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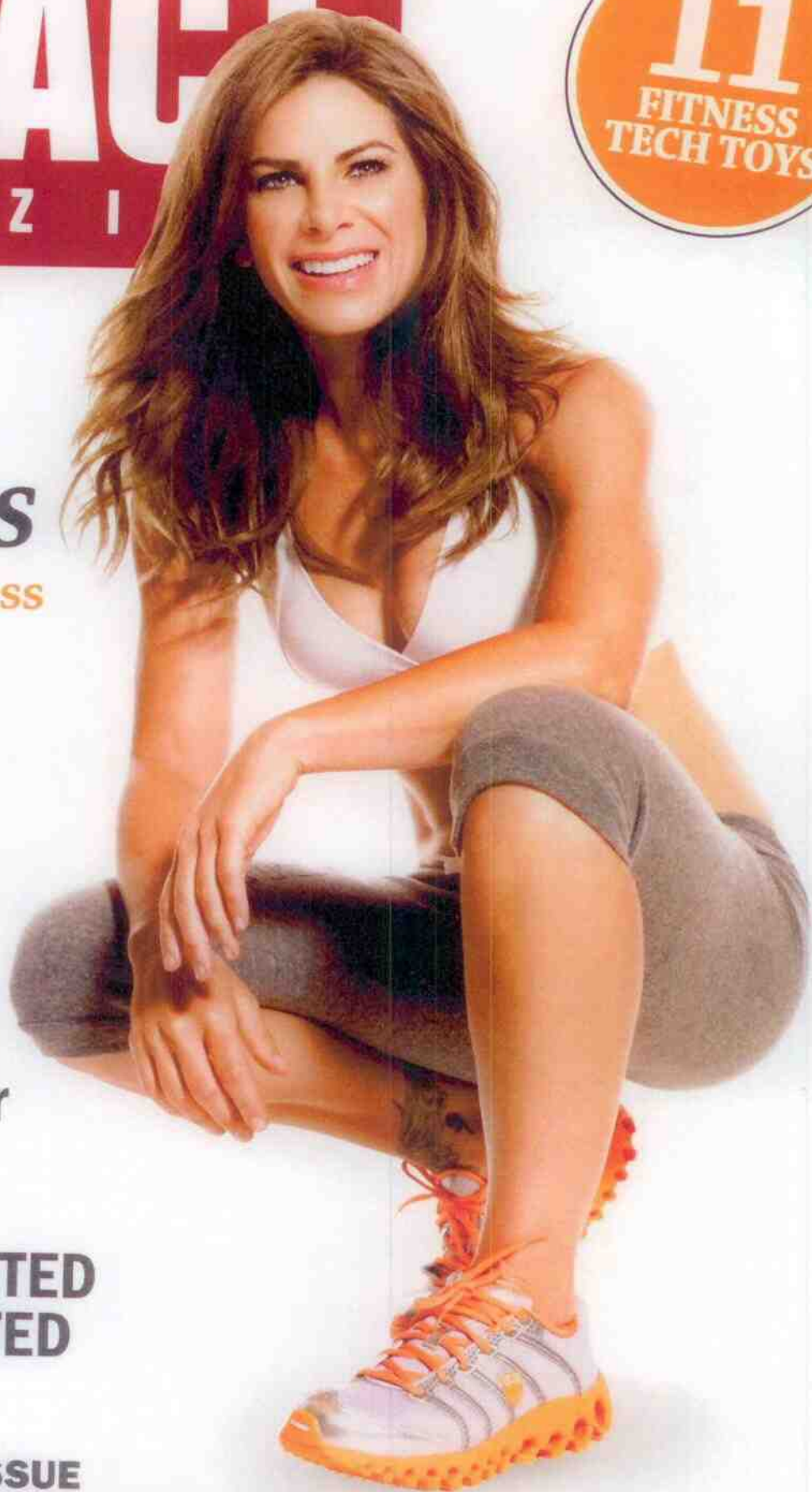
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The IMPACT MAGAZINE GUIDE TO NATURAL HEALTH PRODUCTS

Building Optimal Health and Performance

PART 8 IN A MULTI-ISSUE EXCLUSIVE FEATURE

IMMUNE HEALTH

BY DR. MELINA ROBERTS

When it comes to our immune system, we like to blame other people for us getting sick. Other kids at school, co-worker, person on the train, but the truth is, whether we get sick or not is dependent on our own body and defence mechanisms. We are exposed to thousands of micro-organisms and toxins daily and whether they make us sick, or not, is about the strength of our natural immune system.

The immune system is our body's defence against outside forces. Our immune system protects us against invading micro-organisms including bacteria, viruses, fungi or parasites and toxins. It is our body's internal environment that determines our susceptibility to infections and our best defence is an optimally functioning immune system.

There are a number of ways that we can support a healthy immune system. Approximately 75-80 per cent of our immune system is housed in our digestive

tract, therefore we can support a healthy immune system by eating a healthy diet that consists of whole, natural foods and by taking a probiotic supplement, which is healthy bacterial flora that lays a solid foundation within the digestive tract.

Drink two to three litres of filtered water per day to help clean our cells by flushing out infections and toxins.

Get a good night's sleep of seven to eight hours. This will give the body the energy it needs to help fight off infections. Numerous studies have demonstrated how regular exercise boosts the immune system, so that should be part of everyone's routine. There are a number of vitamins and minerals that enhance the immune system by improving a person's resistance to infections that can be included in your daily regimen.

The benefits of a healthy immune system go beyond helping you to fight off a cold or flu. It helps to prevent chronic disease and helps your body fight off cancerous cells.

This chapter of the IMPACT Magazine Guide to Natural Health Products is compiled with the expert assistance of Melina Roberts, Ryan Nakama and Kyley Hunt. For this article with references, please visit impactmagazine.ca



VITAMIN C

What it is: Vitamin C is an essential biological vitamin found in our foods, ideally taken as a whole foods

supplement.

What it does: Vitamin C prevents oxidative damage. It plays a role in immune function and infection resistance by increasing white blood cell activity to remove infectious agents such as bacteria and viruses.

Why you might need it: Boosts the immune system and your ability to fight infections.

Who shouldn't use this: Vitamin C can increase iron absorption and therefore should not be taken in patients with hemochromatosis.

What happens if you take too much: Can lead to abdominal cramping and diarrhea if you take too much (approx. 4-5 grams/day).

Where to get it: Vitamin C is present in fresh fruits and vegetables, including kale, spinach, broccoli and oranges.

IMPACT Expert Picks: Douglas Lab Orange Chews, INNATE vitamin C 400, AOR Vitamin C, New Roots Vitamin C8.



ZINC

What it is: Zinc is a biologically essential trace element.

What it does: Zinc is a co-factor in many biological processes including DNA, RNA and protein synthesis. It also plays a key role in immune function. Zinc is beneficial by inhibiting viral replication

IMMUNE HEALTH

and boosting immune function by improving cell-mediated immune response.

Why you might need it: Zinc is used for treating the common cold and improving immune system function.

Who shouldn't use this: Can impair copper absorption. People who are hypersensitive to zinc compounds should avoid zinc supplements.

What happens if you take too much: Can cause nausea, vomiting and watery stools.

Where to get it: Zinc is in meat, seafood, nuts and legumes.

IMPACT Expert Picks: Douglas Lab Zinc Lozenges, Pure Encapsulations Zinc 30, Orange Naturals Zinc Citrate, Natural Factors Zinc Citrate.



PROBIOTICS

What it is: Beneficial bacteria or yeasts that form a symbiotic relationship with the human body.

Lactobacillus acidophilus, *Bifidobacterium bifidus*, *Saccharomyces boulardii* are the most common strains, but many other beneficial strains exist.

What it does: Gut floras perform numerous functions. They support gastrointestinal function, produce vitamins such as vitamin K and decrease inflammation and reduce intestinal permeability. They prevent and correct dysbiosis by physically crowding out and out-competing pathogenic organisms as well as producing factors that inhibit pathogen growth and replication. They benefit immune function by helping to balance Th1/Th2 ratio and prevent antibiotic induced infections such as *C. difficile*. Evidence also points to gut bacteria's influence on cognitive function and mental health.

Why you might need it: Those with gastrointestinal symptoms ranging from gas and bloating to irritable bowel syndrome or diarrhea, frequent or recent antibiotic use, to restore flora and prevent antibiotic associated complications, to prevent or treat traveller's diarrhea, recurring urinary tract,

vaginal or yeast infections, seasonal allergies, hay fever or other conditions involving deregulations of the immune system.

Who shouldn't use this: Many probiotics are grown on dairy sources and this may be an issue for those with dairy sensitivity or allergy. Those with compromised immune function, damaged GI barrier, prior or recent GI surgery, or severe underlying disease may be at increased risk of bacteremia and should consult a health professional before initiating treatments.

What happens if you take too much: Probiotics are generally safe and well tolerated. Initial doses may be associated with a transient increase in gastrointestinal gas, bloating, or loose stools as the bowel flora rebalances. Prolonged high dosage of probiotics may not be advisable. Worsening of GI symptoms with probiotics may indicate other pathologies. Consult a healthcare provider if this occurs.

Where to get it: Fermented foods such as sauerkraut, kim-chi, yogurt, miso and tempeh. Be aware that many fermented foods are not made with beneficial organism or those that produce long-term colonization of the gut. Look for "active cultures." Processing and heating can also degrade probiotic content. Probiotics are available in more potent and concentrated forms as dietary supplements.

IMPACT Expert Picks: Genestra HMF line of products. Pure Encapsulations Probiotic 50, Bioclinic Naturals Probio 12, Therbiotic Complete.

HERBALS



ECHINACEA ROOT

What it is: Medicinal extracts from the root of Echinacea species plants that are native to North

America.

What it does: Enhances the body's ability to fight infections.

Why you might need it: Echinacea is commonly used for treating or preventing colds and other upper respiratory infections.

Who shouldn't use this: Individuals

sensitive to the Asteraceae/Compositae plant family (i.e. Ragweed, chrysanthemums, marigolds, daisies) are more likely to experience an allergic reaction, including anaphylaxis, fever, nausea, vomiting. May interfere with immunosuppressive drugs.

What happens if you take too much: Safe when taken orally and according to directions.

Where to get it: Available as a tincture, compounded capsule or tablet or dried herb.

IMPACT Expert Picks: Mediherb Echinacea, Pharmax Echinacea-complex, Genestra Echinacea Mix.



HYPERICUM PERFORATUM (ST. JOHN'S WORT)

What it is: Hypericum perforatum is a healing

herb native to Europe also commonly found in the U.S. and Canada in the dry ground of roadsides, meadows and woods.

What it does: Helps fight against viruses and bacteria including influenza virus, herpes simplex virus, Gram negative and Gram positive bacteria.

Why you might need it: Mainly used for depression, but also activates the immune system.

Who shouldn't use this: May increase muscle tone of the uterus, therefore not recommended to use during pregnancy.

What happens if you take too much: When used orally in large doses (1800mg or more per day) there is risk of severe phototoxic skin reactions.

Where to get it: The plant parts that are above the ground that are dried or in tincture form.

IMPACT Expert Picks: Genestra St. Johnswort Plus, Genestra St. Johnswort tincture, Douglas Lab St. Johnswort Max-V.



GLYCYRRHIZA GLABRA (LICORICE ROOT)

What it is: An herb with long history of use both as medicine in Europe and

Asia, as well as a sweetener and flavouring agent.

What it does: Licorice has been shown to be anti-inflammatory, demulcent, protective of the liver and to act as an expectorant in the treatment of coughs. Many studies have been done on the antiviral and antibacterial properties of licorice. It has been shown to activate specific immune cells, including CD4 and CD8 T cells.

Why you might need it: To help improve immune function; shorten the duration of upper respiratory tract infections and soothe coughs.

Who shouldn't use this: Individuals with high blood pressure should only use deglycyrrhizinated preparations. It should not be taken in combination with the following medications: cardiac glycosides, corticosteroids, diuretics, monoamine oxidase inhibitors and medications for high blood pressure. Seek medical advice before using during pregnancy or breastfeeding.

What happens if you take too much: Chronic or overuse of this herb can cause

low blood potassium levels, headaches, numbness, high blood pressure, weakness, dizziness and edema (swelling). Side effects are low in cases where daily intake is less than 10 mg of the glycyrrhizin component.

Where to get it: Available as a tincture (alcohol-extract), glycerite (glycerin extract), compounded capsule or tablet, as well as a dried herb for use as a tea.

IMPACT Expert Picks: Mediherb Licorice Tincture, Wise Woman Licorice Solid Extract, Vitazan Licorice Root, Orange Naturals Licorice Tincture, St. Francis Licorice.



TINCTURE, MELALEUCA ALTERNIFOLIA (TEA TREE)

What it is: The oil extracted from the leaves of the Tea Tree.

What it does: A topical antimicrobial. It has been shown to disrupt the cell membranes of certain bacteria and fungi.

Why you might need it: As a topical treatment for toenail fungus, athlete's foot, as an antiseptic in cosmetic products. May have

some use as a topical treatment for dandruff, acne, skin infections and as a mouth rinse in cases of infection.

Who shouldn't use this: Those with known sensitivity to Tea Tree essential oil. Should not be used internally.

What happens if you take too much: May cause allergic contact dermatitis in those with sensitive skin. As such it should be diluted in a carrier oil before being applied directly.

Where to get it: As an essential oil extract of Melaleuca alternifolia, not to be confused with other Melaleuca species.

IMPACT Expert Picks: Natural Factors Tea Tree Spray, St. Francis Tea Tree Oil, Sage Natural Wellness Tea Tree Oil.



HYDRASTIS CANADENSIS (GOLDENSEAL)

What it is: The root of an herb indigenous to North America. Goldenseal is a member of the Buttercup family.

What it does: Hydrastis is known for its



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antimicrobial properties, tonification of mucous membranes and anti-inflammatory effects. It is commonly used to treat digestive concerns. The antimicrobial properties are attributed to the alkaloids berberine, canadine, canadoline and to a lesser extent hydrastine.

Why you might need it: Has been shown to be effective in cases of intestinal infection, especially when there is a loss of appetite. Also commonly used for infections of the ear, eyes, nose and throat. Studies have shown the best results are from when the herb is applied directly to the affected tissue.

Who shouldn't use this: Those who have high blood pressure, women who are pregnant or breastfeeding.

What happens if you take too much: May cause digestive upset including vomiting and diarrhea. Local irritation can be caused by prolonged contact with high concentrations of the alkaloids. Alkaloid poisoning can cause organ failure, especially liver, and death.

Where to get it: Because it is an endangered species it is best to source Hydrastis from a cultivated source. Available in tincture, dried root or rhizome that has been compounded into a capsule or tablet.

IMPACT Expert Picks: MediHerb Goldenseal, St. Francis Herb Farm Echinacea Goldenseal.



TINCTURE, BERBERIS VULGARIS AND MAHONIA AQUIFOLIUM

What it is: Plants from the Berberis species including

Barberry (*Berberis vulgaris*) and Oregon Grape (*Mahonia aquifolium* previously *Berberis aquifolium*) that contain berberine alkaloids.

What it does: Both plants are antimicrobial, and stimulate bile secretion. The anti-inflammatory and antimicrobial properties of *Mahonia* have also made it useful as treatment for skin conditions such as psoriasis and eczema. They help relieve nausea.

Why you might need it: Berberine extracts from *Berberis vulgaris* and *Mahonia aquifolium* are primarily used for the treatment of gastrointestinal infections.

Who shouldn't use this: Should not be used while pregnant or breastfeeding. Shouldn't be used in infants with jaundice or when there is a blockage of the bile ducts.

What happens if you take too much:

May cause digestive upset, nosebleeds, dizziness, urinary tract disorders, skin and eye irritations when extracts include more than 0.5 mg of berberine. Poisoning from an overdose of the alkaloid berberine can cause organ failure and death.

Where to get it: The bark of the root or stem can be prepared as a tincture, capsule, tablet or tea.

IMPACT Expert Picks: Thorne Berberine 500, St. Francis Herb Farms Barberry, Cyto-Matrix Berber.

DEEP IMMUNE SUPPORT

What it is: Botanical, nutritional and other measures to build immune function by supporting the tissues that mediate its function.

What it does: In contrast to surface immune stimulation which benefits acute illness or infection, deep immune support nourishes, tonifies and strengthens immune tissues at a deeper level to build up long-term immune function.

Why you might need it: Those who are immune-compromised or susceptible to frequent colds or infections.

Who shouldn't use this: Each herb has its own safety profile. Do not use if you have known sensitivity or allergy to the specific product.

What happens if you take too much: While generally safe, each herb or product has its own unique potential adverse effects. In general, abdominal discomfort or nausea may be a sign of excess intake.

Where to get it: Deep immune support can involve herbs such as *Astragalus* and *Codonopsis*; mushrooms such as Reishi, Shitake, or Turkey Tail; or glandular extracts such as bovine thymus.

IMPACT Expert Picks: St Francis Herb Farm Deep Immune, Host Defense – Reishi, Turkey Tail, Stamets 7, My Community. Purica Immune 7, Orange Naturals Immune Health.



ASTRAGALUS MEMBRANACEOUS (ASTRAGALUS)

What it is: A plant in the legume family. The root is used medicinally.

What it does: *Astragalus* is traditionally used as an immune enhancing tonic and to promote general vitality. It is known to

stimulate natural killer cell activity and interferon production. It appears to boost both specific and non-specific immunity. In Traditional Chinese Medicine it tonifies qi (your natural energy), blood and the spleen.

Why you might need it: Especially beneficial in cases of impaired immunity such as frequent colds or viral infections. May also benefit those with low white blood cell count due to conventional therapies.

Who shouldn't use this: Evidence is unclear regarding safety in use with autoimmune disease. It may also be incompatible if used with immunosuppressive therapies. Not suggested for acute illness or infection.

What happens if you take too much: Very high safety profile. May aggravate acute infections.

Where to get it: Available in tincture (alcohol extract), tablet/capsule or raw herb. The root can be used to make a pleasant tea or soup.

IMPACT Expert Picks: as part of St. Francis Herb Farm Deep Immune formula, Orange Naturals Astragalus Tincture, NFH.

ASTRALAGUS SAP

Codonopsis pilosula (*Codonopsis*)

What it is: An herb traditionally used in Chinese medicine. Also known as "poor man's ginseng." The root is used medicinally.

What it does: Has similar but weaker properties as Korean Ginseng. General qi tonic with specificity to the lung and spleen in traditional Chinese medicine. Promotes general vitality, immune function and red and white blood cell count.

Why you might need it: General fatigue, poor appetite, or low blood cell counts.

Who shouldn't use this: Those with known sensitivity or allergy to *Codonopsis* or related species. Women trying to become pregnant — a related species was shown to decrease fertility in a lab rat model. Those with bleeding disorders or on anti-coagulant medications should use caution due to potential additive effects.

What happens if you take too much: No adverse effects expected at recommended dosages.

Where to get it: Available in tincture (alcohol extract), capsule/tablet, or as raw herb to be used to make tea.

IMPACT Expert Picks: As part of St Francis Herb Farm Deep Immune formula, St. Francis Herb Farm *Codonopsis*. ■