



## Recommended Immunizations for Mexico

1.

### What immunizations do you recommend for adults for winter holiday trips to Mexico?

Question submitted by:

**Dr. Peter Palma**  
Okanagan Centre, British Columbia

Many travellers to Mexico do not take any pre-travel immunizations. Nevertheless, I would recommend a few basic considerations. Tetanus immunity should be boosted every 10 years. This does not mean that there is a major risk of tetanus without the booster, but this would avoid the need to look for a local clinic for vaccination in case of injury. It also provides the chance to boost immunity to diphtheria and pertussis with a single injection. It has also been recommended that all adult travellers receive one polio booster in adulthood. Hepatitis A is an omnipresent risk in all countries with reduced sanitary, water purification and/or hygiene standards and a large proportion of cases in Canadians occurs secondary to travel.

Hepatitis B risk is largely limited to sexual transmission in Mexico (and Canada), but travellers do tend to acquire new sexual partners while away. Pretravel assessments provide an opportunity for counselling on all STIs. The vaccine against "tourista" known as Dukoral<sup>®</sup> is not highly effective and routine use is not recommended by the Public Health Agency of Canada (see <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/05vol31/asc-dcc-7/index-eng.php>). Malaria, while present in some parts of Mexico, does not pose a significant risk to travellers going to the usual resort areas of Mexico and malaria prophylaxis is not necessary.

Answered by:

**Dr. Michael Libman**

## Treatments for Premature White Hair

2.

### What is the treatment of choice for premature white hair (a young child 12-years-of-age)?

Question submitted by:

**Dr. John Chan**  
Abbotsford, British Columbia

First of all, you rule out syndromes that are associated with premature white hair such as Vogt-Koyanagi syndrome, Waardenburg syndrome, piebaldism, albinism, etc. Otherwise, there is no real treatment for premature white or grey hair other than tints and dyes.

Answered by:

**Dr. Scott Murray**



## Test for Celiac Disease

3.

### What is the best test for celiac disease?

Question submitted by:  
**Dr. Sankar Vaidyanathan**  
Toronto, Ontario

The most useful test for screening for celiac disease is for antibodies against anti-tissue transglutaminase (anti-tTG) which is highly sensitive, specific and the most cost-effective. Approximately 2% of patients with celiac disease will have unrecognized IgA deficiency. Since anti-tTG is an IgA-based test, total IgA should be measured in patients with negative results but a high clinical suspicion of celiac disease. Some

experts recommend testing IgA levels in all patients along with the anti-tTG. Patients with a positive anti-tTG should undergo a small bowel biopsy. A small bowel biopsy is the gold standard for the diagnosis of celiac disease but is much more invasive than serological testing.

Answered by:

**Dr. Jerry McGrath**

## Transobturator Tape Procedure

4.

### Can you please explain the transobturator tape (TOT) procedure?

Question submitted by:  
**Dr. Jean-Guy Gagnon**  
Sudbury, Ontario

The TOT procedure is a new method used to treat urinary stress incontinence (USI). In the past, the burch colposuspension, an abdominal procedure, was the gold standard to treat this condition. In the 1990's, the minimally invasive Tension Free Vaginal Tape Procedure (TVT) was shown to be equally efficacious in treating USI with less morbidity and shorter hospital stay.

For the TVT, a polypropylene mesh tape is placed underneath the urethra and brought out over the symphysis pubis through two suprapubic incisions, in the retropubic space (RS), just lateral

to the bladder. Given the infrequent complications of bladder perforations and venous bleeding associated with TVT trocar placements, the TOT procedure was developed, in which the urethra is elevated more laterally through the obturator spaces (OS) instead of the RS. The mesh edges are brought out through the OS at the angle of the thigh folds, thus avoiding the bladder. The procedure has been performed over the last four years and results appear to be similar to the TVT for success and side-effect profile.

Answered by:

**Dr. Cathy Popadiuk**

## Gripe Water for Colic

### 5.

#### Does gripe water work for colic?

Question submitted by:

**Dr. Steve Choi**  
Oakville, Ontario

The easy answer is no. There are no drugs known to be safe and effective in the therapy of infantile colic. Rhythmic movement, swaddling and baby carriers are reported to be effective in some infants and in the case of colic, time is the ultimate cure. It is

unquestionably true that a colicky infant (having had two personally) is a drain on parental resources and patience, but all cases of colic resolve with time.

Answered by:

**Dr. Michael Rieder**

## Assessing Attention Deficit Hyperactivity Disorder

### 6.

#### What should you use to assess attention deficit hyperactivity disorder (ADHD)? When should you start medications and when to refer?

Question submitted by:

**Dr. Ciara Lynch**  
Ottawa, Ontario

There are a number of screening tools that can be applied to assess a patient with ADHD. As opposed to listing the various merits and demerits of each rating tool, here is the website for Canadian Attention Deficit Hyperactivity Disorder Resource Alliance for physicians under the Chapter one and Appendices section: [http://www.caddra.ca/english/p\\_hys\\_guide.html](http://www.caddra.ca/english/p_hys_guide.html).

Medications should be started after deliberation with the patient and caregivers and a diagnosis of ADHD has been reached. However, it is essential to note that after the risk-benefit assessment and initial assessment have been completed, that it is a matter of starting the right medication for the right person at the right time for the right condition

with a minimum of adverse effects. Considerations such as efficacy, safety and tolerability should be employed. Stimulants have the best body of evidence in ADHD, but it is important to consider adherence, risk of diversion and coverage of the medication. Basically the therapeutic thought process should look at if there are any allergies, interactions, duplications, compliance and cost.

Referral depends on comfort with the diagnosis of ADHD and the patient, access to psychiatrists and support staff and complexities that may coexist with the patient, including failure on an adequate trial of medications and behavioural therapy/counselling.

Answered by:

**Prof. Joel Lamoure**

**Typhoid Fever**

**7.**

**What parts of the world are more at risk for typhoid fever or should everyone leaving North America be vaccinated? What is the lowest age for children to be vaccinated?**

Question submitted by:

**Dr. Gary P. Stephan**  
 Thornhill, Ontario

Recent published data from GeoSentinel and other groups have confirmed that the highest risk area (by far) for travellers to contract typhoid is South Asia (India, Sri Lanka, Pakistan and Bangladesh). The reason for this is not clear. However, the disease is present virtually everywhere where sanitation is poor. It is a fecal-oral disease with no non-human reservoir. It is recommended to give the vaccine to all travellers to areas where high levels of transmission have been documented, with the possible exception of those with shorter stays in accommodations with high standards of hygiene. In general, risk increases among those travelling on low budgets, those who are staying with friends and relatives in endemic countries and those with reduced defenses secondary to achlorhydria (including PPI use) or gastrectomy. The injectable vaccine is licensed for children two-years-of-age or more. The oral vaccine is currently available only in capsules and is therefore not suitable for young children. Typhoid is typically a mild disease in children under three- or four years-of-age, however, they can become bacterial shedders and a public health hazard. Finally, in recent years, about half of all cases of the enteric fever syndrome have actually been caused by Salmonella paratyphi. The vaccine does not protect against this infection.

Answered by:

**Dr. Michael Libman**

(Anti-inflammatory analgesic agent with a mucosal protective agent.)  
 Arthrotec\* is contraindicated in pregnancy. Product Monograph available on request.

**ARTHROTEC<sup>®</sup>** 50 & 75 mg diclofenac sodium and misoprostol tablets



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 Pfizer Canada Inc., Licensee





## Correlation Between Morning Sickness and Miscarriages

8.

### What is the correlation between the amount of morning sickness and incidence of miscarriage?

Question submitted by:

**Dr. Janna Bentley**  
*Kelowna, British Columbia*

There is no direct correlation between the amount of morning sickness and the incidence of miscarriage. Every pregnancy is different and it is variable how much nausea and vomiting women have in their pregnancies. For the most part, the symptoms improve following the first trimester although some women have these symptoms throughout their pregnancies and others have none. That being said, when a woman suffers a spontaneous abortion, the nausea and vomiting may lessen or stop abruptly. There is no evidence that suggests that

women who have nausea, as opposed to other pregnancy symptoms, are more or less likely to suffer a miscarriage. One study found that almost 90% of pregnant women who did not eventually miscarry experienced pregnancy related symptoms within eight weeks of their last menstrual period. In women who smoked tobacco or marijuana and pregnancies that did miscarry, symptoms started later in pregnancy.

Answered by:

**Dr. Cathy Popadiuk**

## Migraine Treatments for Children

9.

### What are the prophylactic treatments of migraines in children?

Question submitted by:

**Dr. Said Ramadan**  
*London, Ontario*

Migraines in children are an interesting clinical entity, quite different in character and response than in adults. Many childhood migraines respond to hydration and fairly mild analgesics. In adults, there is robust (Class A) evidence for the use of amitriptyline, valproic acid, propranolol, timolol, topiramate and valproate in the prophylaxis of migraine. In contrast, in children the only agent which has evidence of efficacy in migraine prophylaxis is propranolol. A significant reduction in headache was seen in a study in which children with

migraine were treated with three divided doses of propranolol at a dose of 60 mg t.i.d. for children weighing < 35 kg and 120 mg t.i.d. for children weighing > 35 kg. It should be noted that a substantial issue in children is that many of the existing trials are too small to detect a clinically meaningful difference.

Resource

1. Victor S, Ryan SW: Drugs For Preventing Migraine Headaches In Children. Cochrane Database Syst Rev 2003; (4):CD002761.

Answered by:

**Dr. Michael Rieder**

## Complications of Pacemaker Insertion

10.

### What are some of the complications associated with pacemaker insertion?

Question submitted by:

**Dr. Lorna Hruby**  
**Burnaby, British Columbia**

Complications of pacemaker insertion include:

- infection,
- air embolism,
- pneumothorax,
- myocardial perforation,
- pericardial effusion,
- tamponade,
- vascular or nerve damage,
- thrombophlebitis and
- bleeding and arrhythmia (premature atrial contractions, atrial tachycardia, premature ventricular contractions, ventricular tachycardia).

These complications are uncommon when a permanent pacemaker is inserted in the OR or cardiac catheterization laboratory. The complications are more common with temporary pacemaker insertions, particularly when the pacemaker is inserted under emergency circumstances.

Answered by:

**Dr. Chi-Ming Chow**

## Side-Effects From the Flu Vaccine

11.

### What is the incidence of side-effects to the flu vaccine?

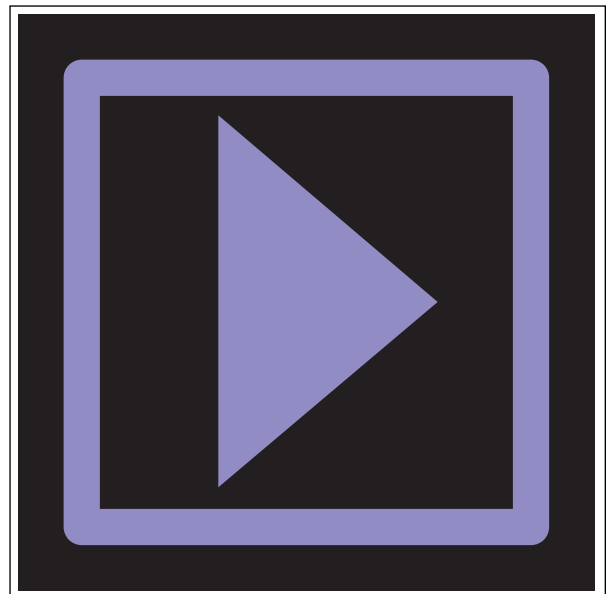
Question submitted by:

**Dr. Mary Taylor**  
**Ottawa, Ontario**

Influenza vaccine is generally very well tolerated in adults. Rates of mild local soreness after administration of inactivated influenza vaccine are around 70%. Local side-effects are slightly more common in women than in men. Systemic reactions, including malaise, flu-like illnesses and fever, are relatively uncommon. Rates have varied from 2% to 10%—these rates are only marginally increased above the rates in placebo recipients. Fever occurs in approximately 8% to 11% of vaccinated children and may be associated with other systemic symptoms such as myalgia, arthralgia, headache and malaise. Anaphylaxis has been reported and appears to be linked to severe allergies after eating eggs. Those without such a history can be safely vaccinated. The incidence of Guillain-Barré syndrome, which occurred at a rate of about one in 100,000 after vaccination for the “swine flu” of 1976, has not been clearly linked to influenza vaccination in other years, with estimates being at most one per million doses.

Answered by:

**Dr. Michael Libman**





## Restarting the OC Pill

12.

**How soon do you start the OC pill after therapy abortion, miscarriage and pregnancy delivery?**

Question submitted by:  
**Dr. John Dawson**  
Richmond Hill, Ontario

Ovulation can occur two weeks after a first trimester spontaneous or therapeutic abortion. The OC should therefore start immediately, preferably the day of the abortion.

In women who are not breastfeeding, ovulation occurs around four weeks postpartum so contraception should start within three weeks after delivery. As postpartum women are at increased risk for hypercoagulable complications, the progesterone only pill is considered a safer option than the combined OC and can be started immediately postpartum. Product labels state to wait four weeks before starting combined OCs but

some experts advocate to start the OC after three weeks in a well informed low-risk patient. For women who breastfeed, ovulation is suppressed 98% of the time if she is within six months of delivery, breastfeeding exclusively and is amenorrheic. If these criteria are not met, progestin only pills can be started immediately as ovulation may occur within three weeks or unpredictably later. Progesterone does not appear to affect milk production and quality, or cause harm to the infant.

Answered by:  
**Dr. Cathy Popadiuk**

## Corrected QT

13.

**What should we do with an increase in the corrected QT (QTc) on the ECG of a patient taking some tricyclic antidepressant? When is it dangerous? When should we decrease the dose? Which follow-up should be done?**

Question submitted by:  
**Dr. Diane Morissetti**  
Hawkesbury, Ontario

Tricyclic antidepressants, such as amitriptyline is known to prolong the QT interval. After adjustment for heart rate, the QTc is defined as prolonged if it is > 420 milliseconds in men and > 440 milliseconds in women. QT interval prolongation is accepted as having a risk of causing *torsades de pointes*.

Patients with a history of CVD who require treatment with amitriptyline should be started on a low dose which may be cautiously increased

over time. These patients also require close monitoring, including periodic ECG testing. In addition, all patients receiving higher than usual dosage should have periodic ECGs, regardless of the presence or absence of cardiac abnormalities prior to treatment.

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



## Hypothyroidism

14.

**Some studies have shown that almost 50% of personal care home residents with hypothyroidism do not need thyronine replacement. I have successfully weaned off some. Your views please.**

Question submitted by:  
**Dr. Rajen Ramgoolam**  
*Winnipeg, Manitoba*

I suspect you mean thyroxine (T4) and not thyronine (T3). Depending on the cause, hypothyroidism can either be transient or permanent. That which occurs in the setting of chronic thyroiditis, after thyroidectomy, radioactive iodine ablation, etc. is permanent, whereas transient hypothyroidism can occur in the setting of thyroiditis. If the cause of hypothyroidism is transient, then the patient may not require lifelong treatment and it is certainly possible to taper and discontinue it in that setting. A significant number of patients with thyroid nodules and non-toxic goiters were in the past treated with thyroxine to "shrink" the gland/nodules even in the

absence of hypothyroidism. This again would be a situation where the patient will remain euthyroid once the treatment is discontinued. A significant number of patients with subclinical hypothyroidism become euthyroid spontaneously. Again, if treatment was initiated to treat subclinical hypothyroidism, it is conceivable that these patients may not require lifelong treatment. Thus, once the cause of the hypothyroidism is known, one can make an educated guess regarding which patients may or may not require indefinite treatment.

Answered by:  
**Dr. Hasnain Khandwala**

## Repairing a Congenital Umbilical Hernia

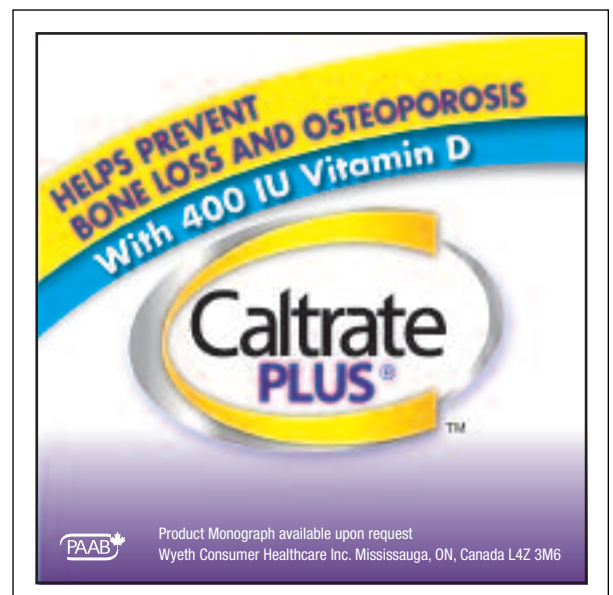
15.

**At what age should congenital umbilical hernias be repaired surgically?**

Question submitted by:  
**Dr. Dan Ezekiel**  
*Vancouver, British Columbia*

Umbilical hernias will almost always close spontaneously within the first year of life. If an umbilical hernia persists beyond the first year of life, consideration should be made for surgical closure. It should be emphasized that umbilical hernias are benign and there is no risk of intestinal strangulation or other catastrophic problems associated with hernias in other locations. As well, it should be noted that the practice of taping a coin or button over the hernia—a common practice in some cultures—is both ineffective and potentially dangerous and should be discouraged.

Answered by:  
**Dr. Michael Rieder**







## Alzheimer's Disease in the Young

### 16. Why are we seeing more Alzheimer's disease (AD) in younger patients?

Question submitted by:  
**Dr. Mona Lee**  
*North Vancouver, British Columbia*

There is currently no evidence that AD is presenting at an earlier age. The disease is most frequently seen in the elderly but can present in younger individuals. While rare in patients < 40-years-of-age, it has been reported in much younger individuals. The most likely explanation for reports of diagnoses at younger ages is that there is increased

awareness of the condition and thus earlier diagnoses. In younger individuals, one needs to evaluate for other causes of dementia, including frontotemporal dementia, vascular dementia and vasculitis in addition to the diagnosis of AD.

Answered by:  
**Dr. Ashfaq Shuaib**

## Shellfish Allergies

### 17. Which shellfish allergic patients do you give an epinephrine injection to?

Question submitted by:  
**Dr. Michael Keating**  
*Saint John, New Brunswick*

Allergies to crustacean and mollusk shellfish are common and account for a large proportion of the morbidity and mortality caused by food allergies. Allergic reactions to shellfish are one of the four foods most often associated with fatal anaphylaxis (the others are peanut, tree nuts and fish). Although an understanding of the prevalence and natural history of shellfish allergy is not as precise as for other foods, shellfish allergies are generally lifelong. Crustacean (shrimp, lobster, crab) and mollusk (oyster, clam, scallop, mussel, squid, octopus) shellfish are distantly related, but often cross-react in those with shellfish allergy. The major allergenic protein in shellfish is tropomyosin. Shellfish tropomyosin exhibits a high degree of cross-reactivity with dust mite and cockroach tropomyosin. There is little evidence for clinically

significant levels of shellfish allergens in either glucosamine or omega-3 fatty acid supplements. Hidden sources of shellfish allergen include Worcestershire sauce and other prepared sauces, salad dressings and surimi (imitation crab meat often flavoured with shellfish extract).

Epinephrine auto-injectors are indicated in patients who may experience potentially life-threatening allergies. These include patients with a history of severe reactions to shellfish, those with asthma (especially if the asthma is severe) and patients who may not exercise stringent avoidance. Patients with shellfish allergy should wear a MedicAlert® bracelet.

Answered by:  
**Dr. Peter Vadas**



## Seasonal Affective Disorder Treated by UV Lights

18.

**What is the current thinking for optimal length of exposure to UV lights for seasonal affective disorder (SAD)? Are there any concerns (e.g., side-effects)?**

Question submitted by:  
**Dr. Patricia E. Barry**  
**Burlington, Ontario**

SAD is a condition associated with the winter months. In the Northern hemisphere, this period would be between November and April, when the alignments of geography and the impact of the sun are less direct. Direct sunlight covers a spectrum of electromagnetic radiation divided into five wavelengths: UVC, which spans a range of 100 nanometers to 280 nanometers, UVB at 280 nanometers to 315 nanometers, UVA at 315 nanometers to 400 nanometers, visible light ranging from 400 nanometers to 700 nanometers and the infrared (A, B and C) which range from 700 nanometer to one millimeter.

Generally, the lower end of the visible spectrum (420 nanometers to 500 nanometer (blue to green range) appeared to offer best effects on the circadian rhythm and melatonin production. However, white light is generally used. Initially, 2500-lux intensity light exposure for at least two hours daily for one week resulted in significantly more remissions (defined as a reduction in the Hamilton Depression Rating Scale [HAM-D] score of  $\geq 50\%$ ) in patients with SAD. The light was found to be most therapeutic when used in the morning vs. the evening (62% vs. 28%). However, currently a 10,000 white light lux strength light is used over a 30- to 45- minute period (up to a maximum of 60 minutes). This accounted for a 74% remission (defined as a reduction in the HAM-D score of  $\geq 50\%$ ) in patients with SAD. The light was still found to be most

therapeutic when used in the morning vs. the evening.

Adverse effects of light therapy that have been reported include headaches, rash, itchy eyes and possible nausea. The choice of light is essential to consider in patients also on concurrent medications or who may have porphyria. The American Medical Network lists on their webpage similar findings, as well as cautions patients who are on photosensitizing herbs, such as St. John's wort, or on a psoralen agent or has a tendency towards mania. Please note that trend towards mania is not cited but there are case reports in the literature.

### Resources

1. Naylor M, Farmer KC. "Sun damage and prevention". Electronic Textbook of Dermatology. The Internet Dermatology Society. 1995 <http://www.telemedicine.org/sundam/sundam2.4.1.html>. Accessed: Aug 28, 2009.
2. Terman M, Terman JS, Quitkin FM, et al: Light Therapy For Seasonal Affective Disorder. A Review Of Efficacy. *Neuropsychopharmacology* 1989; 2(1):1-22.
3. Meesters Y, Jansen JH, Beersma DG, et al: Light Therapy For Seasonal Affective Disorder. The Effects Of Timing. *Br J Psychiatry* 1995; 166(5):607-12.
4. Wileman SM, Eagles JM, Andrew JE, et al: Light Therapy For Seasonal Affective Disorder In Primary Care. *Br J Psychiatry* 2001; 178:311-6.
5. Podosayan G. "Practical aspects of light therapy". Dec 2007. American Medical Network. [http://www.health.am/psy/more/light\\_therapy4/](http://www.health.am/psy/more/light_therapy4/). Accessed: Aug 28/09.

Answered by:  
**Prof. Joel Lamoure**



## Low Libido in Women

### 19. What works for low libido in women?

Question submitted by:

**Dr. Steve Choi**  
Oakville, Ontario

Libido refers to the desire to have sexual activity. It is the initial component of the sexual response cycle which includes desire, arousal, orgasm and resolution. Up to 40% of women report some form of sexual complaints with 12% being distressed by the sexual dysfunction. Sexual function is dependent upon physical, psychological, sociocultural and relational elements. At present, pharmacologic treatments for sexual dysfunction are not approved in Canada or the US. Thus, non-pharmacologic treatments should be maximized. A thorough physical, psychological and social evaluation should be performed and goals outlined for the treatment plan. Medications that affect libido such as selective serotonin reuptake inhibitors and various antihypertensives may need to be changed to alternatives.

Counselling, couples therapy, lifestyle changes and body image improvements should be explored. Finally, in clinical studies, androgen therapy has been shown to be effective for various sexual dysfunctions in postmenopausal and oophorectomized premenopausal females but the potential for masculinizing side-effects and possible long-term risks such as breast cancer precludes its approval in North America. With careful monitoring and following thorough discussion with the patient, testosterone orally or transdermally is approved in Europe. Phosphodiesterase inhibitors have not been shown to be effective in women.

Answered by:

**Dr. Cathy Popadiuk and  
Dr. Kristina Bajzak**

## Celiac Disease in Children

### 20. What are the symptoms of celiac disease in children? Is IgA anti-tissue transglutaminase a good screening test?

Question submitted by:

**Dr. Jabril Dorar**  
New Waterford, Nova Scotia

The symptoms of celiac disease in children are often reflective of growth and include poor weight gain and growth failure. Symptoms in children tend to be more often those considered characteristic of celiac disease, with a major intestinal focus. Diarrhea and vomiting as well as abdominal bloating can be seen in toddlers, while in older children in addition to poor weight

gain, irritability and fatigue can also be symptoms. The presence of IgA anti-tissue transglutaminase antibody is an excellent screening test as it is strongly suggestive of celiac disease, which should be confirmed by biopsy for the definitive diagnosis.

Answered by:

**Dr. Michael Rieder**

**CME**