



# CONSULTANT'S CORNER

Practical Answers To Your Everyday Questions

## What the new DPP-4 inhibitors are all about

### 1.

#### What are the new DPP-4 inhibitors all about?

Question submitted by:  
**Dr. Rex Verschirren**  
Scarborough, Ontario

The dipeptidyl peptidase-4 (DPP-4) inhibitors are a relatively new class of hypoglycemic agents. The FDA approved sitagliptin in the US a few months ago, whereas a number of other agents are currently in clinical trials. These agents inhibit the enzyme DPP-4, which catabolizes glucagon-like peptide-1 (GLP-1). GLP-1 is a hormone secreted by the gut and:

- causes glucose dependent insulin release,
- reduces glucagon secretion and
- inhibits gastric emptying.

The DPP-4 inhibitors therefore increase the half-life of the endogenous GLP-1 and reduce

blood glucose levels without causing severe hypoglycemia or weight gain. They appear to be effective oral agents and their lack of significant side effects makes them an attractive treatment option.

Answered by:

**Dr. Hasnain Khandwala**

Not for Sale or Copyright  
Unauthorised use prohibited. Authorised users can download, display, view and print a single copy for personal use

## The significance of a Schmorl's node

### 2.

#### What is the significance of a Schmorl's node?

Question submitted by:  
**Dr. Adam Gavsie**  
Montreal, Quebec

Schmorl's nodes are one of the most common incidental findings on radiographs of the spine. They are attributed to herniation of the nucleus pulposus of the disc through the vertebral end-plate into the vertebral body. A weakened area of cartilage is subjected to the expansion pressure of the nucleus pulposus, with greatest pressure occurring in younger individuals. Schmorl's nodes may be present in up to 58% of normal individuals.

Although Schmorl's nodes are mostly asymptomatic, pain may be present and is treated with simple analgesics or non-steroidal anti-inflammatory drugs. The reason for pain in some patients may be due to the presence of inflammation and oedema in the vertebral bone marrow.

Answered by:

**Dr. Mary-Ann Fitzcharles**



## Statins and the avoidance of grapefruit

### 3.

#### Does statin use absolutely preclude use of grapefruit juice? If so, why?

Question submitted by:  
**Dr. Richard Genge**  
*Baddeck, Nova Scotia*

Certain components in grapefruit called furanocoumarins can irreversibly inhibit cytochrome P450 (3A4) isoenzymes in the intestinal wall. This effect can last up to 72 hours after grapefruit or grapefruit juice ingestion. The statins that depend on the P450 pathway for drug metabolism include lovastatin, simvastatin and atorvastatin. Ingestions of grapefruit or grapefruit juice can lead to increased blood levels of these statins and their metabolites. The risk of adverse effects can be increased with these statins, such as muscle damage or rhabdomyolysis can be increased. Therefore, patients

who are prescribed with these statins should avoid ingesting grapefruit and grapefruit juice. However, there is no apparent significant interaction with the other statins, such as:

- pravastatin,
- fluvastatin and
- rosuvastatin.

In the hospital where I work, both grapefruit or grapefruit juice are banned from the patient menu because of the potential interactions with many medications.

Answered by:  
**Dr. Chi-Ming Chow**

## Evidence of mood alterations with isotretinoin

### 4.

#### What is the evidence that there are mood alterations with isotretinoin?

Question submitted by:  
**Dr. Clyde**  
*Markham, Ontario*

The possible link between isotretinoin and depression has become a hot topic both in the press and with eager litigation attorneys. While large cohort studies have not established a definite association<sup>1</sup> there are increasing anecdotal cases reported of manic behaviour, depression and suicide with isotretinoin use. Since the treatment group is largely teenaged and the rates of these psychic changes is so common, good data is difficult to establish. However, some biologic information such as the PET scan demonstration of decreased frontal lobe activity with

isotretinoin use is tantalizing. Currently, prescribing physicians should be aware of the possibility of an association and clearly screen prospective patients for psychiatric risk and follow them regularly during the course of therapy for such problems.

#### References

1. Jick SS, Kremers HM, Vasilakism Scaramozza C: Isotretinoin use and risk of depression: Psychotic symptoms, suicide and attempted suicide. *Arch Dermatol* 2000; 136(10):1231-6.
2. Bremner JD, Fani N, Ashraf A, et al: Functional brain imaging alterations in acne patients treated with isotretinoin. *Am J Psychiatry* 2005; 162(5):983-91.

Answered by:  
**Dr. Scott Murray**

## Reflux in infants and toddlers

### 5.

#### When would one treat reflux in a patient under two-years-of-age? Is gripe water of any use?

Question submitted by:  
**Dr. J. V. Patidar**  
Edmonton, Alberta

Reflux in infants and toddlers is usually first treated with thickened feeds and positioning. This often provides symptomatic relief, but not always. In this case, the current next step is often to use an anti-acid agent, such as ranitidine or a proton pump inhibitor such as omeprazole. My personal preference is to use ranitidine, as there is little strong evidence supporting one or the other and ranitidine has a longer track record of use in

infants and toddlers (as well as being much cheaper). Gripe water is of no proven value in the treatment of reflux.

Answered by:

**Dr. Michael Rieder**

## HPV vaccine for men?

### 6.

#### Human papilloma virus immunization indication is currently only for females in Canada. Why is it not also indicated for men as well with a higher risk of HPV?

Question submitted by:  
**Dr. E. Faheim**  
Mississauga, Ontario

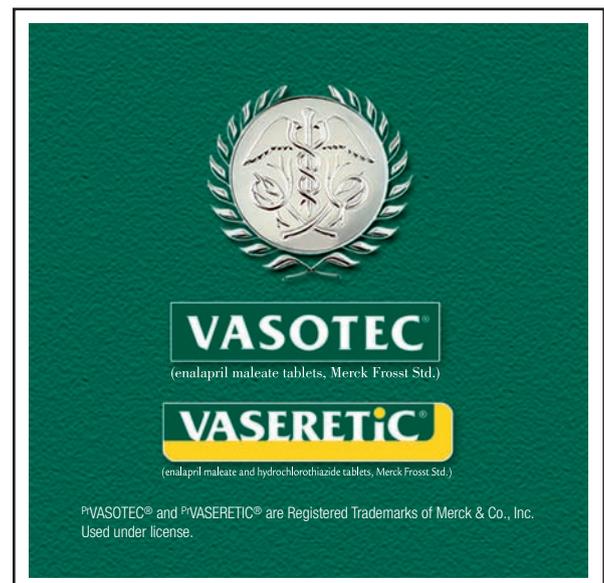
The bottom line is a cost-benefit consideration. There is no reason to believe that the vaccine is less effective or behaves differently in men, compared to women, although there is very little clinical data in men. The major reason for vaccination is to prevent cervical cancer, although it may theoretically also prevent some cancers in men as well, such as penile cancer. Though vaccination of men and women is likely to prevent more cases than vaccinating women alone, the estimated marginal costs of vaccinating men are very high. Therefore, the trials

which were conducted for regulatory approval included only women. Without any other data, the vaccine could not be given an indication for men.

Answered by:

**Dr. Michael Libman**

→  
Continued on p. 30





## Treating viral laryngitis

# 7.

**What is the most commonly prescribed treatment for a child (at a walk-in clinic) who presents with mild-to-moderate laryngitis (with stridor)?**

Question submitted by:  
**Dr. Diane Girovx**  
Montreal, Quebec

The therapy for mild-to-moderate croup, that is best studied, is the use of a single dose of dexamethasone. The use of steroids for croup has been shown to reduce the severity and the duration of the disease and reduce the need for hospitalization. There are six studies that support this and the doses used range from 0.6 mg/kg to 0.15 mg/kg. I take the middle ground and use 0.3 mg/kg of dexamethasone, along with instructions about use of antipyretics, hydration and humidity.

Answered by:  
**Dr. Michael Rieder**

## Infants and the flu shot

# 8.

**How do we reconcile the dilemma that:**

- 1. The flushot is recommended as young as six-months-of-age**
- 2. We should not introduce eggs into a baby's diet until they are close to one-year**
- 3. The flushot is contracted in a severe egg allergy?**

**In other words, how can we give a six-month-old baby a flu shot before we even know if they are allergic to eggs?**

Question submitted by:  
**Dr. Norm Blustein**  
Richmond Hill, Ontario

At least one and often several exposures are required in order to cause allergic sensitization. Only after sensitization leads to specific IgE production can subsequent exposures potentially cause allergic reactions. Allergic reactions will not occur on the very first exposure, although sensitizing exposures can be occult or unrecognized. Because most six-month-old children will not have been exposed to egg, they will not have had an opportunity to develop sensitization to egg protein and hence, will not be at risk of an allergic reaction with their first exposure to influenza vaccine. In fact, a number of studies have addressed this very question and have confirmed the safety of the initial influenza vaccine at six-months-of-age. The American Advisory Committee

on Immunization Practices reviewed results of the Vaccine Adverse Event Reporting System (a joint program of the FDA and Centers for Disease Control and Prevention) in children under two-years-of-age receiving trivalent influenza vaccine (TIV). Between 1990 and 2003, only 166 reactions were reported. Of these, 35% had a fever, 25% had an unspecified or urticarial rash, 17% had a seizure and 17% had injection site reactions. In a recent 2006 study, 13,383 patients between the ages of six months to 23 months were immunized with TIV. The authors found no statistically or significantly elevated hazard ratios for the first TIV dose.

Answered by:  
**Dr. Peter Vadas**

## Excess earwax

# 9.

**A patient complains of excess earwax. She cleans her ears with cotton swabs every day after showering. What advice should be given?**

Question submitted by:  
**Dr. George Wilson**  
Richmondhill, Ontario

Cerumen impaction affects 2% to 6% of the population in North America. The external ear canal epithelium is designed to exfoliate in a circular fashion, heading away from the tympanic membrane. Hence, the ear is truly designed to clear itself of earwax and debris on its own. Any trauma or physical disruption of the contents by using a cotton-tipped applicator or any other foreign body can interfere with this normal cleansing process and causes wax accumulation.

If there is significant wax, the patient should be asked to apply two drops of mineral oil to the ear canal once or twice a day for a week to soften the wax. If the wax does not fall out on its own, it should be removed by a physician, either with a syringe and warm water (close to body temperature) or with curette or suction under microscopy. If there is any

question that the tympanic membrane may be perforated or scarred, the use of irrigation with water is contraindicated. Instillation of hydrogen peroxide causes hardening of the cerumen and may cause bleeding during the cleaning process. The use of commercial wax softeners is also discouraged as it may produce an allergic reaction. Ear candling (insertion of a burning candle or a cone of wax-soaked linen or cotton into the affected ear) is not only an ineffective way to remove impacted cerumen, it can actually damage the ear. If pain is associated with wax impaction, the patient should seek a medical opinion.

Answered by:  
**Dr. Valerie Brousseau and**  
**Dr. Ted Tewfik**

## Immunizing children travelling to Mexico

# 10.

**Should children be immunized for Hepatitis A when travelling to Mexico, etc. If so, at what age would you start? Would you use Hepatitis A and B immunizations?**

Question submitted by:  
**Dr. Dennis Ghibish**  
St. Albert, Alberta

It is a good idea to have children immunized against Hepatitis A and Hepatitis B, whether they travel or not, but certainly immunization against Hepatitis A is prudent for travel to higher-risk areas. The 2007 recommendations are for Hepatitis A vaccination for children one-year-of-age and older. For complete immunization, this needs to start months before travel, but in the event that this is not possible,

the immunization should be given at least two weeks prior to the trip.

Answered by:  
**Dr. Michael Rieder**



## Vitamin A for acne

### 11.

#### What are the indications for oral vitamin A for acne?

Question submitted by:  
**Dr. Monique Bourbeau,**  
*Boucherville, Quebec*

Oral vitamin A therapy was attempted a bit in the past as retinoids can have a beneficial effect on sebaceous gland disorders. High doses, such as 300,000 units to 500,000 units q.d. have been used with minimal effect. The advent of more effective vitamin A derivatives, such as isotretinoin, have superceded efforts to use vitamin A. The side-effect profile of the derivatives seem more acceptable as well. In the last few years, occasionally vitamin A was used to circumvent the higher cost of isotretinoin, but this

also is less of an issue with the recent decreases in isotretinoin costs due to generics.

Answered by:  
**Dr. Chi-Ming Chow**

## Migraine triggers in children

### 12.

#### Are the migraine triggers in children different than in adults ?

Question submitted by:  
**Dr. Len GrBac,**  
*Etobicoke, Ontario*

Migraine triggers in children can be similar to those in adults but most often they vary. Some of the triggers appear to be the same, such as fatigue, but others are quite different and can include non-headache symptoms which rarely, if ever, are seen in adults such as:

- dizziness or syncope,
- abdominal pain, or
- hemiplegia.

Migraines in children are less severe than in adults and they often respond well to simple therapies such as ibuprofen or acetaminophen and rest.

Answered by:  
**Dr. Michael Rieder**

→  
*Continued on p. 37*

## Advice for chronic congestion

# 13.

**What advice can be given or what can be prescribed for a patient with a constant congestion and a sometimes dripping nose year round and who have tried every over-the-counter drug there is?**

Question submitted by:  
**Dr. Sam Brown**  
Toronto, Ontario

Before recommending a specific therapy, it is important to establish the cause of the nasal congestion and rhinorrhea. There may be any of a number of causes to consider including:

- chronic sinusitis,
- allergic rhinitis,
- non-allergic rhinitis, or
- structural abnormalities, such as nasal polyps or deviated nasal septum and rare causes like:
  - malignancy,
  - granulomatous disease, or
  - vasculitis.

The approach to management is based upon a detailed history, physical examination (including

rhinoscopy), imaging studies and appropriate allergy testing, if indicated.

Answered by:  
**Dr. Peter Vadas**

## Harmful effects of glucosamine

# 14.

**Are there any harmful effects of glucosamine? Any allergy problems?**

Question submitted by:  
**Dr. K. Emmott,**  
Comox, British Columbia

Overall, glucosamine may be considered a safe product. In light of mounting evidence of lack of efficacy of glucosamine for the treatment of osteoarthritis, the greatest disadvantage to continued use is likely on the wallet. The most troublesome clinical side effect is bloating and abdominal discomfort. In patients with glucose intolerance or early-untreated diabetes, oral glucosamine may have an effect on both glucose transport and insulin sensitivity. Therefore, there is a theoretical concern that prolonged glucosamine use in obese osteoarthritic patients may worsen insulin resistance, aggravate

endothelial dysfunction and thereby contribute towards cardiovascular disease. Importantly, no clinically significant effects on glucose metabolism have been reported in patients without glucose intolerance or in those with established diabetes currently on treatment. Considering the extensive use of glucosamine by millions of people, there have been only a few isolated case reports of urticaria and asthma attributed to this product.

Answered by:  
**Dr. Mary-Ann Fitzcharles**

**cme**