Food Allergens in Children

1. Is it important for young children to have skin testing done to determine food allergens (prior to an actual incident)?

Question submitted by:
Anonymous

By and large, skin testing to foods is highly accurate when the skin test (if properly done) is negative. A negative skin test to a suspect food allergen will have a negative predictive value as high as 98%. In contrast, a positive screening skin test to a food, in the absence of a suggestive history of allergy to that food, may have a positive predictive value of only 50% to 60%. So, for example, a child who has never come into contact with peanuts and has screening skin testing done showing a positive skin test to peanuts, has an *a priori* risk of reaction to peanuts of about 58%. The diameter of the positive skin test adds further information about risk, as does an ImmunoCAP test for allergen-specific IgE. Practically speaking, this type of screening skin testing is best reserved for individuals who are at high risk of developing an allergy to the food in question. Children with a positive family history of allergy to peanuts or tree nuts will benefit from screening skin testing prior to exposure. So too will children who have a strong family history of atopic disease. A negative skin test will be very reassuring. In young children with a positive skin test, avoidance of the suspect food would be appropriate until such time that additional definitive investigations, such as a supervised graded oral food challenge, can safely be done.

Answered by:
Dr. Peter Vadas

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Immunizations Post Guillain-Barre Syndrome

2. Should an 11-year-old girl with prior Guillain-Barre syndrome receive further immunizations?

Question submitted by:
Dr. Roshan Dheda
Bradford, Ontario

The question is germane with reference to influenza immunization, as there has been a rare association between Guillain-Barre syndrome (which is a paralytic syndrome of probable post-infectious origin) with influenza immunization. There is controversy over this, as there are a number of infectious disease consultants who will recommend immunization, given that the complications of influenza are much more severe in patients who have had Guillain-Barre syndrome. However, there are also a number of infectious disease consultants who feel that patients under these circumstances should not receive influenza immunization. This requires a full discussion with the family, as ultimately, given the controversy, the family's wishes should be respected. Other immunizations, such as tetanus, are not contraindicated in this setting.

Answered by:
Dr. Michael Rieder

The OC Pill Postpartum

3. When can one start the OC pill postpartum? What is the best OC to use?

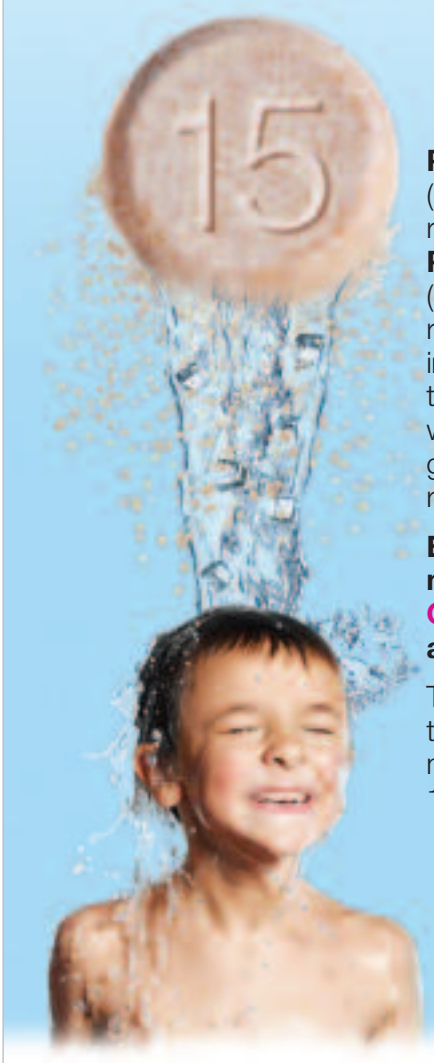
Question submitted by:
Dr. Roshan Dheda
Bradford, Ontario

There are two choices when starting the OC pill postpartum. The combined OC containing estrogen and progestin should not be started until six weeks postpartum which is the period of highest risk for venous thromboembolism. Although controversial, there is anecdotal evidence that the combined OC pill may interfere with milk production. I advise women who want to use this method to make sure that breastfeeding is well-established and that the infant is thriving. If a significant change in milk production is noticed, then the pill should be stopped immediately and a back-up contraception (condoms) should be used for the first month.

The progestin-only pill, which does not contain the thrombogenic estrogen component, may be started immediately postpartum. The evidence would suggest that there is no effect on breastfeeding with this method. However, efficacy is slightly reduced and requires more vigilant compliance. When a decision is made to wean, a patient may want to switch to the combined OC for better contraceptive efficacy.

Answered by:

Dr. Susan Chamberlain



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Hypertension in Children

4.

What investigations should be done in the work-up of a 16-year-old boy with hypertension? He is of normal weight and is otherwise healthy and fit. His BP is 144/90 mmHg.

Question submitted by:
Dr. Marianne Willis
Vanderhoof, British Columbia

The National High BP Education Program Working Group (NHBPEP) established guidelines for the definition of normal and elevated BP in children. The last update was in 2004.[1] The definition of childhood hypertension is statistically defined based upon the normal distribution of BP among healthy children.

History and physical examination should focus on clues that point to underlying etiologies:

- Family history of hypertension, diabetes, obesity, or renal disease
- Comorbid risk factors for cardiovascular disease, (*e.g.*, obesity, sleep apnea)
- Drug history, such as athletic performance-enhancing drugs

Laboratory investigations should include:

- Blood urea nitrogen, creatinine, electrolytes, urine analysis
- Complete blood count to look for anemia
- Renal ultrasound to look for kidney pathology
- Fasting plasma glucose and lipid profile
- Echocardiogram to assess the left ventricular mass to assess target organ damage

Most hypertensive children, especially those who are likely to have secondary hypertension, should be referred to a pediatric nephrologist or physician with experience in hypertension.

Reference
1. The Fourth Report on the Diagnosis, Evaluation and Treatment of High Blood Pressure in Children and Adolescents. Pediatrics 2004; 114(2 Suppl 4th Report):555.

Answered by:
Dr. Chi-Ming Chow

Screening for Celiac Disease

5.

Should all diabetics be screened routinely for celiac disease?

Question submitted by:
Dr. Hashmat Khan
Richmond Hill, Ontario

There is a relationship between Type 1 diabetes (juvenile) and celiac disease. One study from Ireland reported the association to be as high as 8%.[1] Most patients with celiac and diabetes have no GI symptoms. Currently, screening could be considered for all Type 1 diabetics; however, patients who have unexplained hypoglycemia, anemia, osteoporosis, weight loss or GI symptoms, such as diarrhea, bloating or flatulence, must be evaluated for celiac disease.

Reference
1. Cronin C, Feighery A, Ferriss J, et al: High Prevalence of Celiac Disease Among Patients with Insulin Dependent (Type 1) Diabetes Mellitus. Am J Gastroenterol 1997; 92(12):2210.

Answered by:
Dr. Jerry McGrath

Management and Prevention of Aphthous Mouth Ulcers

6. What is the best management and prevention of aphthous mouth ulcers?

Question submitted by:
Dr. Joseph A. D'Costa
Red Deer, Alberta

The best prevention is moderating any possible:

- underlying conditions (*e.g.*, GI disorders),
- hematologic problems (*e.g.*, anemia, stress, food allergies, toothpaste allergies [sodium lauryl sulphate, cinnamates]) and
- drugs (methotrexate, *etc.*).

Smoking tends to decrease apthous ulcers—a point most physicians are reluctant to advertise.

In terms of therapy, topical steroids are the mainstay. I prefer potent applications such as fluocinonide gel at the first signs of lesions. Oral tetracycline suspensions can be swished as needed. In severe cases, thalidomide can be tried if the side-effects are felt to be warranted by the severity of the symptoms.

Answered by:

Dr. Scott Murray

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Allergy Testing

7. Should we refer patients for allergy testing if they are known to have many environmental allergies and who do not wish to have desensitizing injections?

Question submitted by:
Dr. Andrea Coholic
Timmins, Ontario

Formal allergy skin testing serves a number of purposes. First and foremost, allergy skin testing (done in the context of a thorough history and physical examination) identifies relevant inhalant allergies, allowing for counselling on appropriate avoidance measures. Avoidance of exposures to relevant indoor and outdoor inhalant allergens effectively reduces symptoms and the need for medications. Second, identification of contributory airborne allergens allows for prescription of allergen immunotherapy, which currently remains the only form of immunomodulatory therapy which can alter the natural history of allergic rhinitis and allergic asthma. Allergy testing also provides a context for more thorough education about:

- atopy,
- allergic disease and its complications,
- environmental control measures and
- appropriate use of controller medications.

Answered by:

Dr. Peter Vadas

Functioning vs. Non-Functioning Adrenal Masses

8. What do we do if a CT scan reveals an adrenal adenoma that was not expected?

Question submitted by:
Dr. Claude Roberge
Sherbrooke, Quebec

Incidentally discovered adrenal masses, incidentalomas, are not uncommon given the frequency with which CT scans and MRIs are performed. The vast majority of these lesions turn out to be small, benign, non-functioning adrenal adenomas of no clinical significance. However, it is important to ensure that the incidentally discovered mass does not represent a functioning lesion, adrenocortical carcinoma or metastasis to the adrenal gland. The size of the lesion and the Hounsfield unit determined by the CT scan are helpful since lesions > 4 cm to 5 cm and those with higher Hounsfield units are suspicious and should be removed. Smaller, benign-appearing lesions may be followed at three to six monthly intervals initially and less frequently thereafter.

Functionality of the lesion can be determined by performing appropriate biochemical screening for pheochromocytoma, Cushing's syndrome, hyperaldosteronism and virilizing adrenal tumours. While most adrenal incidentalomas are non-functioning, up to 15% may be functioning.

Answered by:

Dr. Hasnain Khandwala

Medications to Control Nausea in Pregnancy

9. Aside from doxylamine succinate/pyridoxine hydrochloride, what other medications can be used for nausea in pregnancy?

Question submitted by:
Dr. B. Bhayan
London, Ontario

Many antinausea medications may be used to treat nausea and vomiting in pregnancy. The combination of doxylamine and pyridoxine is recommended as first-line treatment. Dimenhydrinate is another option for treatment and can be given either orally or rectally, which may be of particular benefit if the patient is unable to keep pills down. Ginger (250 mg q.6.h.) is another option that has some evidence of efficacy. Other medications can be added if these are ineffective or cannot be taken for other reasons. Options include prochlorperazine, promethazine, chlorpromazine or metoclopramide. Ondansetron and corticosteroids are usually reserved for patients admitted to hospital with hyperemesis gravidarum that is refractory to the previously mentioned choices.

Answered by:

Dr. Susan Chamberlain

Benefits of Fish Oil Consumption

10. What is the evidence that fish oil supplements reduce LDL-C and what is the recommended dose to take?

Question submitted by:
Dr. Michael Starr
Pointe-Claire, Quebec

Fish oils contain eicosapentaenoic acid and docosahexaenoic acid. Both of these fats are omega-3 fatty acids which are polyunsaturated. Although the body can synthesize these fats from α-linolenic acid, this conversion is believed to be inefficient in many people. Reports that populations with high omega-3 fatty acid intake (such as the Inuits) have low rates of heart disease sparked interest in the omega-3 family of fatty acids. Omega-3 fatty acids have a small effect in reducing serum cholesterol, but have also been found to be beneficial in decreasing platelet aggregation and lowering the serum fibrinogen and triglyceride concentration. In addition, antiarrhythmic effects have been reported.

In a cohort of women from the Nurses' Health Study (NHS), higher consumption of fish and omega-3 fatty acids were associated with a lower risk of coronary heart disease and coronary heart disease deaths. One randomized trial of 223 patients found that, compared with placebo, dietary supplements of fish oil concentrate (approximately 1.5 g q.d.) for two years reduced the progression and enhanced the regression of angiographically-determined coronary atherosclerosis.

Answered by:

Dr. Chi-Ming Chow

The Effects of Disease-Modifying Antirheumatic Drugs

11.

Should all patients with rheumatoid arthritis (RA) be treated with disease-modifying antirheumatic drugs (DMARDs)?

Question submitted by:
Anonymous

Untreated RA almost always progresses to joint destruction and a lifelong disabling disease. Only a minority of patients with recent onset polyarthritis (< 10%) have a self-limited disease course with complete remission. It is also possible that this group of patients has a disease process different from true RA. DMARDs control the disease, improve function and quality of life and prolong longevity. For this reason, all patients with RA should be offered DMARD treatment. In patients with more longstanding disease, spontaneous remission and ability to withdraw DMARDs may occur in < 10%. For this reason, treatment is mostly continuous and lifelong. DMARDs should be initiated as early as possible when a patient is newly diagnosed with RA in order to prevent irreversible damage.

Answered by:

Dr. Mary-Ann Fitzcharles

The Status of Malaria in the Dominican Republic

12.

What is the current status of malaria in the Dominican Republic?

Question submitted by:
Dr. Len Grisac
Etobicoke, Ontario

Malaria is likely to be a recurring problem in the Dominican Republic, largely because it is poorly controlled in neighbouring Haiti. What is relatively new is that malaria had been mostly restricted to the region bordering Haiti and to the urban area around Santo Domingo and has now involved other areas. During the past three years, several cases have occurred in tourists who had not travelled outside the resorts in the province of La Altagracia. This province includes the popular resorts in Punta Cana and Bavaro. Since new cases occurred shortly after initial recommendations for malaria prophylaxis were rescinded, these recommendations now remain in effect indefinitely. This will likely be reviewed if there are no further cases among tourists for at least one year.

Chloroquine remains an inexpensive, effective and well-tolerated prophylactic agent for this region.

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Answered by:

Dr. Michael Libman