


[One of the authors responds:]

The Osteoporosis Society of Canada (OSC) believes that pediatric osteoporosis is an emerging problem in this country. However, the OSC guidelines were developed primarily to address osteoporosis in adults; accordingly, they should not be used for children, except for the well-supported guidelines on physical activity and nutrition.

The paucity of recommendations specific to children in the recently published guidelines was unfortunate, yet justifiable. In contrast to the situation for adults, few high-quality osteoporosis trials involving children have been conducted, particularly with regard to treatment. This scarcity of trials makes it difficult or impossible to develop evidenced-based guidelines. Nonetheless, it is recognized that severely afflicted children must be treated. Because of the complexity and predominantly secondary causes of pediatric osteoporosis, its diagnosis and treatment should be reserved for specialists who keep abreast of this rapidly evolving field and who must combine sound clinical judgement with the limited evidence that is available.

The diagnosis of osteoporosis in children is complicated and unclear. At the root of the problem is the size dependency of bone mineral density data obtained by dual-energy x-ray absorptiometry. The density of smaller bones is systemically underestimated and that of larger bones is overestimated, which causes errors in interpretation when comparing children’s values with adult norms. When comparing one child with another and when comparing values obtained during growth. Many methods have been proposed for dealing with this size dependency,2,3 but none are in regular clinical use, nor have any been related to fracture risk. Canadian pediatric bone mineral density and bone mineral content norms are available, yet the proper use is unknown.

The roots of osteoporosis lie in childhood; as much bone is laid down during puberty as is lost in all later life.4 Thus, any perturbation of normal bone accrual during growth (related to alcohol, smoking, bone-robbing medications, or lack of adequate physical activity or calcium) will have devastating effects on skeletal health in later years. The key is prevention.

More quality trials in the diagnosis, prevention and treatment of pediatric osteoporosis are sorely needed.

Jacques P. Brown
Chair, Scientific Advisory Council
Osteoporosis Society of Canada
Toronto, Ont.

References

Corrections

Note the following additional corrections to the CMAJ supplement containing the 2002 clinical practice guidelines for the diagnosis and management of osteoporosis in Canada.

On page S3, right column, under Definitions, the following text replaces the existing text for numbers 1-3.

1. Normal BMD is defined as a T-score between +2.5 and –1.0, inclusive (i.e., the patient’s BMD is between 2.5 standard deviations [SDs] above the young adult mean and one SD below the young adult mean, inclusive).

2. Osteopenia (low BMD) is associated with a T-score between –1.0 and –2.5 …

3. Osteoporosis is defined as a T-score of –2.5 or below.

Page S3, right column, fourth paragraph, “whose T-score is below –2.5” should read “whose T-score is at or below –2.5.”

Page S5, Table 3, the first bullet under “Major risk factors” should read “Age ≥ 65 years.”

Page S7, Fig. 2, the box in the upper right of the figure should read “Low BMD by DXA (T-score at or below –2.5).”

Page S11, left column, last paragraph, “and age over 65” should read “and age 65 and older.” Other corrections appear in CMAJ 168(4) and 168(5).

Reference