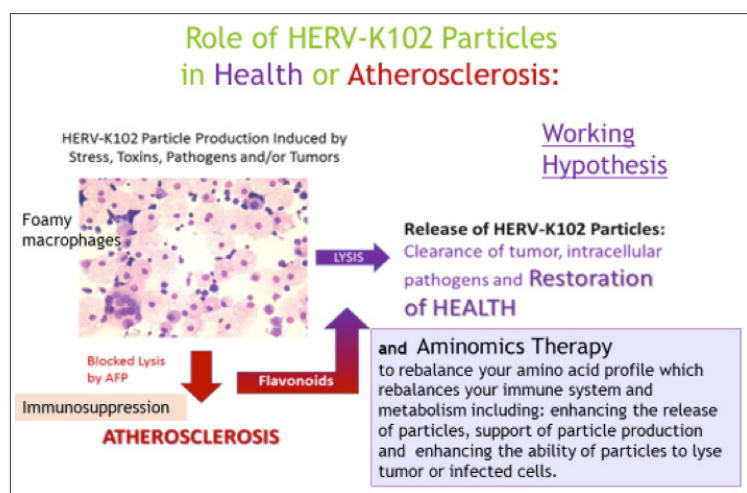
It turns out that viruses as well as tumors cause the induction of HERV-K102 particles in activated macrophages. Here the particles accumulate at high numbers in hundreds of vacuoles, giving macrophages their foamy appearance. The virus particles and the vacuoles that they accumulate in inside the cells, are all lipid bilayers comprised of cholesterol and this may explain the high cholesterol content of the foamy macrophages. In healthy individuals, the release of protective endogenous retroviruses is through cell lysis, and these particles then search and destroy virally infected cells or tumors and help to restore health.

People get into trouble when they are immunosuppressed and the virus particles are not released, leading to chronic inflammation and persistence of the foamy macrophages. This then shows up as hypertension (increased blood pressure) and leads to hardening of the arteries (atherosclerosis). As humans age they become more immunosuppressed, which helps explain why the risks of cardiovascular diseases increase with age.

This link also helps to directly explain why peak heart attack season (usually February) correlates with peak flu season as reported by Foster ED et al, in 2013, although this connection is only evident in epidemiological studies with persons 65 years of age or older⁽³⁾. Presumably flu and cold viruses induce HERV-K102 particle production resulting in foamy macrophages where in older people who are more likely to be immunosuppressed, this can be associated with heart attacks.

The ramifications of this discovery are many, but as long as you avoid stress and immunosuppression, balance your amino acid and related protein profile, consume lots of flavonoids such as found in fruits and vegetables, don't smoke and follow the recommendations of Hypertension Canada,⁽⁴⁾ you should be able to significantly reduce cardiovascular and other health disease risks. "While lipids such as oxLDL or LDL may augment or support atherosclerosis, respectively, the notion that high cholesterol per se directly causes hardening of the arteries is simply no longer tenable." This new insight on foamy macrophage

production and persistence may help explain various clinical inconsistencies with the lipid hypothesis of atherosclerosis and the growing awareness of the role of inflammation in driving atherosclerosis.



More details and images can be found at:

<http://www.aminomics.com/professionals/HERVK.htm>

- Opinion Article "Why is February Heart Month?"
- Powerpoint Presentation at the 2014 Canadian Hypertension Congress-Gatineau, PQ October 17, 2014: "New Insights in Mechanisms of Foamy Macrophage (FM) Induction and Persistence"

Resources:

1. Keyel PA et al, Coordinate stimulation of macrophages by microparticles and TLR ligands induces foam cell formation. J Immunol 2012 189:4621-4629.
2. Laderoute MP et al, The replicative activity of human endogenous retrovirus K102 (HERV-K102) with HIV viremia. AIDS 2007, 21:2417-2424.
3. Foster ED, et al. Acute myocardial infarctions, strokes and influenza: seasonal and pandemic effects. Epidemiology and Infection 2013, 141:735-744.
4. <https://www.hypertension.ca/en/chc/scientificprogram>

Tips for Making Better ISM Smoothies in the Cool of Winter



The main fresh ingredients in a decent smoothie – strawberries, blueberries, various seasonal fruits – are a little hard to come by (or cost a fortune) this time of year. Of course, there's always frozen fruit, but we've got some other creative tips for making fresh, creamy smoothies in the snowy-white months ahead.

- Include bananas. They're good (and cheap) any time of year, but in winter, they're essential. While a little high in sugars (medium glycemic level), they are a great source of heart-healthy potassium and magnesium, a good source of fibre, and 25% of your Vitamin B6 needs (essential to metabolising your ISM Custom Protein). Bananas have all the essential amino acids and have about 5.2% protein dry weight. Here's the thing: FREEZE THEM. We think this is the key to making thick, creamy smoothies without having to add ice. Do you have a blender that won't chop ice very well? Frozen bananas are your friend. (Peel them before you freeze them).

- Use all types of frozen fruit. Frozen mixed berries will also add thickness. If your blender has a hard time with big, chunky, frozen strawberries, let them thaw for a couple of minutes and chop them into smaller pieces. Use other fruits too; frozen peaches are great, as are frozen tropical fruits like pineapple and mango.
- Add peanut butter or nuts. We like the idea of something heartier when it's frigid outside. Or add some chopped almonds or walnuts.
- Add ground-up oatmeal. Just another way to give a smoothie some heft and warmth, especially if you're limited on fresh ingredients. We're imagining a banana, oatmeal, yoghurt smoothie with some organic honey or maybe flax seeds.
- Freeze some yogurt and add oranges. Citrus is plentiful right now, but it doesn't exactly give you a soft, creamy texture. Try freezing some organic vanilla yogurt (almost like adding ice cream!) and making a creamsicle-ish smoothie.

Gingerbread Cookie Smoothie

Full of flavor, yet full of healthy ingredients like vegetable, fruit, and protein. What better way to prepare your ISM Custom?

Ingredients

- 3/4 cup almond milk
- 1 banana, frozen in chunks
- ISM Custom Protein
(as directed)
- 1 tbsp molasses
(blackstrap molasses)
- 1/2 tsp cinnamon
- 1/4 tsp ginger
- 1 tsp organic vanilla extract
- 2 handfuls of spinach



(adapted from: www.healthydiaries.com)

Instructions

Place all ingredients into a blender and process until smooth, about 1-2 minutes. This recipe can make one large serving or two smaller ones.

"Optimal Health" is written and produced by staff, associates and friends of Immune System Management Inc.

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 health care.

Optimal Health will act as a gathering place and forum for comments and articles from medical professionals, educators and researchers from all health care specialties to the ultimate benefit of both the patient and the health care provider. 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.

Your comments and article contributions are welcome.

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