



1.

Reactive airway disease or asthma?

What is "reactive airway disease"?

Question submitted by:
Roshan Dheda, MD, MB, BCh,
LMCC, CCFP
Bradford, Ontario

Many people use the term reactive airway disease synonymously with the term asthma. However, this is often done to avoid "labelling" the patient with asthma.

While wheezing, associated with certain viral infections (particularly respiratory syncytial virus), is common in young children, only some will experience the same symptoms later in life. Therefore, some physicians have been reluctant to call these childhood wheezers asthmatics. They sometimes call this clinical presentation "reactive airway disease."

In true terms, reactive airway disease applies to the hyper-reactivity of the airway induced by a variety of stimuli, (*i.e.*, allergens, irritants, *etc.*). Almost all asthmatics have hyper-reactivity of the airway. However, one must demonstrate reversible airway obstruction by bronchodilators to diagnose asthma. Hyper-reactivity of the airways is also seen in a lower percentage of individuals with chronic bronchitis and allergic rhinitis without asthma.

Answered by:
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This month—13 Answers:

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2.

Can we stop the flu?

Should oseltamivir be offered to close household contacts of influenza patients?

Question submitted by:
Donald Collins-Williams, MD
Mississauga, Ontario

Oseltamivir, in conjunction with early treatment, is effective in preventing the transmission of Influenza A and B to close household contacts of those with influenza.

Oseltamivir should be started within 48 hours of contact, with treatment lasting a total of seven days. For patients over 13 years, the dosage is 75 mg/day.

The attack rate within households is 25%. Oseltamivir is up to 90% effective in preventing household contacts from acquiring symptoms of influenza.

Amantadine and zanamivir are viable alternatives to oseltamivir.

Answered by:
Richard Ward, MD, CCFP, FCFP
Clinical associate professor
Faculty of medicine
University of Calgary
Calgary, Alberta

3.

What to know about testosterone

What kind of testosterone studies should I order? And when should I order them?

Question submitted by:
Simon Treissman, MD, FRCSC
Kamloops, British Columbia

Hypogonadism in men is diagnosed by a combination of clinical judgment and laboratory measurement. In men, the testosterone level varies through the day (higher in the morning, lower in late afternoon) and from week to week. Thus, an early-morning sample is best and two separate readings are generally needed to diagnose an abnormally low value.

There is controversy regarding the best test to measure testosterone, as none are ideal. Testosterone is bound to carrier proteins; the hormone available to tissues is nonprotein bound, and likely bound to albumin, but not that bound to sex hormone binding globulin (SHBG). Thus, the total serum level reflects all these components and any change in the level of SHBG will falsely elevate or lower the total value, without changing the biologic activity.

Better measurements include:

- true free testosterone (expensive and, thus, not practical),
- bioavailable testosterone (free and albumin bound—not available in all centres) or
- calculated free testosterone index.

Because bioavailable testosterone is unavailable, I measure serum free testosterone index in the morning, and repeat if low.

Answered by:
Bernard Corenblum, MD, FRCPC
Professor of medicine
University of Calgary
Active staff
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4.

What's the goal in BP control?

What is the main objective in hypertension control? Blood pressure normalization?

Question submitted by:
Daniel Caron, MD
Montreal, Quebec

Prevention of premature death and disability from cardiovascular disease is the primary purpose.

Blood pressure should be lowered to < 140 mmHg systolic and < 90 mmHg systolic in general and to < 130 mmHg systolic and < 80 mmHg diastolic in those with diabetes or renal disease.

Lifestyle modification (smoke-free environment, healthy diet and regular physical activity) is important. Global cardiovascular risk management is required to optimize risk reduction. Therefore, patients with cardiovascular disease should be treated with an angiotensin-converting enzyme (ACE) inhibitor. Those with cerebrovascular disease should be on an ACE inhibitor and thiazide-like diuretic. Diabetes should be managed to current targets and acetylsalicylic acid (ASA) should be prescribed once blood pressure is controlled.

There is evidence that normalizing blood pressure in patients without compelling indications does not improve cardiovascular outcomes greater than lower blood pressure to the above indicated targets.

Answered by:
Norman Campbell, MD, FRCPC
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Calgary, Alberta

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5.

Where to start with personality disorder

What are the recommendations for treatment of personality disorder?

Question submitted by:
Rose Anne Goodine, MD, CCFP
Woodstock, New Brunswick

Patients with personality disorder are less likely to respond well to standardized psychiatric treatments. The most important management principle is to establish a workable doctor-patient relationship. It is advisable to set some parameters on the nature of the relationship, including determining appropriate frequency of visits and what type of symptom issues should prompt contact regarding more urgent attention.

Potentially habit-forming drugs should be avoided. There are no specifically approved medications for personality disorder. However, in patients with borderline personality, selective serotonin reuptake inhibitors (SSRIs) have been used with success for specific behavioural difficulties, such as self-destructive tendencies, impulsiveness and anger control.

SSRIs as first-line medical therapy for personality disorders may help reduce irritability and extreme dips in

mood. Mood stabilizers like lithium, carbamazepine and valproate may help stabilize mood and reduce irritability.

Atypical antipsychotics at low dosages may reduce impulsive behaviour and cognitive distortions.

It may take up to several months to determine if a specific medication has a role to play in the management of personality disorder.

Answered by:
John Jordan, MD, MCISc(FM),
CCFP, FCFP
Associate professor of
family medicine
University of Western Ontario
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6.

Chiropractic medicine—a good alternative?

How important is chiropractics as alternative medicine?

Should we encourage or discourage our patients from this alternative treatment?

Question submitted by:
Jayprakash V. Patidar, MD,
MB, BCh, FCP(Peds),
Brandon, Manitoba

Chiropractic deals with structural problems which have been estimated to comprise about 20% of visits to the offices of general practitioners and family physicians.

Physicians receive virtually no training in these types of problems and this lack of awareness was one of the main reasons why Dr. Andrew Still (a physician) founded osteopathy about 150 years ago.

Things haven't changed much. With the increasing complexity of pharmacology, there may be even less emphasis on structural problems now than there was in Dr. Still's time.

Chiropractors have filled this void. American-trained osteopaths are just now beginning to be recognized in Canada as medical doctor (MD) equivalents, so chiropractors have had the field to themselves.

As a practitioner of orthopaedic medicine, I have a number of philosophic differences with the approach of chiropractors. I feel structural problems can best be dealt with by medically

trained practitioners who have the background to provide comprehensive care, and are able to deal with the non-structural causes of musculoskeletal pain problems. This can only become a reality if appropriate training is introduced into the undergraduate medical curriculum, and carried on in post-graduate programs like family medicine, physiatry, rheumatology and orthopaedic surgery, where residents can hone their clinical skills.

Until the medical community is able to offer this kind of comprehensive service widely across the country, there will continue to be a need for chiropractors and we should not discourage patients from seeking this kind of approach.

Physicians should get to know the chiropractors in their area, as it is quite reasonable to collaborate in the best interests of the patient.

Answered by:
Craig Appleyard, MD, CCFP
Active staff
Renfrew Victoria Hospital
President, Canadian Association
of Orthopaedic Medicine
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7.

Combine with care

I have seen rosiglitazone used with insulin to decrease total dose. It is my understanding that rosiglitazone is not approved for use with insulin. Please offer your in this area.

Question submitted by:
Bob Bradstock, MD, BMSc,
CCFP, FCFP
Edmonton, Alberta

Rosiglitazone is one of a group of drugs called thiazolidinediones (TZDs). They make any insulin in the body work more effectively. If someone was taking insulin and took a TZD, less insulin would be needed.

A main side-effect of TZDs is fluid retention and occurs in 5% of subjects. In uncontrolled diabetes, the hyperglycemia gives rise to a diuresis. Correction of the hyperglycemia with insulin results in fluid retention. Thus, when TZDs and insulin are combined, there is a risk of congestive heart failure because of fluid retention.

Although not a formally approved use in Canada, the prescribing doctor may use them together if the benefit outweighs the risk of heart failure. The setting for this combination may be someone who is very

insulin-resistant, quite obese and not well controlled on large doses of insulin. In someone with good glucose values on smaller doses of insulin, it is harder to justify a TZD just to use less insulin as the glucose control will not necessarily be much better.

Answered by:
Edmond Ryan, MD, FRCPI, FRCPC
Professor of medicine
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8.

Tools to ease chronic pain

How do you make the transition from a morphine to methadone hydrochloride trial for chronic pain syndromes?

Question submitted by:
Stephen P. Ashwell, MD
Dawson Creek, BC

Methadone is a tricky drug. I have been using it for more than 30 years, first for narcotic addiction and now for chronic pain as well, and I still find it tricky. It is, however, extremely useful for chronic pain unresponsive to other therapies.

Methadone has a long half-life, and a variable one from patient to patient.

The equivalence to morphine (and hydromorphone) changes depending on the dose of morphine the patient is already taking. The higher the dose of morphine, the smaller the equivalent dose of methadone, but authors don't agree on specific equivalents. Because of this there are many recipes for switches, all of which scare me. I don't know if I will underdose or overdose. So, I don't switch—I add.

Specifically, I add 2.5 mg/day of methadone for one week. The patient changes nothing on his other medications. I advise to immediately cease methadone if there is any somnolence. After one week I increase to 2.5 mg twice daily, and after another week, to 2.5 mg three times daily. I continue increasing by 2.5 mg/week until either the pain is controlled or the patient experiences side-effects.

If somnolence appears at a given dose, I discontinue for three days and then prescribe 75% of the previous dose.

If the patient is reliable, I see him after one week, then every two to four weeks. If he is unreliable, I see him every week to ascertain that he is not somnolent.

Somnolence, if it appears, usually starts after day five of the initial dose or of the increased dose. If methadone is immediately stopped, the somnolence will decrease over four to five days.

I have had absolutely no problems using this method for a tricky drug that is extremely useful in chronic pain.

Answered by:
François Lehmann, MD
Co-ordinator, Pain Clinic
Verdun General Hospital
Chair, Department of family
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9.

Antidepressants—is there a right age?

With all the warnings for children's use of selective serotonin reuptake inhibitors (SSRIs) and selective norepinephrine reuptake inhibitors (SNRIs), what is the best practice for treatment of depression in children and adolescents?

Question submitted by:
Kersti V. Covert, MD,
DPsy(mcG), FRCPC,
Saint John, New Brunswick

In summer 2003, warnings about SSRIs and SSNRIs put a shadow over use of these drugs and changed the way of practising. Strictly according to the literature, the effectiveness of these drugs for major depression is weak and the side-effects are potentially serious (e.g., suicide, agitation, automutilation).

Only fluoxetine hydrochloride is formally approved for major depression in children and adolescents. In the most important studies related to major depression in children and adolescents, there is a low rate of response, but there is a clear support for the effectiveness of cognitive therapy in this pathology.

The physician should be cautious on his ways of practising, and antidepressants should not be prescribed on the first visit. The physician has to evaluate spontaneous remission and/or placebo response, completing the evaluation with a meeting with the parents to assess environmental impact.

After this first step, in the presence of endogenous or psychotic depression and a high rate of family history for affective disorders, a pharmacologic treatment could be tried.

Paroxetine hydrochloride and venlafaxine should not be prescribed. A first trial with fluoxetine hydrochloride at low doses could be started and gradually increased with good monitoring of the side-effects. In presence of anxiety, setraline hydrochloride, citaloprom HBr or fluvoxamine are good alternatives.

The decision to use pharmacologic treatment with a child or teenager should be discussed openly with the family and be well recorded in your files.

Answered by:
Carmen Beaugard, MD, FRCPC
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10.

Hidden causes of hyperkalemia

What are the causes of hyperkalemia in patients with normal creatinine and urea levels?

Question submitted by:
Angelo E. Bourkas, MD, MSc,
CCFP
Montreal, Quebec

Since urinary excretion of potassium represents > 90% of potassium excreted from the body, it is very unusual to observe hyperkalemia in the presence of normal plasma creatinine and blood urea. The following four conditions may explain such a finding:

1. Pseudohyperkalemia resulting from the in vitro release of potassium with hemolysis, marked leukocytosis or thrombocytosis; the patient is asymptomatic and the electrocardiogram is normal.
2. Massive intake of potassium (for example, in a suicide attempt) or rapid intravenous administration of large amounts of potassium.
3. Massive shift of potassium from red blood cells (hemolysis) or muscle cells (rhabdomyolysis) in a very transient fashion because the release of hemoglobin or myoglobin rapidly induces oliguric renal failure.
4. Very cachectic (very small muscle mass and production of creatinine) and anorexic (no protein intake) patients who maintain normal levels of creatinine and urea despite markedly reduced renal function.

Answered by:
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11.

Don't forget to flush!**Does "non-flushing" niacin provide the same benefits for cholesterol as regular niacin? If not, why?**

Question submitted by:
Martin Fleckenstein, MD
New Minas, Nova Scotia

Niacin (or nicotinic acid, vitamin B3) has demonstrated benefit in reducing cardiovascular events in secondary prevention, both as monotherapy and in combination with a statin. However, its chief side-effect (flushing) limits its use in many patients.

Unfortunately, most over-the-counter flush-free (or "non-flushing") niacin preparations have little to no free nicotinic acid and are ineffective in treating dyslipidemia.

Immediate-release niacin preparations, though they cause flushing, are still the cheapest and most effective. Niaspan® (a sustained-release preparation) has been used effectively and with relative tolerability and safety in the US, but are as yet unavailable in Canada.

Answered by:
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12.

Making the right choice for geriatric care

What factors should we consider when finding a new type of home for geriatric patients?

Question submitted by:
Mike Johnston, MD, FRCSC
Toronto, Ontario

Each province has different routes to follow, but these general guidelines should be helpful.

Options for accommodations include, from most independent to most supportive:

- house,
- apartment/condo,
- seniors' apartment,
- retirement home,
- long-term care and
- complex continuing care.

Consider patient factors, such as:

- age/social situation,
- rapidity of decline,
- cognitive impairment,
- safety concerns,
- family support,
- amount of extra help patient is able/willing to pay for privately,
- assistance Home Care/Access Centre is willing to provide,
- desire for company and
- financial situation.

Patients with cognitive impairment do better with routine and fewer changes in accommodation.

Patients without cognitive impairment may feel out of place in long-term care settings, as the majority of patients in nursing

homes have cognitive impairment.

Retirement homes with attached nursing homes may provide smooth transition to higher level care if needed in the future.

Hiring capable caregivers may provide a higher level of care than moving to higher level accommodation.

Short (*i.e.* a few hours) or longer-term respite care can be provided at home, in a retirement home or in a long-term care facility.

Remember—waiting lists for accommodation may be long. The Access Centre in your area may assess a patient's capacity to make decisions about level of care, provide counselling about the options and maintain the lists.

Order free copies of The Care Guide, which outlines options for seniors' housing and care online at www.thecareguide.com.

Answered by:
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Kingston, Ontario

13.

How should we manage persistent AF?

What is the current status of ablation therapy for persistent atrial fibrillation (AF)?

Question submitted by:
Jeffrey W. Lynskey, MD
Powell River, British Columbia

Few recent publications in AF ablation have included series of patients with persistent or chronic AF. Ablation techniques varied among reporting centres; however, no specific technique changes were applied for patients with persistent versus paroxysmal AF.

Pulmonary vein ostial isolation appears less effective in persistent than paroxysmal AF.¹

Favourable ablation results in persistent AF have been reported with techniques aimed at modification of left atrial arrhythmia substrates, which perpetuate AF.

Circumferential left atrial ablation encircling pulmonary veins, pulmonary vein antrum isolation or ablation of areas associated with complex fragmented atrial electrograms have been described and appear efficacious in both paroxysmal and chronic AF.²⁻⁴ However, similar results have not been widely reproduced in other centres. Current ablation techniques require further refinement as we gain a better understanding of AF mechanisms and ablation as well as the reduction of procedural risks.

Possible candidates for the procedure are symptomatic patients who have failed alternative therapies, and who have normal or only mild left

atrial dilation.

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Question answered by:
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