



Answers to your questions  
from our medical experts

## 1. Is Pap needed after hysterectomy?

**Do women who had a total hysterectomy for benign disease really need to have Pap smears of the vaginal vault?**

Submitted by:  
**Stephen Sullivan, MD**  
Victoria, British Columbia

Patients in the situation of hysterectomy with removal of the cervix for benign disease do not require annual Pap smear screening. Cases of vaginal carcinoma following hysterectomy are confined to patients with a history of invasive or pre-invasive cervical disease.

Patients with intact ovaries should have an annual pelvic exam performed by their family physician. It is advisable to screen patients exposed to new sexual partners, as vaginal human papillomavirus can cause vaginal intraepithelial neoplasia.

Although the data does not support regular screenings, patients should be encouraged to have annual pelvic exam.

Answered by:  
**Paul Martyn, MBBS, MRCOG, MRACOG, FRCS(C)**  
Obstetrician/Gynecologist  
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### *This month's topics:*

1. Is Pap needed after hysterectomy?
2. Chicken pox vaccine after exposure: Is it useful?
3. A brief primer on deep brain stimulation
4. Picking an ADHD drug
5. What are normal TSH values?
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## 2. Chicken pox vaccine after exposure: Is it useful?

### ? What is the recommendation for chicken pox vaccine administration post-chicken pox exposure?

Submitted by:  
**Gary Barrs, MD**  
Montreal, Quebec

Varicella vaccine can prevent or reduce the severity of varicella in a susceptible individual if given within three days (and possibly within five days) of exposure. Such use has not been associated with an increase in adverse events. Thus, if an unimmunized child or adult who has never had chicken pox is exposed to someone with chicken pox, giving the vaccine within 72 hours of exposure may prevent the child from developing the illness or decrease the severity of the illness. Serologic testing prior to vaccination is not required in this instance.

Resource

1. National Advisory Committee on Immunization (NACI). NACI Update to Statement on Varicella Vaccine. Can Commun Dis Rep 2002; 28(ACS-3):1-7.

Answered by:

**D'Arcy Little, MD, CCFP**

Lecturer and Academic Fellow  
Department of Family and Community Medicine  
University of Toronto  
Staff Physician, St. Joseph's Health Centre  
Toronto, Ontario

### Memorable Quote

“ *Middle age is when your classmates are so wrinkled and bald they don't recognize you.* ”

Bennett Cerf

## 3. A brief primer on deep brain stimulation

### ? What is "deep brain stimulation"?

Submitted by:  
**Lianne Lacroix, MD**  
Kelowna, British Columbia

Deep brain stimulation (DBS) is a functional stereotactic surgical procedure being used to treat complicated Parkinson's disease (PD), dystonia, tremors and, more recently, obsessive compulsive disorder.

This technique consists of introducing an electrode to structures that do not function normally. These structures are precisely localized with magnetic resonance imaging, ventriculography and microelectrode recording. The electrode is connected to an externally programmable battery usually positioned subcutaneously at the level of the upper chest.

DBS is reserved for patients who can no longer be controlled medically. Patients over 75 with dementia, hallucinations, depression or unstable medical conditions are not considered good candidates.

In cases of PD with severe on-off fluctuations, the most popular target is the subthalamic nucleus and the result is stabilization of the clinical state with a decrease in the amount of medication and in dyskinesia.

In dystonia, the target is usually the internal part of the globus pallidus and the result is spectacular improvement in posture and muscle tone. In cases of tremors, the thalamus is the target and the result is a near 90% rate of resolution.

Side-effects include hemorrhage in < 2.5% per electrode. Other side-effects are rarer and can include dysarthria and gait disturbance.

Answered by:  
**Michel Panisset, MD, DEA, CSPQ**  
Director, Movement Disorders Clinic  
McGill Centre for Studies in Aging  
Montreal, Quebec

## 4. Picking an ADHD drug

**?** Is there a preference between drugs available for attention deficit hyperactivity disorder (ADHD)?

Submitted by:  
**Gary Barrs, MD**  
 Montreal, Quebec

Preferences depend on:

• The "gold" standard	Methylphenidate
• The individual's age	Under six—dexamphetamine Six to 13—methylphenidate 14 plus—long-acting stimulants or desipramine
• The need for longer action	Methylphenidate or amphetamine-dextroamphetamine or atomoxetine
• Vulnerability to street use	Longer-acting medications
• Personal or parental research may eliminate certain drugs	
• Prices may deter particular brand drugs	
• Risks from pre-existing conditions	Paranoid ideation—avoid amphetamines Restricted eating—avoid amphetamines Using stimulants for asthma, <i>etc.</i> Some heart conditions
• Other factors (Tics, anxiety, bipolar questions)	

Start with minimal methylphenidate. Titrate and choose the optimal individual solution.

Answered by:  
**Peter C. Matthews, MB, BS, FRCPC, MRCPsych**  
 Clinical Professor  
 University of Saskatchewan  
 Saskatoon, Saskatchewan

## 5. What are normal TSH values?

### ? Have the TSH values changed in the last year?

Submitted by:  
**Krista Heier, MD**  
Toronto, Ontario

Recently, some thyroid specialists have raised doubts about the upper limits of "normal" for current thyroid-stimulating hormone (TSH) assays, which are typically 4.5 mU/L to 5.0 mU/L. The concern is that these ranges were derived using "normal" controls who were not adequately screened for subclinical thyroid disease.

There is some evidence the upper limit of normal should be closer to 2.5 mU/L to 3.0 mU/L, but this is not universally accepted. Individuals with goitre, positive thyroid autoantibodies and TSH 2.5 mU/L to 5.0 mU/L are at increased risk for progressing to overt clinical hypothyroidism. However, a recent consensus could not identify a benefit of starting thyroid replacement therapy in otherwise asymptomatic individuals with normal free thyroxine and TSH 4.5 mU/L to 10 mU/L.

Answered by:  
**Daniel L. Metzger, MD, FAAP, FRCPC**  
Clinical Associate Professor, University of British Columbia  
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## 6. Measuring blood pressure at the ankle

**?** When measuring blood pressure at the ankle, if ABI is > 1.3, what could we look for with regard to a differential diagnosis and possible treatment options?

Submitted by:  
**J. Kumar, MD**  
Toronto, Ontario

Some “normal” patients can have relatively high ankle brachial index (ABI), but there are really no other differential diagnoses. If the patient has no symptoms, no treatment is required other than control of standard atherosclerosis risk factors. Nonobstructive peripheral vascular disease (PVD) does not usually cause claudication.

If the patient has symptoms suspicious of claudication, make sure there are no other causes, such as spinal stenosis. If no other causes are found, peripheral angiography may help rule out obstructive PVD. This is especially true if there are ischemic skin changes.

Answered by:  
**Bruce Josephson, MD, FRCPC**  
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Dalhousie University  
Halifax, Nova Scotia

### — Memorable Quote —

**“ To be seventy years young  
is sometimes far more cheerful  
and hopeful than to be  
forty years old. ”**

— Oliver Wendall Holmes —

## 7. Diuretics and sulfa allergy

### ? What is a good diuretic to use in patients with sulfa allergy?

Submitted by:  
**Shanti Rao, MD**  
Windsor, Ontario

Unfortunately, for patients with true sulfonamide allergy, a huge number of medications are derived from sulfonamide precursors.

In hypertension, the goal of "diuretic" therapy is not to reduce body water and, therefore, thiazides, a class of diuretics that act primarily as vasodilators, are commonly used.

Hydrochlorothiazide, chlorthalidone and indapimide all have at least a precaution for sulfonamide cross-reactivity, leaving only the less effective potassium-sparing agents, including triamterene, amiloride and spironolactone. Thus, in sulfa allergy, another class of antihypertensives would be more suitable.

In heart failure, the goal is to reduce body water and, therefore, loop diuretics are used, of which only ethacrynic acid is not a sulfonamide. Close attention to optimizing use of angiotensin-modifying agents, beta blockers, spironolactone and digoxin should be made in these patients to minimize dependence on diuretics.

Answered by:  
**P. Timothy Pollak, MD, PhD, FRCPC**  
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## 8. What is the best option for this depressed patient?

**A 35-year-old man in good physical health and taking no medication is diagnosed with depression. He also reports sleeping problems. What would be the most appropriate medication?**

Submitted by:  
**Constance Goulet, MD**  
Radisson, Quebec

For treating major depression, the options depend on:

- the patient's preference,
- illness severity,
- level of disability,
- intensity of psychosocial stressors and
- time pressure for improvement.

For milder cases, you can select psychotherapy and lifestyle changes with no medication. If pharmacotherapy is required, you can add an antidepressant, knowing it will take weeks to normalize sleep.

My first choice for immediate insomnia correction would be zopiclone or temazepam for two to four weeks with an antidepressant. The chosen hypnotic should address middle and late insomnia with a pharmacokinetic profile that limits daytime impairment. If a sedating antidepressant is chosen, patients may complain of daytime fatigue later in treatment.

Answered by:  
**Robin T. Reesal, MD, FRCPC**  
Adjunct Associate Professor  
Department of Psychiatry  
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Kingston, Ontario



## 9. The GI effects of *H. pylori*

Recently, I came across an article suggesting *H. pylori* was associated with B<sub>12</sub> malabsorption. Can other elements/substances be affected in the same way?

Submitted by:  
Smadar Tourjman, MD, FRCPC  
Montreal, Quebec

*Helicobacter pylori* infection may affect the absorption of various micronutrients, including iron, vitamin B<sub>12</sub> and various antioxidant compounds (such as ascorbic acid, α-tocopherol, and β-carotene). There is a hypothesis that *H. pylori* gastritis, when affecting the whole stomach, reduces gastric acidity, thereby impairing the absorption of iron (leading to the development of iron-deficiency anemia) and the absorption of antioxidant compounds. Antioxidants play an important role in reducing the formation of N-nitroso compounds and in scavenging reactive oxygen metabolites.

These alterations in the gastric oxidative balance may lead to an increased risk of gastric cancer.

Answered by:  
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Answered by:  
Jeffrey P. Baker, MD, FRCPC  
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Toronto, Ontario

### Memorable Quote

“ *How do you know  
when you're old?  
When you double your  
current age and realize  
you're not going to  
live that long.* ”

Michael J. Leyden II


## 10. Diagnosing parathyroid conditions

### ? What is the best way to diagnose parathyroid conditions?

Submitted by:  
**C.R. Gupta, MD**  
Markham, Ontario

Disorders of parathyroid function frequently manifest as abnormal calcium levels. In hypocalcemic patients, hypoparathyroidism may be suspected, especially if they have had previous neck surgery. Parathyroid hormone (PTH) levels in these cases are very low or undetectable and treatment is to give calcium and calcitriol. If the hypocalcemic patient has an elevated PTH, the most likely scenario is vitamin D deficiency. This can be confirmed with a 25-OH vitamin D measurement and treated by giving vitamin D. (Over-the-counter preparations are sufficient in most cases.)

Secondary hyperparathyroidism with hypocalcemia or normocalcemia is common in renal failure and requires calcitriol therapy.

Patients with elevated calcium due to hyperparathyroidism will have an elevated PTH level or it may be inappropriately in the normal range. A low phosphate level may be seen and 24-hour urine calcium levels are high, normal or elevated, which helps distinguish this from hypercalcemic hypocalciuria, a relatively rare and benign cause of hypercalcemia. 

Answered by:  
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