



## This month—8 answers:

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# 1.

## Advising on adult ADHD

### What medications are effective for adults with ADHD?

Question submitted by:  
Laura Chapman, MD  
Vancouver, British Columbia

The key to treating adult attention deficit hyperactivity disorder (ADHD) is in making the diagnosis.

In our practice, we do not treat for adult ADHD unless there are current ADHD symptoms and a clear childhood history of ADHD. Also, there must be significant functional impairment in multiple areas.

Before

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Before starting the stimulant for adult ADHD, the patient should be titrated to a dose that maximizes reduction of ADHD symptoms with minimal side-effects (e.g., insomnia, hypertension, weight loss).

If the patient does not respond/ tolerate a stimulant or has comorbid anxiety/mood symptoms, it may be

and antidepressants almost as effective as stimulants for adult ADHD.

Answered by:  
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## 2.

### Dealing with CRPS

#### What is the current best management for complex regional pain syndrome?

Question submitted by:  
Steve O'Brien, MD  
Charlottetown,  
Prince Edward Island

Reflex sympathetic dystrophy, or complex regional pain syndrome (CRPS), is an example of neuropathic pain—pain that is mediated by a lesion or dysfunction in the nervous system. Typically, it is precipitated by trauma and immobilization. Often, the trauma appears minor. It can be subclassified as CRPS 1 (without nerve injury) and CRPS 2 (with nerve injury).

#### Pathophysiology

It is thought that CRPS occurs as a result of a normal sympathetic response to trauma that does not shut off, leading to prolonged vasoconstriction and the continued release of proinflammatory mediators. The end result is pain, swelling, trophic changes and disuse of the affected area. Recently, however, the role of the sympathetic nervous system in CRPS has been called into question.

#### Natural history

CRPS is characterized by pain, trophic changes and autonomic dysfunction. Typically, on examination, there is evidence of allodynia, hyperalgesia and hyperpathia. The early phase of the disorder is characterized by pain that is disproportionate to the degree of trauma. There is evidence of swelling, redness and vasomotor instability, hyperhidrosis and coolness to the touch. Demineralization begins due to disuse.

Over time, redness gives way to cyanosis of the skin, fibrosis affects the joints and demineralization becomes pronounced, leading to osteoporosis.

#### Investigations

Although tests ranging from three-phase bone scans and thermography to laser Doppler fluxmetry have been used as investigative tools in making the diagnosis of CRPS, the key to diagnosis is the history and physical examination.

#### Treatment

Outcome is improved by early identification of this disorder and early treatment. Typically, treatment focuses on early physiotherapeutic intervention.

Evidence suggests that physiotherapy should be the first line of treatment for adolescent patients with CRPS.

Evidence to support specific pharmacotherapeutic treatments is limited. These interventions include the use of non-steroidal anti-inflammatory drugs, tricyclic antidepressants, anticonvulsants, steroids, alpha-2 agonists, calcium channel blockers, clonidine, capsaicin, calcitonin and opioids.

Surprisingly, the evidence for sympathetic blocks and sympathectomy is poor. There is support for spinal cord stimulation. Treatment with thalidomide and etanercept are under investigation.

Finally, the development of pain management skills is critical for patients who have to deal with this poorly understood, and often misdiagnosed, disorder.

Answered by:  
Jeff Ennis, MSW, MD, FRCP(C)  
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## 3.

## Disc replacement update

**Can you update us on lumbar and cervical disc replacement surgery for DDD in Canada? What are the outcomes so far? Is anyone doing it in Canada yet?**

Question submitted by:  
Monique Moreau, MD  
Alliston, Ontario

Spinal arthroplasty (cervical and lumbar disc replacement) has been widely used in Europe for over three decades to treat degenerative disc disease (DDD), but only recently in selected Canadian centres, including Vancouver, Calgary, London, Toronto and Montreal.

Over 90% of European patients with lumbar arthroplasty with followup of more than a decade report satisfaction and pain relief.

*Spinal arthroplasty has been widely used in Europe for over three decades.*

Answered by:  
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FRCS  
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#### Limitations of arthroplasty

- Only a very small, specific subgroup of patients with DDD may be candidates.
- The offending disc has to be the primary pain source.
- It is a complex surgery with serious potential complications.
- Arthroplasty mimicks spinal biomechanics, but does not reproduce them.
- Cost effectiveness has not yet been addressed.
- Long-term durability is not known (only 10 to 15 years for hip implant).



## 4.

### The travelling child—what do you recommend?

**What are the recommendations for a 10-month-old travelling to Pakistan? (Hepatitis A/B vaccine? Malaria prophylaxis? What doses? Any good Web sites?)**

Question submitted by:  
Shanti Rao, MD  
Windsor, Ontario

A healthy 10-month-old travelling to Pakistan must have a thorough pre-travel health assessment, as children under two years are at a higher risk for consequences of travel-related infections, such as malaria.

First, all routine childhood primary series vaccinations must be up to date, not forgetting poliomyelitis, hepatitis B vaccine, one dose of measles-mumps-rubella vaccine and three doses of pneumococcal conjugate vaccine.

Other recommended vaccinations would normally include hepatitis A and typhoid vaccines, but, since this child is too young to receive these, particular attention needs to be given to food and water precautions.

Referral to a travel health specialist would be recommended for more complex vaccine decisions, including rabies, Japanese encephalitis and tuberculosis. As for malaria, preventative use of diethyl-N-toluamide (DEET) and insecticide-treated bednets are highly recommended in conjunction with chemoprophylaxis with

mefloquine.

An excellent travel health Web site to consult is the Public Health Agency of Canada Travel Medicine Program ([www.TravelHealth.gc.ca](http://www.TravelHealth.gc.ca)).

Answered by:

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***Children under two years are at a higher risk for consequences of travel-related infections.***

## 5.

## Looking for Lyme disease

**Where is the spirochete, *Borrelia burgdorferi*, that causes Lyme disease endemic in Canada?**

Question submitted by:  
John Crawford, MD  
Victoria, British Columbia

In Canada, Lyme disease endemicity generally corresponds with those areas where the tick vector has become established and can complete its lifecycle and over-winter for successive years.

In Ontario, the black-legged ticks (*Ixodes scapularis*) are endemic at only six localities, namely Point Pelee National Park, Rondeau Provincial Park, Long Point, Turkey Point, Presquile Provincial Park and Long Point in Prince Edward County.

In British Columbia, there are several regions where endemic Lyme disease occurs. In these regions, the usual vector is the western black-legged tick (*Ixodes pacificus*). Over the last several years, black-legged ticks (deer ticks or *Ixodes scapularis*) have been shown to over-winter in a small area in Nova Scotia, near the town of Lunenburg.

To date, we have documented three cases of Lyme disease that appear to have been acquired in that area.

Black-legged ticks are occasionally found in other areas of the country, where their appearance usually reflects their sporadic importation on the backs of migratory birds. Such occurrences are unlikely to contribute to the number of cases of Lyme disease and rare cases that might arise would hardly be considered endemic.

Answered by:  
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# 6.

## Is SARS making a comeback?

**What are the odds of another outbreak of SARS or a similar virus? What should the family practice clinic do for protection on an ongoing basis?**

Question submitted by:  
Barbara Lansing, MD  
Calgary, Alberta

It is impossible to give an accurate prediction about if, when and where a novel respiratory might appear. Even with pandemic influenza, all we know for certain is another pandemic will occur. When it will occur and how severe it will be cannot be accurately predicted.

Ongoing precautions for respiratory infections in a family practice or outpatient setting should continue to focus on basic infection control:

- good handwashing,
- trying to keep coughing patients from close contact with other patients and
- good environmental cleaning.

***With pandemic influenza, all we know for certain is another pandemic will occur.***

To be effective, as well as not unnecessarily burdensome, screening and additional precautions would need to be based on the epidemiology of any novel virus. Therefore, such additional steps are not recommended prior to the emergence of a novel virus.

In the event of the emergence of a novel virus, communication regarding epidemiology, screening and infection control would come from local public health units.

Ease and speed of such communications are essential, but experience shows that the link between public health and family physicians is often less than optimum (fax and regular mail, rather than electronic communication, are still the norm). Therefore, in addition to enhancing basic infection control steps, ensuring a good communication link with Public Health should be part of preparing for the potential emergence of a novel respiratory virus.

Answered by:  
Robert Strang, MD, MHSc, FRCPC  
Medical Officer of Health  
Dartmouth, Nova Scotia

## 7.

## Understanding umbilical hernias

**When does an umbilical hernia in an infant require surgery? Is there any role for compression of the hernia to prevent enlargement?**

Question submitted by:  
Rameeta Lad, MD  
Burlington, Ontario

Umbilical hernias (UH) are a relatively common finding in the pediatric population. Children of African origin, low birth weight or Down's syndrome have a higher prevalence.

A UH occurs because the umbilical ring has not fully closed. The umbilical ring starts to close in the late gestational period and continues to close until mid-childhood in most children. Thus, in 95% of cases, the UH will spontaneously close by school age (five years old), without any need for surgical intervention.

Absolute indications for early surgical repair before five years old are hernia incarceration or strangulation, which occurs exceptionally.

Compression of the hernia has no benefit in preventing enlargement of the fascial defect and may, in fact, increase the risk of complications.

Answered by:  
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***In 95% of cases, the UH will spontaneously close by five years old.***



## 8.

### Subclinical hyperthyroidism help

#### How do you investigate and manage subclinical hyperthyroidism (*i.e.*, low TSH, normal free T4)?

Question submitted by:  
Christiane Proulx, MD  
Port Colborne, Ontario

A low thyroid-stimulating hormone (TSH) with a normal free T4 level in an asymptomatic patient is suggestive of subclinical hyperthyroidism. This is once T3 toxicosis is ruled out by a normal T3 level. Other considerations include pituitary/hypothalamic disease, pregnancy and the use of high-dose glucocorticoids and dopamine.

The most common causes of subclinical hyperthyroidism include exogenous levothyroxine therapy, Graves' disease, thyroiditis, toxic nodule and toxic multinodular goiter.

In addition to a history and focused physical examination, additional investigations include measurement of thyroid antibodies and a radioactive iodine uptake and scan, which will help find the specific cause of the hyperthyroidism.

There is evidence that subclinical hyperthyroidism is associated with increased incidence of tachycardia, atrial fibrillation, impaired diastolic relaxation, low bone mass and increase in fractures.

Although intervention studies are sparse, most thyroidologists would treat patients for hyperthyroidism if the TSH remains persistently suppressed (at least > 6 months) below 0.1 IU/L; most would not treat if the TSH is between 0.1 IU/L and 0.5 IU/L as the risk of the above complications and the progression to overt hyperthyroidism is not high enough to warrant the side-effects associated with antithyroid agents.

*cme*

Answered by:  
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