



Answers to your questions
from our medical experts

1. Calcium Supplements

? Calcium has been highly recommended for prevention of osteoporosis. Can too much calcium harm people with heart and renal calculi?

Submitted by: **Erwin Braun, MD**, Winnipeg, Manitoba

There has recently been some controversy suggesting that calcium supplementation may be implicated in several adverse events, such as increased myocardial infarction and renal stones. Current guidelines for osteoporosis recommend at least 1,200 mg of calcium for patients aged above 50.¹ Most patients do not achieve this current recommendation through diet alone and are placed on calcium supplements. In a study from New Zealand, a meta-analysis showed that calcium supplementation (without vitamin D co-administration) is associated with increased relative risk of myocardial infarction.² The Women's Health Initiative (WHI) study reported an increase in renal stones with those who used calcium supplementation. However, another systematic review did not show an increase in kidney stone risk with high calcium intake, and some findings suggest an inverse association between calcium intake and stone risk.³ At this time we would recommend following the current guidelines for calcium supplementation unless there is a particular concern in a high risk patient.

Resource

1. Papaioannou A, Morin S, Cheung AM, *et al*: 2010 Clinical Practice Guidelines for the Diagnosis and Management of Osteoporosis in Canada: Summary. *CMAJ* 2010;182(17):1864–73.
2. Bolland MJ, Avenell A, Baron JA, *et al*: Effect of Calcium Supplements on Risk of Myocardial Infarction and Cardiovascular Events: Meta-Analysis. *BMJ* 2010; July 29:341.
3. Heaney RP: Calcium Supplementation and Incident Kidney Stone Risk: a Systematic Review. *J Am Coll Nutr* 2008;27(5):519–27.

Answered by: **Dr. Michael Starr and Dr. Fares Kalache**

2. Steroids and Bell's Palsy

? Is there any evidence-based proof that steroids and antivirals are helpful in Bell's palsy?

Submitted by: **Peter Noble, MD**, Oshawa, Ontario

Inflammation of the facial nerve is considered to be the cause of the symptoms of Bell's palsy, and corticosteroids are helpful in improving these symptoms by reducing the inflammation. There is significant improvement in outcome when prednisone is initiated within 72 hours of the onset of symptoms. Use of antiviral agents is controversial, as some of the previous trials have shown

limited benefit, but recent randomized controlled trials showed no benefit.

Suggested Readings:

1. Salinas RA, Alvarez G, Daly F, *et al*: Corticosteroids for Bell's Palsy (Idiopathic Facial Paralysis). *Cochrane Database Syst Rev* 2010; (3): n.p.
2. Adour KK, Ruboyianes JM, Von Doersten PG, *et al*: Bell's Palsy Treatment with Acyclovir And Prednisone Compared with Prednisone Alone: A Double Blind, Randomized, Controlled Trial. *Ann Otol Rhinol Laryngol* 1996; 105(5):371–378.

Answered by: **Abdul Qayyum Rana**

3. Heuristic for Treating Skin Conditions



How true is the dermatology saying, “If it’s wet, dry it; if it’s dry, wet it”: as it pertains to treatment of skin conditions?

Submitted by: [Katherine Abel, MD](#), Leduc, Alberta

This old adage is simplistic and exaggerated. With regards to “if it’s wet, dry it,” it is true that exudative lesions and bullous lesions often need to be compressed to decrease exudation and oozing. However, excessive drying can actually impede wound healing and should be avoided. Compresses are best done with normal saline as compressing with other astringents may cause toxicity to fibroblasts and again impede, rather than aid in, wound healing.

Currently, healing wounds and ulcers is best managed with the principle of moist wound healing with occlusive dressings using films, foams, hydrocolloids, hydrogels, or alginates.

The old practice of using wet to dry gauze dressing is best avoided. Although this may aid in debridement of ulcers, it can damage new epithelium and angiogenesis and is best abandoned in

favour of moist wound healing dressings.

As for “if it’s dry, wet it,” it is true that moisturizers are very important in treating dry skin and dermatitis as they help to retain moisture in the epidermis, especially the stratum corneum, and reduce transepidermal water loss by their occlusive effects. However, actual application of moisture to the skin (*i.e.*, wet it) is not helpful and can cause increased dryness due to evaporation of the moisture into the air, unless a moisturizer is used after wetting the skin to retain the moisture. The best time to moisturize is within 3 to 5 minutes after a shower or bath while the skin is still damp, which will retain moisture in the stratum corneum. Therefore if it’s dry, don’t wet it, moisturize it.

Answered by: [Dr. Richard Haber](#)

4. Symptomatic Diverticula



Has anything been proven to reduce the occurrence of symptomatic diverticula in patients with diverticulosis?

Submitted by: **Stephen Sullivan, MD**, Victoria, BC

Colonic diverticula are outpouchings of the mucosa and submucosa of the colon that have herniated through the circular layer of the muscularis propria. Diverticular disease refers to the entire range of symptoms and findings associated with diverticulosis.

Diverticulosis is quite uncommon in nonindustrialized societies and the incidence has increased exponentially since the industrial revolution. The most likely etiology for development of diverticulosis includes lack of dietary fiber, colonic dysmotility or structural abnormalities, and age-related changes. While the actual pathophysiology has yet to be completely elucidated, it has been postulated that a low-residue diet will contribute to constipation, leading to increased intraluminal pressure within the large bowel. In areas such as the sigmoid, where there is elevated elastin, the taeniae can be shortened, causing high-pressure zones where the diverticula begin to protrude. The development of diverticular disease and its complications appear to be linked to decreased physical activity, obesity, NSAID use, smoking, and constipation from any cause. There is no association with consumption of nuts, corn, or popcorn.

An estimated 15 to 30% of patients with diverticulosis will progress to symptomatic disease. The most commonly described symptoms include nausea, flatulence, bloating, and change in bowel habits; however, progression to hemorrhage or diverticulitis can have devastating consequences. As such, it is important to consider potential preventative measures to slow overall disease progression and to reduce the risk of complications.

Studies have indicated that 61% of patients with symptomatic diverticular disease will experience recurrence of symptoms within one

year of previous attacks, and 4% will go on to develop complications such as stenosis, abscess, or fistulae. Most evidence suggests that a high-fiber diet is an effective means of intervention in reducing the risk of the disease and its complications; however, early randomized control trials are indicating that probiotics (*Lactobacillus casei*) in conjunction with mesalazine might be useful in aiding with symptom-free disease in patients after achieving remission.¹ In this study, the symptomatic improvement was characterized quantitatively by episodes of constipation, diarrhea, abdominal pain, rectal bleeding, and mucous discharge with stool. The alteration in symptoms may be due to the anti-inflammatory effect of the mesalazine in conjunction with the anti-microbial effect of the probiotics. Other trials using mesalazine alone for 10 days to a month, at a dosage of 800 mg b.i.d., have also shown a significant reduction in symptoms, including pain, tenesmus, bloating, diarrhea, fever, nausea and overall well-being.²

Although more long-term studies are needed, in cases of uncomplicated symptomatic diverticular disease, cyclic mesalazine may be a therapeutic option.

Resources

1. Tursi A, Brandimarte G, Geirgetti GM, et al. Mesalazine and/or Lactobacillus casei in Preventing Recurrence of Symptomatic Uncomplicated Diverticular Disease of the Colon: A Prospective, Randomized, Open-Label study. *J Clin Gastroenterol* 2006; 40(4):312–316.
2. Comparato G, Fanigliulo L, Cavallaro LG, et al. Prevention of Complications and Symptomatic Recurrences in Diverticular Disease with Mesalazine: A 12-Month Follow-Up. *Dig Dis Sci* 2007; 52(11):2934–2941.

Answered by: **Dr. Robert Bailey and
Dr. Hillary Austin**

5. DVT Risk During Flight



How can we reduce the risk of deep venous thrombosis (DVTs) and ankle edema during flight?

Submitted by: Paul Stephan, MD, Thornhill, Ontario

Philbrick JT, Shumate R, Siadaty MS, *et al*, completed a systematic review on venous thromboembolism (VTE) related to air travel in 2007 and found that these clinical events were rare. They reviewed 24 published reports that analysed 25 studies on VTE, including 6 case-control studies, 10 cohort studies, and 9 randomized controlled trials. Duration of travel (> 8 hours) and clinical risk had a significant effect on VTE rate. Graduated compression stockings prevented travel-related VTE in four of six studies. Aspirin did not prevent the condition, and low-molecular-weight heparin (LMWH) showed a trend toward efficacy in one study.¹

These results were echoed in the latest American College of Chest Physicians' (ACCP) guidelines. For travellers who are taking flights over eight hours in duration, general recommendations included avoidance of constrictive clothing around the lower extremities or waist, maintenance of adequate hydration, and frequent calf muscle contraction. For long-distance travellers

with additional risk factors for VTE, in addition to these general measures listed above, the ACCP suggested the use of properly fitted, below-knee graduated compression stockings, providing 15 to 30 mmHg of pressure at the ankle or a single prophylactic dose of LMWH injected prior to departure. The ACCP also recommended against the use of aspirin.

These same recommendations may also help with reduction of ankle edema. However, peripheral extremity edema should be investigated further for other underlying causes and managed appropriately.²

Resources:

1. Philbrick JT, Shumate R, Siadaty MS, *et al*: Air travel and venous thromboembolism: a systematic review. *J Gen Intern Med* 2007;22(1):107–14.
2. Geerts WH, Bergqvist D, Pineo GH, *et al*: Prevention of Venous Thromboembolism: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. *Chest* 2008; 133(6 Supl):381S–453S.

Answered by: **Dr. Cyrus Hsia and Dr. Leonard Minuk**

6. Clopidogrel Use Post Angioplasty



How long should a patient remain on clopidogrel post angioplasty with stent placement (more than one year)?

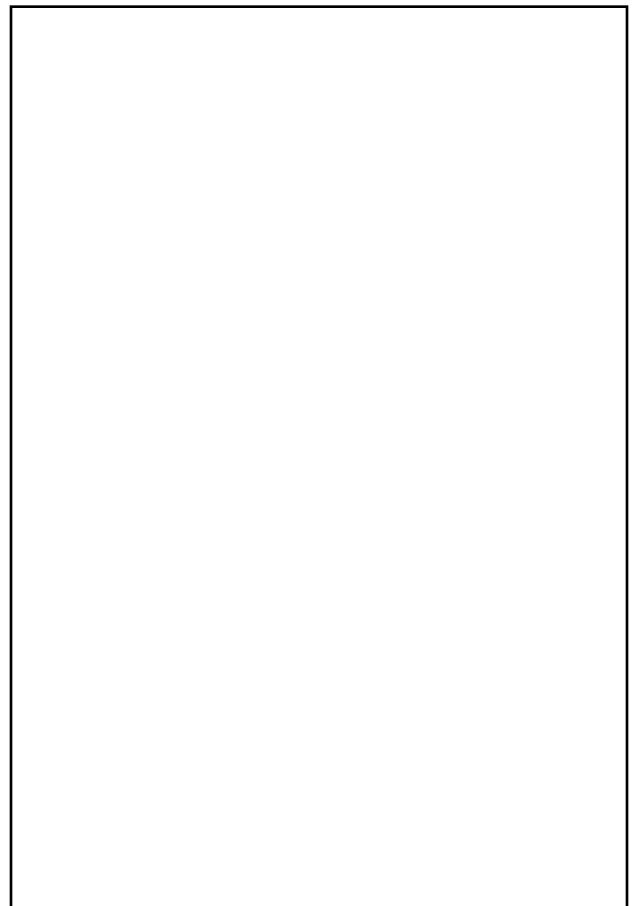
Submitted by: [Lisa Jugloff, MD](#), Etobicoke, Ontario

All patients with coronary stents should be on lifelong ASA. Patients who receive a bare metal stent should be on clopidogrel for a minimum of one month (up to 12 months if the stent is deployed in setting of acute coronary syndrome), and those who receive a drug eluting stent should take clopidogrel for a minimum of one year in addition to ASA.

It takes longer for drug eluting stents to endothelialize, and, after the first month, patients remain at risk for late stent thrombosis

for up to one year. Stent thrombosis is a serious complication often resulting in large infarcts with high mortality (15 to 20%). After one year, the risk of very late stent thrombosis is very low and generally does not justify the increased bleeding risk of dual antiplatelet therapy unless the patient has a drug eluting stent in the left main coronary artery or proximal left anterior descending artery.

Answered by: [Bibiana Cujec](#)



7. Allergy Testing Protocol



Should leukotriene receptor antagonists be stopped before allergy testing? If so, how many days prior to testing?

Submitted by: [Nathalie Laroux, MD](#), Fenwick, Ontario

Allergy skin testing, both epicutaneous and intradermal, involve introduction of small amounts of allergen into the dermal and epidermal space, where interaction with specific IgE (bound to tissue mast cells) result in cross-linking of IgE receptors on mast cells. This leads to a series of biochemical events that results in degranulation of mast cells with the liberation of preformed products, including histamine. This, in-turn, results in the “wheal and flare” reaction of the skin, which can be simulated by testing with histamine itself (a positive control used during skin testing). Therefore, this process can be likened to a “micro allergen challenge” to the skin itself. Antihistamines have the effect of blocking histamine receptors in tissues,

so that the effects of histamine (vasodilation leading to urticaria, sensory neural stimulation leading to pruritus, and other effects dependant on the tissue affected) are minimized. In this way, use of any medication with antihistaminic effects can result in false negative skin testing. Some of these medications include tricyclic antidepressants, imipramines, phenothiazines, and, in some cases, prolonged topical corticosteroid treatment. As leukotriene receptor antagonists block leukotrienes, but do not block histamine receptors, these medications do not need to be stopped prior to allergy testing.

Answered by:
[Dr. Tom Gerstner](#)

8. The Continuous Birth Control Pill



Is the continuous birth control pill safe?

Submitted by: [Gayle Gaber, MD](#), Conception Bay South, NL

Menstrual suppression has been used for years for several gynecologic disorders (dysmenorrhea, menorrhagia). Products used include depo-medroxyprogesterone acetate (plus other progestins), gonadotropin releasing hormone agonists, cyclomen, continuous hormonal contraceptives, and, more recently, the progestin intrauterine device. These products produce endometrial atrophy through progesterone conversion of the endometrium or hypoe-strogenemia, both of which reduce the risk of endometrial cancer. In addition, women have also avoided menses for social reasons by omitting the hormone-free interval with or without medical advice. Recently, the popularity of continuous, or extended combined, hormonal contraceptive regimes has grown due to the marketing of products packaged

for this purpose. The short-term safety data that was needed for approval of these products demonstrates that these products are as safe as cyclic regimens. Despite the use of continuous or extended hormonal contraceptives for up to fifty years, no systematic data collection has shown direct evidence of long-term safety concerns stemming from the use of continuous or extended regimens. However, if there are any increased risks compared to cyclic regimens, they are likely minimal. Any contraceptive can be used continuously or in an extended fashion by omitting the hormone-free interval indefinitely or periodically.¹

Resource

1. Guilber E, Boroditsky R, Black A, *et al*: Canadian Consensus Guideline on Continuous and Extended Hormonal Contraception. *J Obstet Gynaecol Can* 2007;7(Suppl 2):S1–32.

Answered by:
Dr. Victoria Davis

9. Exhaustion and the Elderly

? A 90-year-old female reports feeling tired. Serum calcium is 2.64. She has a normal parathyroid hormone level. Is this age-related, and what type of malignancy work-up is required?

Submitted by: **Sandra Simon, MD**, Edmonton, Alberta

This is most likely mild primary hyperparathyroidism (PHP) if repeated tests show similar values. This is more common with increased age. The parathyroid hormone (PTH) is likely inappropriately normal. Other differential diagnoses include medications such as thiazide and lithium, tertiary hyperparathyroidism due to end-stage renal disease, and familial hypercalcemic hypocalciuria (FHH). Generally speaking, if the clinical assessment is benign, no further malignancy work-up is required if the PTH is truly normal or high-normal. A malignancy work-up is required if the PTH is suppressed or low, unless there is an obvious other cause of hypercalcemia. To confirm primary hyperparathyroidism, one needs to repeat the testing, including serum calcium, phosphate, intact PTH, creatinine, vitamin D level, and a 24 hour urine collection for

creatinine and calcium to document inappropriate hypercalciuria or a high fractional excretion of calcium to rule out FHH. If PHP is confirmed, one needs to determine if there are any indications for surgery (since most cases are due to a parathyroid adenoma). These include severe symptomatic hypercalcemia, corrected serum calcium levels 0.25 mmol/L above the upper limit of normal, osteoporosis, calcium kidney stones, renal failure with GFR < 60 mL/min, age < 50 years old, and pregnancy in certain cases.¹

Resource

1. Bilezikian J, Khan A, Potts J.T. Jr.: Guidelines for the Management of Asymptomatic Primary Hyperparathyroidism: Summary Statement from the Third International Workshop. *J Clin Endocrinol Metab* 2009;94(2): 335–39.

Answered by: **Dr. Ally Prebtani**

10. Methylphenidate for Multiple Sclerosis (MS) Related Fatigue



What role does methylphenidate play in the treatment of MS-related fatigue?

Submitted by: [Heather Sylvester, MD](#), Stratford, Ontario

Methylphenidate is a central nervous system (CNS) stimulant and is mainly used to treat narcolepsy and attention deficit hyperactivity disorder (ADHD) in children. However, some experts also use Ritalin for other indications, such as intractable fatigue related to multiple sclerosis and excessive daytime sleepiness with Parkinson's disease and dementia. Fatigue is a very common problem in multiple sclerosis patients. Attention is one of the major cognitive domains that is adversely affected in multiple sclerosis. Administration of a single dose of methylphenidate may significantly improve attention in MS patients with considerable attention deficit. However, most experts use other medications, such as amantadine, before trying methylphenidate. Amantadine is an antiviral drug, which is used at a dosage of 100 mg two to three times daily and is very helpful in improving fatigue

related to multiple sclerosis. Afternoon naps and rest periods also have a good effect on fatigue related to MS. Patients who don't experience any improvement with these measures may be tried on methylphenidate. However, due to its effects on the nervous system and abuse potential, patients have to be closely supervised.

The dose of methylphenidate should be individualized according to the needs of each patient. It is usually started low and titrated upwards depending upon the response of symptoms. The starting dose is usually 5 mg, 2 or 3 times daily. There is usually significant improvement of attention and cognitive performance with methylphenidate in MS patients.

Answered by: [Dr. Abdul Qayyum Rana](#)

11. Foods to Avoid during Pregnancy



Many newly pregnant patients ask which foods/drinks to avoid during pregnancy. Besides alcohol are there any definite foods to avoid?

Submitted by: **Gail Dangoor, MD**, Thornhill, Ontario

One of the most important subjects to discuss in pregnancy is how to avoid foodborne illnesses, which can cause maternal disease as well as congenital disease, premature labour, miscarriage, and fetal death. Expecting mothers should wash their hands frequently; only consume meats, fish, poultry, and eggs that are fully cooked; avoid unpasteurized dairy products and fruit/vegetable juices; wash fresh fruits and vegetables thoroughly prior to eating; avoid eating raw sprouts; and wash all surfaces that come in contact with raw fish, meat, and poultry with soap.

Toxoplasmosis can be caused by eating undercooked or cured meats, soil-contaminated fruits and vegetables, and contaminated, unfiltered water.

Listeria is a common low-level contaminant in processed and unprocessed foods; however, hot, cooked foods are not a vehicle. Listeria is most commonly associated with processed meats, hot dogs, soft cheeses, smoked sea food, meat spreads, and pate.

Brucellosis is caused by contaminated foods, such as raw milk, raw meat, or cheeses made from unpasteurized milk.

Dietary restrictions include the avoidance of shark, swordfish, king mackerel, and tilefish, because they may contain high levels of mercury.

The consumption of seafood low in mercury (shrimp, canned light tuna, salmon, pollock, catfish) should be limited to two meals a week. Albacore tuna has higher levels of mercury and should be limited to one meal of the total.¹

Herbal medicines should be avoided in pregnancy as there is no control on the strength or purity, and there have been several documented cases of potential harmful effects on pregnancy.²

Only observational studies suggest some negative effect of caffeine on pregnancy, but it is considered prudent to limit caffeine consumption to less than 200 mg per day.

There is no evidence that artificial sweeteners increase the risk of birth defects, and most individuals consume much less than the “Acceptable Daily Intake” suggested by the FDA.

A balanced, healthy diet based on the Canadian Nutritional Guidelines is recommended with appropriate vitamin and mineral supplementation. **Dx**

References

1. Food Safety: Product Specific Information. United States Federal Food and Drug Administration [Internet]. <http://www.fda.gov/Food/FoodSafety/Product-SpecificInformation/default.htm>. Accessed May 10, 2011.
2. Ernst E: Herbal Medicinal Products During Pregnancy: Are They Safe? *BJOG* 2002;109(3):227–35.

Answered by: **Dr. Victoria Davis**