



*Answers to your questions
from our medical experts*

1. Treatment of Warts

? When, if ever, would you advise referral of a patient to a general surgeon for treatment of warts?

Submitted by: **Ronan O'Shea, MD**, Clarenville, Newfoundland

As warts due to HPV normally resolve spontaneously in an immunocompetent patient, surgery which would produce permanent scarring is best avoided.

My indication to refer warts to a general surgeon would be if the verrucae/condylomata impinge on the anal canal. This would indicate that there is a high likelihood of intra-anal condylomata which a dermatologist could not treat and if only the cutaneous condylomata are treated, the chance of recurrence is great. The patient needs to undergo anoscopy and if warts are found intra-anally, would require a destructive modality and this is best done by a surgeon.

In the situation here, if there are massive perianal condylomata causing obstruction and hygiene problems, a surgical referral could be considered to debulk the warts. The major risk is scarring and CO₂ laser is likely preferable to surgical treatment.

Similarly, if warts are seen around the urethral meatus, the patient needs a urologic referral for cystoscopy. Intravaginal condylomata would prompt a referral to a gynecologist for possible laser therapy as well as assessment for cervical intraepithelial neoplasia.

Answered by: **Dr. Richard Haber**

2. Wolff-Parkinson White Syndrome

? Please explain Wolff-Parkinson White (WPW) syndrome.

Submitted by: **Terry Carscadden, MD**, Lively, Ontario

WPW syndrome is a condition in which there is rapid activation (or "pre-excitation") of the cardiac pumping chambers (both left and right ventricles) through an abnormal accessory electrical pathway in addition to the usual pathways through the atrioventricular node (AV node). This pathway, however, is special in WPW because the electrical activity conducts from atria to ventricle in normal sinus rhythm, when the patient is not tachycardic and is at rest. Most accessory pathways are not visible on the 12-lead surface ECG when the patient is at rest. In WPW, the patient has a "delta" wave that can be seen on the resting 12-lead ECG. In addition, the term WPW syndrome generally refers to

patients who have the "delta" wave in addition to symptoms of arrhythmia. The concern in WPW syndrome is when the patient suffers from atrial fibrillation and the rapid "fibrillatory rate" is transmitted via the fast accessory pathway into the ventricles potentially causing ventricular fibrillation and sudden death.

In WPW syndrome, many of these rapid fibrillatory waves bypass the AV node which is usually a filter and helps slow conduction to the ventricle in the context of atrial fibrillation.

Answered by: **Dr. Richard Sheppard**

3. Swimming After a Ruptured Eardrum



How soon after should we let a child with a ruptured eardrum swim or dive?

Submitted by: [Anonymous](#)

A ruptured tympanic membrane (eardrum) may result from a number of etiologies, including both infection and trauma. Infection may result from a number of pathogens, commonly starting as an upper respiratory tract infection (viral) and resulting in a secondary bacterial infection within the middle ear space. As the pressure builds up behind the tympanic membrane, the patient experiences otalgia and possibly dizziness. When the pressure is excessive the tympanic membrane ruptures often relieving the symptoms and resulting in otorrhea. Trauma may be iatrogenic, blunt (blow to the head) or penetrating (commonly cotton tips). Iatrogenic causes include myringotomies and ventilation tubes (while in position or after they have fallen out).

In most cases, perforated tympanic membranes heal spontaneously. There are some cases that require surgical intervention to

close them, if they are problematic (recurrent infections). While the membrane is ruptured, care should be taken to keep the ear dry (to minimize the risk of infection). Situations that increase the risk of water crossing the perforation, into the middle ear space, include diving (increased barometric pressure) and hair washing (soap lowers the surface tension of the water). Water in the middle ear space can act as a nidus for infection. Children swimming with perforations should use appropriate ear moulds to limit water entry into the external auditory canal and should be encouraged not to dive until the perforation has healed.

Answered by: [Dr. Jonathan Irish](#); and [Dr. Emma Barker](#)

A ruptured tympanic membrane (eardrum) may result from a number of etiologies, including both infection and trauma.

4. Screening for Osteoporosis in Post-Menopausal Women



Should all post-menopausal women be screened for osteoporosis (OP)? If so, when and how?

Submitted by: **Gerry Bally, MD**, Ottawa, Ontario

Because post-menopausal women are at significant risk of developing OP, there has been special attention given to identify those who need screening.

After identifying the major and the minor risks factors for developing OP (Table 1), the Osteoporosis Society of Canada (OSC) recommends that all post-menopausal women > 50-years-old should be assessed for the presence of these risks. Those who have one major risk factor or two minor risk factors, should have a BMD test.

Central (hip and spine) measurements by dual energy X-ray absorptiometry (DXA) should be used for screening and follow-up as they remain the most accurate measurements of BMD. Depending on the clinical situation

DXA scan may be repeated in one to three years. Because the presence of vertebral fractures increases the risk of a second vertebral fracture and fragility fractures, OSC also recommends that post-menopausal women with historical height loss > 6 cm or height loss > 2 cm within three years should be sent for spine radiographs to rule out vertebral fractures.

Resource

1. Brown JP, Josse RG: Scientific Advisory Council of the Osteoporosis Society of Canada: 2002 Clinical Practice Guidelines For The Diagnosis And Management Of Osteoporosis In Canada. CMAJ 2002; 167(10 Suppl):S1-34.

Answered by: **Dr. Michael Starr; and Dr. Ahmad Al-Enizi**

Table 1

Risk factors that identify who should be assessed for osteoporosis

Major risk factors	Minor risk factors
Age 65 years	Rheumatoid arthritis
Vertebral compression fracture	Past history of clinical hyperthyroidism
Fragility fracture after age 40	Chronic anticonvulsant therapy
Family history of osteoporotic fracture	Low dietary calcium intake
Systemic glucocorticoid therapy 3 months	Smoker
Malabsorption syndrome	Excessive alcohol intake
Primary hyperparathyroidism	Excessive caffeine intake
Propensity to fall	Weight 57 kg
Osteopenia apparent on x-ray film	Weight loss 10% of weight at age 25
Hypogonadism	Chronic heparin therapy
Early menopause (before age 45)	

5. Testing for Celiac Disease



What test should be done for celiac disease and who should we be testing?

Submitted by: [Cathy Frederick, MD](#), London, Ontario

The first test for celiac disease is anti-tissue transglutaminase, followed by small bowel biopsy.

Those who should be tested include:

- Patients with typical symptoms like chronic diarrhea, malabsorption, weight loss and abdominal distension
- Patients with unexplained persistent elevation in serum aminotransferases, short stature, delayed puberty, iron-deficiency anemia, recurrent fetal loss and infertility
- Symptomatic individuals at high risk for celiac disease including patients with Type 1 diabetes mellitus or other autoimmune diseases, first- and second-degree relatives of individuals with celiac disease, patients with Turner, Down, or Williams syndromes

Answered by: [Dr. Robert J. Bailey](#); and [Dr. Akram Aljahdali](#)

6.

Atelectasis and Post-Operative Fever



Is there any proof that atelectasis can cause post-operative fever?

Submitted by: [Steve Sullivan, MD](#), Victoria, British Columbia

Atelectasis is a common post-operative pulmonary complication. Risk factors include type (thoracic and upper abdominal) and duration of surgery and presence of underlying lung disease. Post-operative atelectasis (POA) is associated with a number of negative consequences including reduced lung function and impaired gas exchange (e.g., hypoxemia) and possibly increased risk for post-operative pneumonia. However, there is no good evidence that atelectasis is associated with post-operative fever. Pre-operative strategies to minimize POA

include optimizing lung function and smoking cessation; post-operative strategies include providing adequate pain control, early mobilization of the patient and chest physiotherapy techniques (e.g., incentive spirometry).

Answered by: [Dr. Paul Hernandez](#)

7. Oral Allergy Syndrome



Does immunotherapy help oral allergy syndrome (OAS)?

Submitted by: **Michael Keating, MD**, Saint John, New Brunswick

This is an interesting question, as the OAS (or food pollinosis syndrome) has only recently been described and antigenic relationships between various fresh fruit and vegetables to grass, tree and weed pollens continue to be elucidated. Given the effectiveness of immunotherapy in the treatment of grass, tree and weed pollen-associated allergic rhinitis, it would seem plausible that oral allergy symptoms related to, for example, fresh apple (due to associated tree pollen allergy), may respond to effective tree pollen immunotherapy.

A case report in a patient with pollen allergy and OAS revealed marked improved tolerability to fresh fruit in response to pollen immunotherapy in 1995.¹ In 1998, Asero showed immunotherapy with birch pollen extracts effectively reduces clinical apple sensitivity and skin reactivity in most cases after only one year of treatment.² A similar study in 2004 looking at apple and hazelnut pollinosis syndrome with associated tree pollen allergy showed only a small improvement of apple and hazelnut tolerability following a year of tree pollen immunotherapy.³ Recently, use of sublingual birch pollen immunotherapy, although successful in reducing upper airway symptoms, did not alter the immune response

to pollen-related food allergen (apple), which may explain why pollen-associated food allergy may not be ameliorated by pollen immunotherapy even if respiratory symptoms significantly improve.⁴

In summary then, there is some evidence for improvement in OAS symptoms following subcutaneous immunotherapy, although more work is needed. Thus far, sublingual pollen immunotherapy has not shown efficacy in OAS, although again, this needs to be corroborated with more study.

References

1. Kelso, J: Oral Allergy Syndrome Successfully Treated With Pollen Immunotherapy. *Annals Of Allergy, Asthma, and Immunology* Presented at American College of Allergy and Immunology. Annual meeting, 1995.
2. Asero, R: Effects Of Birch Pollen-Specific Immunotherapy On Apple Allergy In Birch Pollen-Hypersensitive Patients. *Clin Exp Allergy* 1998; 28(11):1368-73.
3. Bucher X, Pichler WJ, Dahinden CA, et al: Effect Of Tree Pollen Specific, Subcutaneous Immunotherapy On The Oral Allergy Syndrome To Apple And Hazelnut. *Allergy* 2004; 59(12):1272-6.
4. Kinacian T, Jahn-Schmid B, Radakovics A, et al: Successful Sublingual Immunotherapy With Birch Pollen Has Limited Effects On Concomitant Food Allergy To Apple And The Immune Response To The Bet v 1 Homolog Mal d 1. *J Allergy Clin Immunol* 2007; 119(4):937-43.

Answered by: **Dr. Tom Gerstner**

8. Lactose Intolerance vs. Milk Protein Allergy in Infants



How can we distinguish between lactose intolerance and a true milk protein allergy in an infant with milk-induced diarrhea?

Submitted by: **Anonymous**

Despite the urban myth, infants born with lactose intolerance is extremely rare. There can be transient dietary lactose intolerance brought on by many conditions that cause inflammation of the small intestine such as viral gastroenteritis, celiac disease for those ingesting gluten in the diet and genetically susceptibility, parasite infections of the small intestine (*e.g.*, *giardia*) and associated with cow milk protein enterocolitis. For the latter there may be some improvement transiently with the acidity of the stools and looseness but the underlying harm is continuing and in the long term of no benefit. Cow milk

protein-induced enterocolitis is common in infants (between 2.5% and 7.5%), can be diagnosed by trial of hypoallergenic formulas (extensively hydrolyzed casein formulas, amino acid formulas), corroboration may be from endoscopy and biopsy but usually not needed.

Answered by: **Dr. Richmond Sy; and Dr. David Mack**

9. Treating Plantar Warts



Is liquid nitrogen more effective than topical medications, such as podofilin, for plantar warts?

Submitted by: **Anonymous**

The major obstacle in using topical medications for plantar warts is the lack of penetration through the hyperkeratotic surface of the warts. For this reason, topical treatment of plantar warts is often ineffective. In my experience, liquid nitrogen when applied properly is much more effective as it penetrates deeper. However, even with liquid nitrogen, it is often necessary to have multiple treatments to clear plantar warts. Podofilin which contains 25% podophyllin is not an effective treatment for plantar warts in my opinion and is best used in

treating condylomata acuminata in which it has much better penetration. Topical salicylic acid is often a useful adjunctive agent to use in combination with liquid nitrogen when treating plantar warts.

Answered by: **Dr. Richard Haber**

10. Diagnosing MI in the Post-Operative Period



What is the best way to diagnose MI in the post-operative period?

Submitted by: **Azad S. Guron, MD**, Stephenville, Newfoundland

The diagnosis of MI is traditionally based on three factors: ischemic chest pain, biomarker elevation (troponin or creatine kinase myocardial isoenzyme) and ECG changes. In the post-operative setting, chest pain will frequently be masked by analgesics. Dyspnea or an arrhythmia may be the only clinical sign. MI post-operatively may not be related to plaque rupture and thrombosis in a coronary artery but secondary to supply demand imbalance. The post-operative state may be associated with tachycardia, hypertension or hypotension, anemia and hypoxemia any of which may result in MI in the absence of flow limiting coronary artery stenoses.

The new definition for MI requires a rise in troponin with at least one value above the 99th percentile of the upper reference limit for the laboratory as well as at least one of the following:

- Ischemic chest pain
- New ECG changes of ischemia consisting of either new ST-T changes or new left bundle branch block (LBBB)
- New Q waves
- New wall motion abnormality on an imaging test

Troponin is a very sensitive marker for myocardial necrosis but is non-specific for MI. Troponin may be elevated in the setting of pulmonary embolism, sepsis, renal insufficiency or atrial fibrillation with rapid ventricular rate in the post-operative period. Some of these conditions may also result in non-specific ST

changes on the ECG. The diagnosis of MI requires additional evidence of primary cardiac involvement either in the form of new ECG changes (horizontal or downsloping ST segment depression > 0.5 mm, ST segment elevation > 1 mm or inverted T waves > 1mm in leads where the QRS is predominantly positive) or a new wall motion abnormality.

Following coronary artery bypass surgery, there is often some elevation in troponin. Diagnosis of infarction in this setting requires a troponin rise greater than five times the upper reference limit for the laboratory plus either new LBBB or new pathologic Q waves, new wall motion abnormality on an imaging test or angiography confirmed graft occlusion or new native coronary artery occlusion.

The bottom line is that a troponin rise by itself is not sufficient for the diagnosis of MI. Look carefully at the ECG for any new repolarization changes, especially in the post-operative period when the patient is sedated and may not complain of any chest discomfort.

Resource

1. Thygesen K, Alpert JS, White HD; Joint ESC/ACCF/AHA/WHF Task Force for the Redefinition of Myocardial Infarction: Universal Definition Of Myocardial Infarction. *J Am Coll Cardiol* 2007; 50(22):2173-95.

Answered by: **Dr. Bibiana Cujec**

11. Male Pattern Baldness



Are there any truly effective treatments for male pattern baldness?

Submitted by: [Colin Leech-Porter, MD](#), Vancouver, British Columbia

Male pattern hair loss, also known as androgenetic alopecia, is a non-scarring alopecia so common it is considered a secondary sexual characteristic. By 70-years-of-age, nearly 80% of men experience this type of alopecia. Although more common in the mid to late 20s, some young men in their teens and early 20s are also affected.

Affected males have hair follicles that are particularly sensitive to dihydrotestosterone (DHT). Testosterone is converted to DHT in certain tissues including the scalp by type II 5- α -reductase.

Early treatment can prevent further hair loss, may encourage regrowth and improve patients' quality of life.

Minoxidil was initially developed to treat hypertension as a potent vasodilator. It was subsequently found to promote hair growth. Topical minoxidil (5% better than 2% solutions) is applied (approximately 1 ml b.i.d.) indefinitely, as stopping or reducing the dose allows for continued alopecia. One-third of patients may have good regrowth. It is thought to stimulate follicular vascularity and proliferation. There is minimal systemic absorption and has been used safely in large trials. Drawbacks include local irritation and

hypertrichosis if it inadvertently contacts areas not on the scalp.

Oral finasteride (1 mg q.d.) is an option for patients > 18-years-old and may be more effective than topical minoxidil. It inhibits type II 5- α -reductase, thus decreasing scalp and serum levels of DHT. It increases hair growth or halts hair loss in 90% of men. As with minoxidil, at least six months is required to gauge effectiveness. Two per cent can have sexual side-effects such as decreased libido. Nearly all men will have their PSA drop by 50% while taking 1 mg finasteride; their PSA should be doubled to obtain the "corrected" value.

Interestingly, for yet unknown reasons, ketoconazole 2% shampoo has been shown to be as effective as minoxidil 2% scalp solution. If these are not effective, or if patients are interested, surgical options exist (e.g., hair transplantation).

Answered by: [Dr. John Kraft](#); and [Dr. Charles Lynde](#)

12. Elevation of Troponin Level



Does CPR increase serum troponin level significantly even in patients in whom the cause of cardiac arrest was not MI?

Submitted by: [Azad S. Guron, MD](#), Stephenville, Newfoundland

Troponin is an exquisitely sensitive marker of myocardial necrosis. Troponin is elevated in many settings unrelated to acute coronary syndrome. These include pulmonary embolism, stroke and subarachnoid hemorrhage, sepsis, myocarditis, takotsubo (stress-induced) cardiomyopathy, myocardial contusion, arrhythmias, cardioversions and chest compressions during CPR. The elevation in troponin in these settings may be secondary to supply-demand ischemia (hypotension, high levels of catecholamines), direct trauma to the heart (CPR, defibrillation) or cytokine-mediated myocardial

necrosis from a systemic inflammatory condition. Troponin elevation may be quite high (5 ug/L to 10 ug/L) following cardiac resuscitation even in the absence of acute MI. Of course, coronary artery disease is the most common cause of cardiac arrest and most survivors will require coronary angiography unless there is compelling evidence of another cause.

Answered by: [Dr. Bibiana Cujec](#)

13. Nicotine Effects



Does nicotine help to reduce anxiety?

Submitted by: [Atul Mehra, MD](#), Coquitlam, British Columbia

Nicotine improves performance on long, fatiguing, boring tasks. It decreases anger and stabilizes mood. It decreases hunger and food intake and increases metabolic rate. When a smoker experiences these effects, it is often not clear how much of them result from nicotine combating withdrawal symptoms and bringing the smoker back to his normal state

and how much is actual improvement above the norm. Some of nicotine's effects (e.g., performance enhancement) appear to occur independent of withdrawal relief.

Resource

1. Kaplan & Sadock's Comprehensive Textbook of Psychiatry. Eighth Edition, Volume one, Chapter 11.9.

Answered by: [Dr. Hany Bissada](#)

14. Sore Throats



How can you tell if a sore throat is strep?

Submitted by: **Anonymous**

Sore throats (pharyngitis) can be caused by either viruses or bacteria. Less than one-third of cases are bacterial, therefore less than one-third of cases will respond to antibiotics. Common viruses include Epstein-Barr virus, adenovirus and influenza. Strep throat is caused by *Streptococcus* bacterium. This is generally a more severe sore throat. It may result in dysphagia, odynophagia and dysphonia. It can affect both children and adults. The patient may have a raised temperature.

On examination, the patient may have cervical lymphadenopathy. On examination of their oropharynx, the tonsils are often covered with a whitish layer of pus. Children may also have an accompanying rash; a strep throat and rash is commonly called scarlet fever. Diagnosis is by both history and examination. In addition, specific tests including a rapid strep test and bacterial culture can be performed. A rapid strep test just identifies group A streptococci, but it only takes a few minutes to get the results back. Bacterial culture takes two to three days, but is more sensitive. Therefore, if a patient has a negative

rapid strep test, they should be sent for culture as 5% of patients will be positive on culture. Both tests require the back of the throat and tonsillar area to be swabbed. A strep throat needs treating as it may lead to rheumatic fever or glomerulonephritis. However, both these conditions are rare today due to the availability of antibiotics.

Answered by: **Dr. Jonathan Irish; and Dr. Emma Barker**

15. Moderate and Severe Mitral Stenosis



What is the medical treatment for moderate and severe mitral stenosis?

Submitted by: [Anonymous](#)

Moderate and severe mitral stenosis (MS) is defined by echocardiography as a mitral valve area of 1.0 cm² to 1.5 cm² (moderate MS) and < 1.0 cm² (severe MS). Symptomatic MS patients generally present with dyspnea on exertion and fatigue while some will develop acute pulmonary edema. Sometimes symptoms are triggered by the onset of rapid atrial fibrillation and attendant reduced diastolic left ventricular (LV) filling time as well as loss of left atrial contraction and contribution to LV filling. Medical treatment consists of loop diuretics to relieve pulmonary congestion as

well as rate control agents (β -blocker, non-dihydropyridine calcium channel blocker, digoxin) to control heart rate if atrial fibrillation is present and anticoagulation to an INR between 2.0 and 3.0. Definitive treatment options of MS include percutaneous balloon valvuloplasty (in the absence of significant associated mitral regurgitation) or mitral valve replacement surgery.

Answered by: [Dr. George Honos](#)

16. Infectious Mononucleosis During Pregnancy



Is there any risk to the fetus if the mother gets infectious mononucleosis in the first trimester?

Submitted by: [Ilona Grymonpre, MD](#), Nelson, British Columbia

Mononucleosis is caused by the Epstein-Barr virus, one of the most common viruses in the world. The presence of mononucleosis in pregnancy is not associated with any fetal complications such as birth defects, miscarriage, pre-term labour or intrauterine growth restriction. However, close medical attention

should be given to manage fever, decreased appetite and dehydration.

Answered by: [Dr. Victoria Davis](#)

17. Low-Dose Metformin to Prevent Type 2 Diabetes

? Is there a benefit in taking low-dose metformin to prevent the progression of Type 2 diabetes for an impaired glucose tolerance patient?

Submitted by: **Paul Wild, MD**, Sault Ste. Marie, Ontario

The best study utilizing metformin for the prevention of Type 2 diabetes for individuals with impaired glucose tolerance is the Diabetes Prevention Study (DPS). Metformin was dosed at 850 mg t.i.d. for an average of 2.8 years.

Diabetes was prevented by 31% except in the older age group and in the less obese subjects.



Answered by: **Dr. Vincent Woo**



REL PAX (eletriptan hydrobromide) is indicated for the acute treatment of migraine with or without aura in adults. RELPAX is not intended for the prophylactic therapy of migraine or for use in the management of hemiplegic, ophthalmoplegic or basilar migraine. Safety and effectiveness of RELPAX have not been established for cluster headaches, which is present in an older, predominately male population.

For complete prescribing information, please refer to the Product Monograph. The Product Monograph is available upon request from Pfizer Canada Inc., 17300 Trans-Canada Highway, Kirkland, Quebec H9J 2M5.

Reference: RELPAX Product Monograph, Pfizer Canada Inc., March 2006.

P **REL PAX**[®] **40 mg**
eletriptan HBr

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