

ABCs OF OSTEOPOROSIS PREVENTION FOR TEENAGE WOMEN

BONE HEALTH: AS SIMPLE AS “ABC”!

The teen years are a time of major change occurring before and after the first menstrual period. During these years bone not only increases in size (with growth) but also becomes stronger to reach **peak bone** mass. This is the best time in your life to build strong bones and begin lifelong healthy bone habits.

Below are some practical things you can do (with the support of a parent or health care provider) to build strong bones. A high peak bone mass prevents most of osteoporosis (weak bones that easily break) later in life. Bone health depends on healthy living.

“A” IS FOR “ACTIVE”

Bones gain strength through forces from muscle work or gravity. Bones are rapidly growing in size before the first period (menarche). After that bones continue to gain strength. Exercise at least half an hour every day. Any active thing you enjoy doing is good for bones, whether it is walking, dancing, cycling, swimming or playing sports or games. Exercise is also good for whole body health. Being active is a life-long habit—start now!

“B” IS FOR “BRAWNY”

No, you don’t want to be muscle-bound—but normal weight and good muscle are important for bones—think about gaining muscle definition. Around menarche we also gain wider hips and larger breasts. This weight is normal and important for healthy bones. Worrying about gaining weight (just the worry itself) causes bone loss. Girls who are thinner are also less likely to have normal menstrual cycles. Dieting and weight loss, no matter how careful, always cause bone loss.

“C” IS FOR “CALCIUM”

Calcium is not only a bone building mineral but also helps stop bone loss. During the teens you need 1300 mg of elemental calcium each day. That means **you need 4 high calcium servings** each day. Each glass of milk or fortified drink (soy or rice or orange juice) contains 300 mg of calcium. So does ¾ cup of yogurt, or a one inch square hunk of cheese. If your diet doesn’t give that much calcium, it is wise to take calcium pills—bedtime is best. Up to 3,000 mg/d of calcium is safe.

“D” IS FOR “VITAMIN D”

Vitamin D is needed to absorb calcium, for muscle and general health. We can make Vitamin D in our skin in the late spring, early fall or summer sun (without sun-

screen). But sun and foods don’t give enough Vitamin D. During the teen years you need at least 600 IU of Vitamin D each day. An inexpensive multivitamin gives 400 IU and you can add a 400 IU vitamin D pill. Or simply take Vitamin D 1000 IU/d.—it is safe to 4,000 IU/day. Taking Vitamin D is a good habit to begin.

“E” IS FOR “EASY GOING “

Does feeling good about our body and our value as a person help bones? Yes! Hormones made when we are stressed, prevent bones from growing stronger with activity or may actually cause bone loss.

The teen years are times of change. To decrease stress we need **Three A’s**: people that love us (**A**ffection), friends that respect us (**A**ceptance) and to feel that we are growing and learning (**A**chievement). If you feel troubled, talk with a trusted friend, or find further help. Anything we can do to decrease stress (a walk, yoga, relaxation, a good sleep) will help bones!

“F” IS FOR “BONE FORMATION”

After growth is complete, bones renew themselves by getting rid of the old and replacing it with new bone. Osteoblasts are cells that build new bone. Osteoblasts work slowly and do not always keep up with bone loss, especially with weight loss or if periods are skipped or irregular. **Progesterone** is a natural hormone made by the ovary after egg release (ovulation). It is also an osteoblast-stimulating hormone. If you are skipping periods or not ovulating, taking progesterone for 14 days each month will help build new bone. (See the “Cyclic Progesterone Therapy” handout on cemcor.ubc.ca.)

Contraceptive choices also relate to bone health. Depo-Provera causes bone loss but it recovers when you stop. However, the Pill (oral contraceptive) prevents peak bone mass—this is not regained. Always using a diaphragm/cervical cap/condom plus spermicidal jelly prevents pregnancy and causes no bone harm.

“G” AND “H” ARE FOR “GOOD HABITS”

Good habits mean regular eating and sleeping 😊! Cigarettes not only cause bone loss, but also lung damage and cancer. If choosing to drink alcohol, have no more than one drink (beer or 4 oz glass of wine) a day—more alcohol increases risks for breaking bones. Finally drink no more than 2 caffeine-containing drinks a day (coffee or colas). Extra caffeine causes calcium loss through our urine.

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