Experts on Call

Answers to your questions from our medical experts

1. Returning to Sport after Concussion

How long should a patient wait until he/she returns to a sport after having a concussion?

Submitted by: **C. Lynde, MD,** Markham, Ontario

There are many protocols available to decide when an athlete can return to play after a concussion, but none of these guidelines are based on prospective studies. One recent study has questioned the validity of those protocoles which use loss of consciousness as a marker of the severity of concussion to be decided to return-to-play. The following are some of the approximate guidelines:

- Patients with mild or grade I concussion can return to play if the physical examination is normal and there are no symptoms at rest or with exertion after a period of 15 to 30 minutes. Grade 1 concussion is usually defined as no loss of consciousness, or symptoms resolving in less than 15 minutes.
- Patients with moderate or grade II concussion may return to play after one week without any symptoms. There should not be any symptoms at rest and with exertion. Moderate or grade II concussion is defined as loss of consciousness for less than five minutes or post traumatic amnesia longer than 30 minutes, confusion with amnesia, or concussion symptoms or mental status changes lasting more than 15 minutes.
- Patients with severe or grade III concussion may return to paly after one month of being free of symptoms at rest and with exertion for at least two weeks. Severe or grade III concussion is defined as loss of consciousness longer than five minutes or post traumatic amnesia longer than 24 hours.

References:
1. Kelly JP, Rosenburg JH, Practice parameter: The management of concussion in sports. Neurology 48:575-580, 1997
2. Pediatric and Adolescent Sports Injuries - Head and Neck Injuries in Young Athletes, Mark R. Proctor MD Robert C. Cantu MD, MA Clinics in Sports Medicine Volume 19 • Number 4 • October 2000
3. Cantu R: Guidelines for return to contact sports after a cerebral concussion. The Physician and Sportsmedicine 14:75-76, 79, 83, 1986

Answered by: **Dr. Abdul Qayyum Rana**

2. Congenital Heart Disease

How does one follow up congenital heart disease in teens and adults?

Submitted by: **Jean-Pierre Leung, MD,** Calgary, Alberta

Patients with complex congenital heart disease such as tetralogy of Fallot, transposition of the great arteries, Ebstein's anomaly of the tricuspid valve and coarctation of the aorta are at risk for many different complications including heart failure and sudden cardiac death even late after successful repair. These patients should be referred to a regional adult congenital heart disease clinic and managed jointly with cardiologists who have special expertise in adult congenital heart disease.

Patients with the following problems can be followed in the community: bicuspid aortic valve with mild-moderate stenosis or regurgitation (should have periodic echocardiograms), repaired atrial septal defect, small or repaired ventricular septal defect, mild pulmonic valve stenosis, small or closed patent ductus arteriosus. These patients do not require endocarditis prophylaxis for dental procedures.

Answered by: **Dr. Bibiana Cujec**

3. Fighting Obesity

? What is the pharmacological approach to obesity?

Submitted by: B. Athkinson, MD, Nova Scotia

Obesity is a very common problem in the Western world leading to hypertension, sleep apnea, arthritis, type 2 diabetes mellitus, and certain cancers to name a few. Not only is weight loss difficult to achieve, but even those who initially lose weight often find it difficult to maintain. Management strategies include life style changes such as dietary changes, increased activity, and some form of behavioural counseling. All of these modalities are important in conjunction with pharmacological approaches. In Canada, we have two agents approved for treatment of obesity. The first, Orlistat, inhibits pancreatic lipases causing fat malabsorption. The recommended dose is 120 mg three t.i.d. with a multivitamin. Most studies suggest that over a 12 month period Orlistat reduces weight by 5% to 10% or 5 to 10 kg from the baseline weight with the main side effect being diarrhea. There are no cardiovascular side effects. The studies, however, show a large drop out rate thus compliance may be an issue. Orlistat can also reduce the hemoglobin A1C by roughly 0.5% when used in type 2 diabetic patients.

The second drug approved for obesity is Sibutramine which blocks norepinephrine and serotonin re-uptake therefore acting as a sympathomimetic drug. The weight loss is similar to Orlistat, however, due to its sympathomimetic activity, it is contraindicated in patients with hypertension or cardiovascular disease. The main side effect is hypertension and in patients with high risk for cardiovascular disease, it was associated with a high risk of heart attack and stroke. The recommended starting dose is 10 mg daily and up to 15 mg a day is approved. The combination of Orlistat and Sibutramine should not be used. Both Orlistat and Sibutramine are approved for use for two years as long as there was a response, however, if they are tolerated and weight loss is maintained, they may be continued for more than two years in discussion with the patient. Metformin, although not approved for weight loss, is a very reasonable agent to use in someone who already has type 2 diabetes mellitus, since it can both improve glycemic control and result in modest weight loss. There are many other agents not approved for weight loss such as Phenteramine , Ephedra, antidepressants, and anti-epileptic drugs (Torpiramate). These should not be used for weight loss since the efficacy is weak and the adverse effects likely outweigh the benefits. Currently there are ongoing studies with the Incretin agents such as Exenatide and Liraglutide for effects on weight. For patients with BMI's greater than 40 who have failed diet, exercise, with or without drug therapy or patients with BMIs of more than 35 with obesity and co-morbidities such as hypertension, diabetes *etc*. bariatric surgery may be considered at centers where there is very good experience and good outcomes.

Answered by: Dr. Ally Prebtani

4. Herpes Treatment

How is herpes simplex encephalitis treated?

Submitted by: **Suzanne Allaine, MD,** Ontario

Before engaging in a treatment regimen for herpes simplex encephalitis, it would be ideal to either have a high index of suspicion or sufficient substantiating data to embark upon this treatment course. Clues to the diagnosis include sudden changes in mentation, temporal lobe abnormalities observed on electroencephalogram and magnetic resonance imaging scans. Another clue may be the presence of lymphocytes and increased numbers of red blood cells in a non-traumatic spinal tap. In addition, cerebral spinal fluid should be submitted for herpes simplex virus detection. If the index of suspicion is high, or confirmation of herpes simplex virus encephalitis is made, the usual treatment is parenteral acyclovir 10 mg/kg administered every eight hours for up to 21 days. In children < 12 years of age, the dose is 20 mg/kg every eight hours.

Answered by: **Dr.John Embil**

5. Prescription Holiday

Do you advocate a prescription holiday from bisphosphonate prescription for osteoporosis?

Submitted by: **David Heayon, MD,** Scarborough, Ontario

Data suggests it is reasonable to stop bisphosphonates after five years in many cases. In one study, alendronate given over 10 years did not significantly decrease overall fracture risk compared to alendronate for five years followed by placebo. However, sub-group analysis showed that for women who started the trial with a femoral neck T score of -2.5 or less, there was a benefit to continuation of treatment. Currently, it may be reasonable to treat with a bisphosphonate for five years, then reassess fracture risk and possibly also markers of bone turnover. If the fracture risk category is not higher and there is not evidence of continued significant bone resorption, the bisphosphonate can be stopped with careful monitoring of bone density. The point at which the bisphosphonate is to be restarted is also not clear; some suggest restarting therapy after one year of "holiday."

Resourcecs:

1. Osteoporosis: how long should we treat? Sebba A. CurrOpinEndocrinol Diabetes Obes. 2008 Dec;15(6):502-7.

Answered by: **Dr. Emil Nashi and Dr. Starr**

6. Warts: Duct Tape vs. Cryotherapy

? Does duct tape work for warts?

Submitted by: Erik Cunningham,MD, Victoria, BC

The media coverage for duct tape treatment of common warts (verruca vulgaris) comes from a six-week study of pediatric patients by Focht et al. in 2002 which showed warts treated with duct tape responded better than warts treated with liquid nitrogen cryotherapy. 85% of the duct tape treated patients had complete resolution of their warts vs. 60% in the cryotherapy treated patients. This study has been criticized because of the small number of subjects, large loss to follow-up and some telephone follow-up, method of application of cryotherapy (10 seconds only) and lack of a placebo arm.

A 2006 randomized placebo-controlled trial from the Netherlands of children aged 4 to 12 treated for six weeks with duct tape vs. corn pads (placebo) for verruca vulgaris showed the duct tape treatments to be no more effective than placebo.

A 2007 randomized placebo-controlled trial of adults treated for eight weeks with duct tape vs. moleskin (placebo) for common warts also showed no statistical difference between duct tape and moleskin in treating warts.

Resources:
1. Focht DR 3rd, Spicer C, Fairchok MP: The Efficacy of Duct Tape vs. Cryotherapy in The Treatment of Verruca Vulgaris (The Common Wart). Arch Pediatr Adolesc Med 2002;156(10):971-4.
2. de Haen M, Spigt MG, van Uden CJ et al: Efficacy of Duct Tape vs. Placebo in the Treatment of Verruca Vulgaris (Warts) in Primary School Children. Arch Pediatr Adolesc Med 2006;160(11):11215.
3. Wenner R, Askari SK, Cham PM et al: Duct Tape for the Treatment of Common Warts in Adults.Arch Dermatol 2007;143(3):309-13.

Answered by: Dr. Richard Haber

7. Negative Colonoscopy Screening

? If a patient has a colonoscopy for screening purposes and it is negative, do they need to do a faecal occult blood test (FOBT) yearly?

Submitted by: Roshan Dheda, MD, Bradford, Ontario

FOBT screening use guaiac-based test cards that patients prepare at home from three consecutive stool samples and forward to the clinician. If any of the three test cards is positive, then the patient is recommended to have a colonoscopy. If the colonoscopy is normal, then the recommendation would be to repeat the colonoscopy in ten years according to the Canadian Guidelines on colorectal cancer screening. It is unclear from the guidelines when to start screening if the patient and attending physician decide to go back to FOBT testing as the primary means for cancer screening after negative colonoscopy. The opinions are that it is reasonable to restart FOBT testing after five years to ten years

Resources : :
1. Canadian Association of Gastroenterology and the Canadian Digestive Health Foundation:Guidelines on coloncancer screening
2. Leddin D, Hunt R, Champion M, et al. for the Canadian Association of Gastroenterology and the Canadian Digestive Health Foundation committee on colon cancer screening.

Answered by: Dr. Richmond Sy

8. Vaginosis Treatment

Is it necessary to treat symptomatic vaginosis (swab done with routine pap smear)?

Submitted by: Rosemarie Sun, MD, Coquitlam, British Columbia

There are several organisms that may present on cultures taken at a well women exam the most common being bacterial vaginosis, fungal organisms and group B streptococcus. None need to be treated in the asymptomatic woman and often clear spontaneously. An exception is made in the woman who has asymptomatic vaginosis and who is booked for a vaginal gynecologic procedure, under this circumstance treatment should be given just prior to the procedure to reduce the incidence of endometritis.

Resources:

Schwebke, JR. Asymptomatic bacterial vaginosis: response to therapy. Am J Obstet Gynecol 2000;183:1434

Answered by: Dr. Victoria Davis

9. Naboline and Nightmares

How does nabilone stop nightmares?

Submitted by: Tim Seipp, MD, Penticton, British Columbia

Nabilone is a synthetic cannabinoid with therapeutic use as an antiemetic and as an adjunct analgesic for neuropathic pain. Its use to reduce post traumatic stress disorder (PTSD) symptoms, including nightmares, is an off label use that was reported by Dr. George Fraser, a psychiatrist of the Health Services of the Canadian army in Ottawa.

According to Dr. Fraser, the synthetic cannabinoid nabilone was effective in the treatment of symptoms of PTSD. Charts of 47 patients diagnosed with PTSD and having continuing nightmares in spite of conventional antidepressants and sedatives were reviewed after adjunctive treatment with nabilone was initiated. The majority of patients (72%) receiving nabilone experienced either cessation of nightmares or a significant reduction in nightmare intensity. Subjective improvement in sleep time, the quality of sleep, and the reduction of daytime flashbacks and night sweats were also noted by some patients. Nabilone's mechanism of action is not known, but it is believed to be related to its action as an endocannabinoid receptor agonist.

Resources:

1. Fraser GA. The use of a synthetic cannabinoid in the management of treatment-resistant nightmares in posttraumatic stress disorder (PTSD).
2. CNS Neurosci Ther 2009;15(1):84-8.)

Answered by: Dr. Hany Bissada

10. Laser Hair Removal

? What mechanism(s) of resistance are there for hairs not eliminated by photodynamic laser treatments? Management suggestions?

Submitted by: Frank C. Sandi, MD, Edmonton, Alberta

The majority (approximately 80%) of patients will respond to laser hair removal therapy. Generally, a patient can expect 20% to 30% hair loss per treatment but this can vary greatly. The percentage of hairs removed per treatment depends on several factors including the fluence (laser energy per unit area), colour of the hair (darkly pigmented hairs respond much better) and size of the hair.

Photodynamic therapy (PDT) for hair removal is not routinely used. This involves using a photosensitizer such as 5-aminolevulinic acid (ALA) and a light source to activate it, usually a visible wavelength of light but a laser could be used. This form of permanent hair removal would be independent of the pigment in the hair. Unfortunately, studies using PDT for hair removal showed only a 40% loss of hair at six months following a single treatment.

In patients wishing permanent hair removal and not responding well to laser hair removal, electrolysis could still be considered.

Answered by: Dr. Richard Haber

11. Treating Anemia in the Chronically Ill

? What is really the treatment for anemia in chronic diseases (renal failure, cancer, heart failure)?

Submitted by: Marc Mony, MD ,Etobiko, Ontario

Treatment of anemia of chronic inflammation (formerly called anemia of chronic disease) poses a difficult problem. Typically, the underlying diseases such as malignancy, rheumatologic disorders, or chronic infections should be treated. Often this is not possible and patients will require on-going transfusion support for symptoms and quality of life. Anemia associated with chronic renal insufficiency is a different entity also associated with an inadequate production of endogenous erythropoietin. Erythropoiesis stimulating agents (ESAs) such as erythropoietin may be given in this setting along with adequate iron supplementation. Anemia associated with malignancy should be managed cautiously if considering ESAs. ESAs are only indicated for treatment related anemia of cancer. Otherwise, judicious use of transfusions are required. In heart failure, transfusions must be performed slowly, cautiously, and with appropriate amounts of diuretics. The evidence for ESAs in heart failure is limited

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

12. Polycystic Ovary Syndrome

Kindly review the diagnosis, investigation and management of polycystic ovary syndrome (PCOS)

Submitted by: A. Mawji, MD, London, Ontario

PCOS is a syndrome not a disease reflecting multiple potential etiologies and variable clinical presentations. The presentation is usually that of menstrual irregularities, acne, hirsutism, obesity or hair loss. Any of these may be a solo feature or any combination. Diagnosis can be made clinically; ultrasound findings alone are not diagnostic. Investigation includes thyroid stimulating hormone, prolactin, follicle stimulating hormone (FSH), luteinizing hormone (usually two or more times greater than FSH), free testosterone and fasting insulin. The latter is more important in the obese; a glucose tolerance test and lipid profile may also be useful in this group. Thyroid and pituitary disorders may cause menstrual disorders. If the free testosterone is very high, further investigation should be performed to look for an androgen secreting tumor (ovary/adrenal), or late onset congenital adrenal hyperplasia (early morning 17-hydroxyprogesterone). There is no absolute management of this disorder in those who are obese, diet and exercise can vastly improve the symptoms. Oligomenorrhea can be managed with combined hormonal contraception or progestin withdrawal every 6 to 8 weeks. The latter is reserved for those individuals that have no evidence of androgen excess. If the fasting insulin is elevated and the patient wishes to conceive. Metformin can induce ovulation; in others ovulation induction may be required. In those with hirsutism spironolactone or anti-androgens may be indicated in addition to combined hormonal contraceptives.

Answered by: Dr. Victoria Davis

13. Urea Breath Testing

What is the long-term use of urea breath testing (e.g., recurrence of symptoms)?

Submitted by: Lynn Marriott, MD, Banff, Alberta

Urea breath testing is an excellent non invasive test for *Helicobacter pylori* infection. Depending on the lab It has a sensitivity of 90% and a specificity of 96%. It can be used for testing to see if a patient has a current infection with *H. pylori* and unlike the *H. pylori* serology test, can also be used to test for eradication or recurrence of *H. pylori* infection.

Answered by: Dr. Richmond Sy

14. HPV Testing for Men

Is there human papilloma virus (HPV) testing for a high risk male?

Submitted by: George Linn, MD, Kingston, Ontario

The currently available HPV test is only used as part of a screening program for cervical cancer. A specific test does not exist for males and females to check their HPV infecton status. Clearly if a verrucous lesion appears on the penis or in the perianal area, a biopsy would be warranted to minimize the chances of being "high risk". Condoms should always be used during sex. While condoms do not completely eliminate the risk of infection, they can certainly minimize the risk of acquisition and subsequent transmission of HPV. At this time, HPV vaccines are not approved for males but are currently being evaluated in this population. Additional information about HPV can be found at: http://www.cdc.gov/condomeffectiveness/docs/Condoms_and_STDS.pdf

Answered by: John Embil

15. Iron Supplements

Please advise on the appropriate therapy of isolated low ferritin

Submitted by: Loredana Di Santo, MD, Maple, Ontario

Clinically, a patient with an isolated low ferritin without anemia is said to have an iron depleted state rather than iron deficiency anemia. This typically precedes the appearance of microcytosis and the eventual development of anemia. The management or therapy in this situation is similar to iron deficiency anemia. Hence, it is still essential to determine the underlying cause of low iron stores just as in iron deficiency anemia and to replace these stores with iron supplementation. Oral iron supplementation is the preferred initial route of supplementation. We, however, would advise clinicians to be cautious with iron replacement in older patients with hemoglobin in the high normal range, as replacement may unmask an underlying polycythemia rubra vera.

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

16. Vitamin D Intake

Considering that vitamin D levels of 75 to 80 nmol/L decrease the risk of fracture, should we be monitoring this more regularly in patients with osteoporosis?

Submitted by: John E. Dawson, MD, Ottawa, Ontario

Osteoporosis is a very common problem in the general population, especially as our population gets older. It carries with it high morbidity and mortality due to the significant increased risk of fracture. Vitamin D is an essential hormone for maintenance of bone health. There is good evidence that vitamin D deficiency leads to poor bone quality and that adequate calcium and vitamin D intake can result in positive calcium balance and slows the rate of bone loss. The effect on fractures with Vitamin D is less clear, however, combining vitamin D and calcium supplementation reduces the risk of fracture. Both therapies are relatively inexpensive and quite safe as long as they are not taken in toxic doses. The definition of vitamin D deficiency is likely present at 25-hydroxyvitamin D levels < 35 nmol/L and vitamin D insufficiency is at a level of < 50 nmol/L and the optimal level is likely > 75 nmol/L. In the general population, screening for vitamin D deficiency is controversial. It may be more cost-effective and beneficial for the population to ensure an intake of vitamin D at least 1000 units q.d. without the need for monitoring, however, in someone who is at significant risk for vitamin D deficiency or who has osteoporosis it may be worthwhile to check the vitamin D level since they may need higher doses. In general, calcium intake should complement vitamin D supplementation. In patients with osteoporosis and inadequate dietary intake the recommendations are anywhere from 800 to 1000 units of vitamin D a day. However in someone with vitamin D deficiency these patients may require an initial treatment of 50,000 units of vitamin D2, or D3 orally once a week for 6 to 8 weeks and then 800 to 1000 units of vitamin D3 q.d. thereafter. In these patients, the 25-hydroxy Vitamin D level should be measured about three months after initiating therapy and the goal is to get them above 75 nmol/L. These recommendations assume that the patient is not taking medications that increase vitamin D metabolism, they don't have malabsorption, and they are not vitamin D resistant which is quite rare since all these patients require much higher doses of vitamin D.

Answered by: Dr. Ally Prebtani

17. Hypersomnia

Could you discuss the diagnosis and management of hypersomnia?

Submitted by: Geoff Inman MD, Victoria, BC

Hypersomnia may be due to narcolepsy or idiopathic. Diagnosis is made by history, physical examination and sleep studies. Narcolepsy is characterized by increased day time sleepiness with sleep episodes, cataplexy, sleep paralysis, hypnagogic and hypnopompic hallucinations and nocturnal sleep disruptions. Idiopathic hypersomnia is clinically similar to narcolepsy as the excessive day time sleepiness occurs in spite of apparently adequate night time sleep but cataplexy does not occur and there is no association with specific HLA type as seen in some patients with narcolepsy. Evaluation is done with nocturnal polysomnogram to assess night time sleep and multiple sleep latency test (MSLT) usually performed the next day to assess for early onset rapid eye motion (REM) sleep. Presence of two or more sleep onset REM periods during the four to five nap opportunities is considered to be consistent with narcolepsy. Idiopathic hypersomnia is a diagnosis of exclusion. Evaulation of idiopathic hypersomina is done with nocturnal polysomnogram to assess night time sleep and MSLT to rule out early onset REM sleep seen in narcolepsy, psychiatric assessment to rule out depression or any other psychiatric conditions, and a trial of increased sleep of an additional one to two hours each night to rule out chronic insufficient sleep syndrome. Once narcolepsy, psychiatric diseases and chronic insufficient sleep syndrome are excluded, the diagnosis of idiopathic hypersomnia is considered. Management includes medications and behavioural measures. The stimulants such as modafanil, methylphenidate, dextroamphetamine and pemoline may be helpful in promoting alertness. Principles of good sleep hygiene are also emphasized.

Answered by: Dr. Abdul Qayyum Rana

18. Hypothyroid in Pregnancy

How should I treat hypothyroidism in pregnancy? Just increase the dose?

Submitted by: Steve Choi, MD, Oakville, Ontario

It is important to monitor TSH levels during pregnancy as levothyroxine requirements often increase as the pregnancy progresses. If possible, the dose of levothyroxine should be optimized prior to conception. The TSH should be adjusted so that it is the lower part of the normal range. If the dose is increased during pregnancy, then after delivery the dose should be reduced to pre-pregnancy doses. Dx

Answered by: Dr. Vincent Woo