

## The multiple facets of bone diseases

Did you ever wonder why your grandmother touted the virtues of a spoonful of cod liver oil every day throughout the winter? The Canadian Paediatric Surveillance Program (CPSP) will sponsor a concurrent session focusing on two important bone diseases, nutritional rickets and osteogenesis imperfecta, at the June 2004 Canadian Paediatric Society's annual conference in Montreal, Quebec. Dr Charles Scriver, a pioneer advocate for adding vitamin D to milk in Canada in the 1950s, will discuss the crucial role of vitamin D in rickets and the evolution of prevention, from cod liver oil to milk supplementation. He will also review the importance of

implementing genetic screening for paediatric diseases and disorders. Drs Leanne Ward and Francis Glorieux will present, respectively, surveillance results of nutritional rickets and a general overview of osteogenesis imperfecta through the CPSP. The session will provide timely insight into the prevention and early recognition of these two conditions. It will also increase awareness of their serious clinical and public health implications. A review of the risk factors and the investigations needed to adequately assess these infants and children will be presented together with national incidence data to further define the epidemiological profile.

### LEARNING POINTS

The concurrent session will highlight:

#### Nutritional rickets

- Nutritional rickets is still occurring in Canada.
- A subset of the paediatric population is particularly at risk for rickets. Risk factors, including skin pigmentation, lifestyle and cultural practices, affect vitamin D synthesis in the skin from the ultraviolet B light fraction of sunlight.
- Significant morbidity, including fractures, limb deformities, poor growth and delayed gross motor milestones, has already occurred by the time rickets is diagnosed.
- While breast milk is the ideal fluid source for infants, it is not a rich source of vitamin D. Therefore, all exclusively breastfed infants should receive vitamin D supplementation as per the Canadian Paediatric Society's recommendation.

#### Osteogenesis imperfecta (OI)

- Clinical spectrum of OI has expanded to include at least seven recognized types.
- A genetic profile of OI types V to VII is evolving.
- Early OI diagnosis allows a window of opportunity for starting beneficial treatment in infancy and early childhood.
- Adequate evaluation can differentiate the abused child from the child with congenital bone fragility due to OI.

*The Canadian Paediatric Surveillance Program (CPSP) is a joint project of the Canadian Paediatric Society and Health Canada's Centre for Infectious Disease Prevention and Control that undertakes the surveillance of rare diseases and conditions in children. For more information visit our Web site at <[www.cps.ca/english/cpsp](http://www.cps.ca/english/cpsp)> or <[www.cps.ca/francais/pcsp](http://www.cps.ca/francais/pcsp)>.*