



Photo: Claudio Calligaris

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L'Hôpital de Montréal pour enfants
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CONTINUING EDUCATION

MONTREAL CHILDREN'S HOSPITAL PEDIATRICS COURSES

Location: Centre Mont-Royal, 2200 Mansfield, Montréal

Date: February 8, 2012

Title: PEDIATRIC EMERGENCY MEDICINE
PROTOCOL COURSE

Information: This course, intended for pediatricians, nurses, and emergency medicine physicians, looks at new developments in Pediatric Emergency Medicine.

Date: February 9-10, 2012

Title: PRACTICAL PROBLEMS IN PEDIATRICS

Information: For family physicians, pediatricians, nurses, residents, students and allied health care workers. The focus is on practical information and specific management guidelines for immediate use in the office setting.

Registration: www.pedscourses-mch-mcgill.ca



MCGILL UNIVERSITY CHILD PSYCHIATRY DIVISION

A series of four bilingual seminars for professionals interested in the field of mental health. These seminars will be presented in **English on Tuesday afternoons** and in **French on Thursday afternoons**.

Location: MCH, 2300 Tupper, Montreal, Rm D-182

Date: Tuesday, January 10, 2012, 3:00 to 5:00 p.m.

Title: CATCHING UP WITH THE NEW ADOLESCENCE:
PRACTICE AND THEORY

Presenter: Mounir Samy, MD

Date: Tuesday, February 14, 2012, 3:00 to 5:00 p.m.

Title: SOCIAL SKILLS TRAINING FOR YOUTH WITH AUTISM
SPECTRUM DISORDERS (ASD)

Presenter: Jack Strulovitch, MSW

Date: Tuesday, March 13, 2012, 3:00 to 5:00 p.m.

Title: AN OVERVIEW AND ASSESSMENT OF CHILDREN
WITH ACUTE PSYCHIATRIC DISORDERS PRESENTING
TO THE EMERGENCY ROOM

Presenter: Brian Greenfield, MD

Date: Tuesday, April 10, 2012, 3:00 to 5:00 p.m.

Title: BIPOLAR DISORDER IN CHILDREN AND YOUTH

Presenter: Lila Amirali, MD

Registration: www.mcgill.ca/childpsychiatry



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CLINICAL NEWS

Evening the Odds on Concussions

**Fifty Years as a Leader in
Pediatric Neurosurgery**

Treating UTIs at Home

**First Clinic in Canada to Treat
Chest Wall Deformities**

RESEARCH NEWS

**Uncovering the Causes of
Peanut Allergies**

McGILL RUIS NEWS

**Shriners Hospital: Ponzeti
Technique for Clubfoot Treatment**

CONTINUING EDUCATION

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Pediatric ER	514-412-4499
Neonatal Intensive Care	514-934-4425
.....	1-888-590-1617
Pediatric Intensive Care	514-412-4238

CLINICAL NEWS

Evening the Odds on Concussions

The Children's Neurotrauma and Mild Traumatic Brain Injury Programs aim to improve awareness and ensure timely management of concussions

Two weeks after his concussion, Sébastien came to the Emergency Department of the Montreal Children's Hospital (MCH) of the McGill University Health Centre (MUHC). He was nauseous, complaining of headaches, and fatigue. Needless to say, his parents were concerned. This was Sébastien's fourth concussion and he had recovered faster previously.

According to Debbie Friedman, Trauma Director at the MCH, a concussion may result in a variety of symptoms that can appear immediately, hours later or even the following day. "A concussion is a mild traumatic brain injury. For the first one to two weeks, resting is the only way to recover. Cumulative effects may result if a subsequent concussion happens in a short time."

The MCH Neurotrauma and Mild Traumatic Brain Injury Programs see hundreds of patients each year with sports-related concussions. They have been working for over a decade on improving the awareness, management and prevention of these and other types of injuries. The program has been expanded to include the Concussion Clinic, which has a stream specifically dedicated to children and teens who are athletes. "We encourage their physical activity, while emphasizing the importance of safety," says Ms. Friedman. "It's a balance. It is important to never play through an injury."

To help parents, coaches, teachers, and athletes better understand concussions and their impact, the MCH trauma experts have developed the Concussion KiT as an education tool. Brochures and guidelines have also been distributed to the medical and athletic community. The MCH trauma website (www.thechildren.com/trauma) is also an excellent source of trauma-related information.

"Our aim is to increase awareness of the seriousness of concussions," says Ms. Friedman. "If concussions are not recognized and managed properly, the consequences can be significant and long lasting."

For more information:
**MCH Neurotrauma and Mild
Traumatic Brain Injury Programs**
Tel.: 514-412-4400, ext. 23310
Fax: 514-412-4254





CLINICAL NEWS

Fifty years as a leader in Pediatric Neurosurgery

“Children are not just small adults, they need special pediatric care,” says neurosurgeon Dr. Jean-Pierre Farmer, director of Pediatric Surgical Services at the Montreal Children’s Hospital (MCH) of the McGill University Health Centre (MUHC). “This especially applies to a field like neurosurgery.”

It’s this sentiment that motivated Dr. Preston Robb, then MCH Chief of Neurology, and Dr. John Blundell to create the MCH Neurosurgery Department 50 years ago.

“In the 60s, we didn’t have the modern imaging technology that we have today,” says Dr. José Luis Montes, MCH Chief of Neurosurgery. At the time, diagnoses of spina bifida defects, hydrocephaly, epilepsy, and tumours were typically done by trans-illumination and x-rays. For more elaborate problems, invasive procedures such as angiograms were used.

In 1993, The MCH was among the first Canadian hospitals to install an MRI for pediatric patients. Another Canadian pediatric first happened in 2009 with the installation of an intraoperative MRI, which allows surgeons to see the brain without interrupting surgery.

In 2003, Dr. Jeffrey Atkinson joined Drs. Farmer and Montes. The team has become a world leader in the treatment of children with epilepsy, spasticity and congenital tumours.

Spasticity surgery

The MCH was the first hospital in Canada, and only one of two today, to perform surgery on children suffering from spasticity, a neuromuscular condition in which muscles are continuously contracted. These stiff or rigid muscles affect normal activity, including walking, movement, and speech. Spasticity in children has numerous potential causes, most of which include some form of damage to the nervous system, such as brain damage caused by a lack of oxygen, brain trauma, stroke, or spinal cord injury.

Surgery for severe chronic spasticity includes orthopedic and neurological approaches. The MCH performs a procedure known as selective dorsal rhizotomy, in which the nerves that carry sensory information to the spastic limbs are cut where they emerge from the spinal cord. The procedure has been shown to improve leg function. “This surgery helps children sit or even walk again,” says Dr. Farmer.



Photo: Daniel Héon

Epilepsy surgery

The MCH is also considered a world leader in the field of epilepsy surgery. In the 1980s, it became one of the first centres in the world to perform surgery on children with epilepsy. Up until then, primary care physicians widely believed children with epilepsy would simply outgrow the illness. As a result of this misconception, surgery to control or even stop the seizures was often delayed for years. Also around this time it was becoming quite clear that certain catastrophic epileptic disorders in infants and young children were causing long-term damage to their developing brains. “Surgery removes the lesion in the brain that is initiating the seizures,” says Dr. Montes. “Some of these lesions are benign tumours and some are malformations of the brain or brain’s circulation. Our hope is by removing the origin of the seizure, the seizures will stop. The great advantage of the MRI is that we can feel more confident about removing non-vital parts of the brain.”

For more information or to refer a patient:
MCH Department of Pediatric Neurosurgery
Tel.: 514-412-4492



Help me build a brand new Children’s

CLINICAL NEWS

Treating UTIs at Home

A combination of MCH technology and support allow babies to be treated in outpatient program

Caden was only three-and-half weeks old when he made his first visit to the Montreal Children's Hospital (MCH) of the McGill University Health Centre (MUHC). After arriving at the emergency department with a fever, he was diagnosed with a urinary tract infection (UTI). He was admitted and provided with intravenous (IV) antibiotic therapy. However, thanks to a new outpatient program, rather than completing this treatment in hospital, Caden was sent home a few days later.

"Most children less than 30 days of age are treated with IV antibiotics for UTIs," says Dr. Hema Patel, MCH Director of Intensive Ambulatory Care Services. "This is because we consider them to be a particularly fragile population – they can get very sick, very quickly."

Traditionally these patients need to stay in hospital for the duration of their treatment. However, with the advent of antibiotics that require dosing only once every 24 hours and expertise that allows use of peripherally inserted central catheters (a form of IV that can be used for a prolonged time), a new treatment regimen is possible. This allows for babies, once stabilized, to return home to complete their therapy.

To receive their antibiotics, they return daily to the MCH, or in some cases, to the CLSC.

"We had all the right ingredients to start up an outpatient program for babies, which is similar to the one we have for older children," says Dr. Patel.

"The families love it," says Dr. Patel. "We have a 24-hour hotline and this, in addition to the daily visits, provides the comfort and support the families need."

"I was glad Caden was able to be home," says Tara Gardetti, Caden's mother. "We had faith in the process and were confident about his care."

For more information:
MCH Intensive Ambulatory Care Services
Tel.: 514-412-4420
Fax: 514-412-4424

CLINICAL NEWS

Shriners and MCH

open first clinic in Canada to treat chest wall deformities

Shriners Hospitals for Children® - Canada and The Montreal Children's Hospital (MCH) of the McGill University Health Centre (MUHC) have established the Chest Wall Anomaly Centre, a unique, joint national clinic to evaluate and treat children with congenital chest wall deformities. Affecting as many as one child in a thousand, the disorder is often misdiagnosed or underdiagnosed in toddlers.

The two most common types of the disorder, *pectus excavatum* (a caved-in sternum or funnel chest) and *pectus carinatum* (a protrusion of the chest wall or pigeon chest) result when the ribs and sternum develop in an unusual manner. Mild deformities often are not discovered by physicians unless children are referred for coincidental scoliosis. More severe chest deformities may lead to thoracic insufficiency syndrome, which have significant impact on an infant's ability to grow and develop normally.

"These deformities are often silent sources of major distress for the growing child and teenager, as well as his or her family", says Dr. Sherif Emil, Director of Paediatric General Surgery at McGill and the Montreal Children's Hospital, who envisioned the new Centre. "Paediatricians and family doctors often dismiss the anomaly, believing that the only treatment is radical surgery. However, in the last decade there has been a revolution in the treatment of these anomalies with many minimally invasive and less invasive options available," he adds.

The Chest Wall Anomaly Centre is the first of its kind in Canada and one of few such centres in North America. According to Dr. Jean A. Ouellet, Deputy Chief of Staff at Shriners Hospitals for Children – Canada, "Our multidisciplinary team will develop a centre of excellence by concentrating all of our expertise in a one-stop centre for treatment diagnosis and evaluation."

**For more information
or to refer a patient:**
Chest Wall Anomaly Centre
Tel.: 514-282-7201



MCH surgeons Dr. Robert Baird (c.) and Dr. Jean-Martin Laberge (r.) examine a compression brace on patient Antoine Marcil.

Photo: courtesy of Shriners Hospitals for Children® - Canada



RESEARCH NEWS

Infection and Immunity Research

Uncovering the causes of peanut allergy

Canadian researchers, in partnership with international collaborators, have made a significant breakthrough in understanding the causes of peanut allergy. The team of Dr. Ann Clarke from the Research Institute of the McGill University Health Centre, including Drs. Reza Alizadehfar and Moshe Ben-Shoshan from the Montreal Children's Hospital, has helped to identify a gene that could double or triple the risk of a child developing peanut allergy.

The gene of interest - filaggrin - has previously been shown to be a significant factor in causing eczema and asthma. "We know that there is an inherited tendency towards allergies," said Dr. Clarke. "We wanted to see if a gene involved in eczema was also involved in peanut allergy."

Filaggrin is responsible for a skin barrier protein that prevents foreign substances, such as irritants and allergens, from entering the body. A mutation of this gene decreases the effectiveness of this barrier, allowing substances to enter, which presumably leads to a range of allergic conditions. The researchers found that the odds of having a

mutation were higher in people with peanut allergy than the general population, regardless of whether or not they have eczema.

Peanut allergies affect up to 2% of children in Canada and may result in severe or life-threatening allergic reactions. The number of people affected by peanut allergies appears to have increased dramatically over the past 20 to 30 years, but the causes of the disease are still unknown.

This is the first time that any genetic association with peanut allergy has been demonstrated in more than one population, making it more likely to be a genuine risk factor.

For more information:
MCH Research Institute
Tel.: 514-412-4300



McGILL RUIS NEWS

Early Intervention and Teamwork

Key in the treatment of clubfoot

World-wide, clubfoot is one of the most common congenital orthopedic deformities with a prevalence of about 1 in 1000 births. The treatment of clubfoot can be surgical, non-surgical or a combination of the two.

The Ponseti Technique

In 2001, Dr. Reggie Hamdy and Dr. Thierry Benaroch introduced the Ponseti technique at Shriners Hospitals for Children®-Canada in Montreal. The technique involves three years of treatment. It is extremely intensive, however with a success rate close to 90%, parents and healthcare professionals feel it is well worth it. The goal of clubfoot treatment is to obtain a functional plantigrade pain-free foot with good mobility.

When infants are born with clubfoot, they are referred to Shriners Hospitals in Montreal for treatment, ideally within the first week of life. They are immediately evaluated by an orthopedic surgeon. Then a nurse explains every step of the technique and the role the family will play in the treatment.

The first part of the technique involves the surgeon manipulating the feet which are then immobilized with the precise molding of a cast. For a period of five to six weeks, families return to the Hospital on a weekly basis. At each visit, the cast is removed; the feet are further corrected with more manipulation and a new cast is applied.

Nurses Deborah Kenney, Pierre Ouellet and Mario Rinaldi are responsible for casting as well as teaching parents about the technique. They help parents cope with the social and emotional impact of the

treatment. As well, the nurses work in collaboration with doctors and refer the family to physiotherapy or occupational therapy services if required for appropriate development.

The surgery

Once the pediatric orthopedic surgeon is satisfied that he has obtained the desired realignment of the foot, he performs tendon heel cord surgery to correct the position of the heel. Following the surgery, the baby spends three more consecutive weeks in a cast.

The parents' role in treatment

After the cast is removed, parents play a crucial role in the treatment, as the success of the next two phases depends entirely on them. First, the child is fitted with shoes attached to a t-bar (Denis Brown Brace). To maintain the proper alignment of the corrected foot, it is vital that the baby wear the shoes and t-bar for 23 hours a day for three months; then, only during nap time and at night until the age of three years old. At this time, treatment is usually successfully completed.

To refer a family to
Shriners Hospitals for Children-Canada
Tel.: 1-800-361-7256 or 514-282-7223



A baby before (top) and after (bottom) undergoing treatment for clubfoot using the Ponseti Technique