



*Answers to your questions
from our medical experts*

1. Antidepressants During Pregnancy



What is the antidepressant of choice for pregnant women?

Submitted by: **E.J. Franczak, MD**, Scarborough, Ontario

In pregnancy and during breastfeeding, antidepressants should be prescribed very cautiously, and only when the severity of the depressive symptomatology and/or the risk of suicide warrant the risk of prescribing an antidepressant during pregnancy. Most antidepressants have not been formally evaluated in pregnant women (due to obvious ethical considerations) and the information available is mostly based on animal studies and case histories of individual patients who took an antidepressant during their pregnancy.

To date, sertraline and fluoxetine are considered relatively safe during pregnancy and breastfeeding. Paroxetine is contraindicated during pregnancy due to its potential of causing teratogenic malformations in the fetus. No information is yet available on the following antidepressant

medications regarding their use in pregnancy and during breastfeeding:

- Citalopram
- Escitalopram
- Venlafaxine
- Bupropion

If an antidepressant is indicated, then a selective serotonin reuptake inhibitor (SSRI), such as fluoxetine or sertraline, would be a possible choice, as they are designated as category C in terms of fetal risk (*i.e.*, the drug could be given only if the potential benefit justifies the potential risk to the fetus).

Resources

1. APA Practice Guidelines for the Treatment of Psychiatric Disorders, 2006.
2. Briggs, Freeman & Yaffe. *Drugs in Pregnancy and Lactation*. Seventh Edition. Lippincott Williams & Wilkins, 2005.

Answered by: **Dr. Hany Bissada**

2. Blood Pressure after Axillary Node Dissection



Is it true that patients who have had an axillary node dissection should not have their BP taken in their arm?

Submitted by: **G. Baron, MD**

Patients who have had an axillary node dissection may have lymphedema in the arm. Taking the blood pressure in the affected arm, especially if done frequently while the patient is monitored non-invasively, will impede venous return and cause more edema and discomfort in the arm. Lymphedema also increases the risk of cellulitis. In patients who have had bilateral axillary

node dissections, blood pressure should be taken in the leg, or if taken in the arm, the cuff should be inflated only slightly above the systolic pressure and then deflated quickly.

Answered by: **Dr. Bibiana Cujec**

3. Ceramides for Hand Dermatitis



What is your opinion on the use of ceramides on hand dermatitis?

Submitted by: [Bill Taylor, MD](#), Medicine Hat, Alberta

A ceramide is a combination of a fatty acid and a sphingoid base. Ceramides along with cholesterol and free fatty acids are the major stratum corneum intercellular lipids and play a major role in skin barrier function.

Recently, several emollients containing ceramides have come on the market in the United States and there are a few available in Canada. They have been used primarily in diseases with impaired skin barrier function, such as atopic dermatitis, in an effort to repair the altered skin barrier by using physiologic lipids. It has been shown that these physiologic lipids traverse both intact and diseased stratum corneum, are taken up by keratinocytes and are secreted into the stratum corneum intercellular lipid layers. This new generation of emollients are believed to improve skin barrier dysfunction.

A randomized but not blinded, controlled study assessed 30 patients with mild to moderate hand dermatitis. The study compared an emollient containing skin-related lipids (with ceramide 3) versus a petrolatum-based

emollient. Both treatment regimes significantly improved clinical signs of hand dermatitis, but superiority of the emollient containing skin-related lipids over the petrolatum-based emollient could not be demonstrated in this study.

The problem with assessing the various ceramide moisturizers is that different ceramides are used (there are nine subclasses described in human stratum corneum), and they are used alone or in different concentrations with cholesterol and free fatty acids. There is a need for randomized, blinded, placebo controlled studies on these moisturizers, most of which are available OTC, to scientifically prove their efficacy over traditional moisturizers.

Resource

1. Kucharekova PCM, Van De Kerkhof PC, Van Der Valk, PG: A Randomized Comparison of an Emollient Containing Skin-Related Lipids with a Petrolatum-Based Emollient as Adjunct in the Treatment of Chronic Hand Dermatitis. *Contact Dermatitis* 2003;48(6):293-299.

Answered by: [Dr. Richard Haber](#)

These physiologic lipids traverse both intact and diseased stratum corneum, are taken up by keratinocytes and are secreted into the stratum corneum intercellular lipid layers.

4. Folic Acid Administration During Pregnancy



What evidence is there for the usefulness of routine folic acid administration during pregnancy?

Submitted by: [Michel Duplessis, MD](#), Greenfield Park, Quebec

Adequate folate is critical for cell division due to its essential role in the synthesis of nucleic acids and certain amino acids. To reduce the incidence of congenital anomalies there is good evidence supporting the daily intake of 5 mg folic acid, plus or minus multivitamins for two to three months prior to conception. This is especially true for those women who have a personal or family history of neural tube defects (NTDs), those taking anticonvulsants associated with NTDs (e.g., valproate, carbamazepine),

and those with insulin-dependent diabetes. Once pregnancy is established beyond twelve weeks of gestation the folic acid intake can be reduced to 0.4 to 1.0 mg daily.

Resource

1. Wilson RD, et al: Pre-conceptual Vitamin/Folic Acid Supplementation 2007: The Use of Folic Acid in Combination with a Multivitamin Supplement for the Prevention of Neural Tube Defects and Other Congenital Anomalies. *J Obstet Gynaecol Can* 2007;29(12):1003-1013.

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

5. Cerebellar Ataxia



Please discuss cerebellar ataxia.

Submitted by: [Walter Rees, MD](#), Williams Lake, British Columbia

Ataxia due to cerebellar pathology may be seen in a variety of conditions. Acute insults such as cerebellar stroke and hemorrhage, subacute pathology such as focal mass lesions and medications causing cerebellar degeneration (e.g., phenytoin, alcohol), and hereditary degenerative conditions such as spinocerebellar ataxia are some of the conditions which may result in ataxia of the cerebellar type. Patients have a wide-based gait and complain of problems with balance and a feeling of unsteadiness on their feet. The term cerebellar tremor is usually a misnomer and is used when upper limbs are involved. This causes a slow oscillation of the limbs of approximately three to five Hz in a horizontal plane. Upon examination, patients show tremor of the upper extremities when approaching a physical target, called "intention tremor," and heel-knee-shin dysmetria involving the lower extremities. Tremor of the head and trunk may be caused by midline

cerebellar lesions. As mentioned above, it is not a true tremor because in most cases it is ataxia of the affected limb or body part. Cerebellar tremor usually does not respond to surgical treatments.

To assess for cerebellar involvement, the following examination may be conducted:

- Finger-Nose-Finger testing
- Heel-Knee-Shin testing
- Gait
- Assessment for dysdiadokinesia
- Assessment of speech for dysarthria and examination of extraocular movements for nystagmus. Patients with cerebellar disorders may have scanning of speech and rebound nystagmus.

Resource

1. Rana, Abdul Qayyum. *An Introduction to Essential Tremor*. iUniverse Publishing: Bloomington, Indiana, USA, 2010. Chapter 4:57-66.

Answered by: [Dr. Abdul Qayyum Rana](#)

6. Efficacy of Varicella Vaccine



Does the varicella vaccine lose efficacy with time? Should women in their childbearing years be revaccinated?

Submitted by: [Ruth Goldman, MD](#), Toronto, Ontario

The Canadian Immunization Guide, Seventh Edition, provides an excellent and practical summary of varicella vaccination. In this chapter, it is noted that in the pre-licensure clinical trials in the United States, protection against varicella was observed for at least 14 years in most vaccinated children; in Japanese studies, the protection lasted at least 20 years. In the United States, retrospective varicella outbreak studies revealed an overall vaccine effectiveness of 70 to 90% in preventing varicella disease of any severity, and 95%

against severe varicella for seven to ten years after immunization. The National Advisory Committee on Immunization does not recommend any booster doses after the age-appropriate immunization. In particular, women of childbearing age should not be given the vaccine during pregnancy.

Resource

1. The Canadian Immunization Guide, Seventh Edition. (www.phac-aspc.gc.ca/publicat/cig-gci/pdf/cig-gci-2006_e.pdf); pages 327-342.

Answered by: [Dr. John Embil](#)

7. Diabetes Mellitus Control



Please provide guidelines for choosing and starting therapy for diabetes mellitus (DM) control (oral and insulin).

Submitted by: [Olivia Kei, MD](#), Toronto, Ontario

In Type 1 DM, the only option is insulin, usually a prandial rapid acting insulin before meals and a bedtime long-acting insulin.

In Type 2 DM, choice of therapy depends on the following factors:

- Severity and symptoms of hyperglycemia and HbA1c level
 - In decompensated and very symptomatic patients, insulin is best
 - If HbA1c > 9.0%, use two agents in combination to start, plus or minus insulin
- Contraindications to certain therapies (e.g., TZDs are contraindicated in heart failure)
- Pregnancy (only insulin is approved)
- Fasting, premeal, or postprandial hyperglycemia
- Tolerability to the therapy

- Meal pattern of patient (e.g., consistency, frequency, type)
- Long term goals

Based on the above, a choice can be made from a variety of agents including metformin, incretins, sulphonylureas, meglitinides, TZDs, acarbose, and insulin.

Based on the 2008 CDA guidelines, metformin is generally first line, with all others mentioned being second line.

The important thing is to titrate and add therapy quickly, and consider insulin use early to achieve targets, in addition to lifestyle measures at all stages.

Resource

1. 2008 CDA Clinical Practice Guidelines

Answered by: [Dr. Ally Prebtani](#)

8. Magnetic Resonance Processes for Treatment of Depression



Can magnetic resonance processes effectively treat depression? Please comment on the efficacy and safety of repetitive transcranial magnetic stimulation in the treatment of depression.

Submitted by: [Rene Pottle, MD](#), Halifax, Nova Scotia

Transcranial magnetic stimulation (TMS) is a noninvasive method to excite neurons in the brain. The excitation is caused by weak electric currents induced in the tissue by rapidly changing magnetic fields (electromagnetic induction). This way, brain activity can be triggered or modulated without the need for external electrodes as is required in electro-convulsive therapy (ECT). Repetitive transcranial magnetic stimulation is known as rTMS.

Although research in this area is in its infancy, there is now some evidence that TMS is an effective treatment for depression, obsessive-compulsive disorder, generalized anxiety disorder, and auditory hallucinations. There is reason to believe that rTMS could replace some ECT treatments currently used for severely depressed patients. In 2002, Health Canada approved rTMS therapy for drug-resistant depression.

Generally, TMS appears to be free of harmful effects. Research using animals and human volunteers has shown little effect on the body in general as a result of stimulation. Also, examination of brain tissue submitted to thousands of TMS pulses has shown no detectable structural changes. In unusual circumstances, it is possible to trigger a seizure in normal patients, but a set of guidelines which virtually eliminates this risk is available. Research continues, but TMS is certainly free of obvious side-effects, particularly when compared to electro-convulsive therapy (ECT).

Resource

1. Gershon AA, Dannon PN, Grunhaus L: Transcranial Magnetic Stimulation in the Treatment of Depression. *Am J Psychiatry* 2003;160(5):835-845.

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

9. Elevated aPTT



What is the significance of an isolated, elevated Activated Partial Thromboplastin Time (aPTT) result?

Submitted by: **David Hardie, MD**, Coldwater, Ontario

An isolated, elevated aPTT is due to either a deficiency, or an inhibitor of components of the intrinsic pathway of coagulation (factors VIII, IX, XI, XII). Deficiencies can result from congenital disorders such as hemophilia A (factor VIII deficiency), hemophilia B (factor IX deficiency) and von Willebrand's disease. Inhibitors can be non-specific, as is the case in the common lupus anticoagulant (seen in anti-phospholipid antibody syndrome). This prolongation of the aPTT is associated with a tendency towards thrombosis rather than bleeding. Specific inhibitors (*i.e.*, inhibitors of factor VIII, IX, or XI) are rare causes and present as an acquired bleeding disorder. The most common causes of

a prolonged aPTT in a hospitalized patient are treatment with IV unfractionated heparin, or contamination of the blood sample by drawing from a heparinized line.

Investigation of a prolonged aPTT should start with a 1:1 mixing study in which patient plasma is mixed with equal volume normal plasma. If the aPTT corrects, this indicates a coagulation factor deficiency. If it does not correct, this indicates an inhibitor.

Answered by: **Dr. Cyrus Hsia and Dr. Leonard Minuk**

10. Improving HDL



How does one improve HDL cholesterol after diet and exercise? Which method is best for HDL improvement? What specific diet is best?

Submitted by: **Godfrey Wong, MD**, Scarborough, Ontario

It may be very difficult to achieve a target total cholesterol/HDL ratio of < 4.0 in patients with CAD. The following lifestyle changes increase HDL cholesterol:

- 60 minutes of intensive aerobic exercise daily
- Replacing saturated fats with monounsaturated fatty acids (good vegetable sources of monounsaturated fats include olive oil and canola oil)
- One or two glasses of red wine daily
- Weight loss
- Smoking cessation

Some statins such as rosuvastatin and simvastatin are more effective at increasing HDL than other statins. Niacin is also very effective at increasing HDL. Flushing is the main side effect and can be attenuated by using extended release niacin (Niaspan), increasing the dose gradually from 500 mg h.s. to 2 g q.d. and taking ASA 30 minutes prior to the dose of niacin.

Answered by: **Dr. Bibiana Cujec**

11. Hirsutism



What are the latest treatments advocated for hirsutism?


Submitted by: [Mark D'Souza, MD](#), London, Ontario

Hirsutism is defined as the presence of excess terminal hairs in females in a pattern typically seen in adult males. Hirsutism is usually caused by an underlying adrenal, ovarian or central endocrine abnormality. Therefore, treatment of hirsutism depends on the underlying cause. Treating the underlying source of increased androgens is critical in therapy.

Treatment of hirsutism can be divided into medical treatments and physical treatments.

Medical treatments include anti-androgens such as spironolactone, drospirenone, and flutamide. 5- α reductase inhibitors such as finasteride have also been used. Eflornithine is an

irreversible inhibitor of ornithine decarboxylase, an enzyme necessary for follicular polyamine synthesis and hair growth, and can be used in a topical cream containing 13.9% eflornithine hydrochloride (VaniqaTM). Eflornithine does not remove hair, but reduces the rate of growth.

Physical treatments include physical and chemical epilation, electrolysis, and laser photorepilation, which is the most effective and permanent method of hair removal. 

Answered by: [Dr. Richard Haber](#)