Meet Dr. Nanette Santoro. Dr. Santoro has been an active clinician and researcher in reproductive endocrinology since 1986. Prior to becoming Chair of the Department of Ob/Gyn at the University of Colorado, she directed the Division of Reproductive Endocrinology at two medical schools: New Jersey Medical School and the Albert Einstein College of Medicine. She is the author of more than 200 scientific publications and three books. Dr. Santoro’s major research interests include the reproductive endocrinology of premature, peri-, and postmenopause, infertility, and the physiology of gonadotropin-releasing hormone secretion. She has been involved with numerous industry- and government-supported clinical trials, including the Study of Women’s Health Across the Nation (SWAN), the Kronos Early Estrogen Prevention Study (KEEPS), and the Reproductive Physiology of Ovarian Failure, and is a co-editor of the Textbook of Perimenopausal Gynecology, Amenorrhea: A Clinician’s Guide., and Primary Ovarian Insufficiency.

Dr. Santoro’s laboratory has specialized in the development and measurement of urinary metabolites of reproductive hormones. In this way, field studies can be performed that allow for daily hormone assessments without the inconvenience of blood drawing. The Santoro lab has recently been awarded an R01 to follow up on intriguing findings from past work examining how obesity affects the reproductive axis in women. Initial studies found evidence for suppression of hypothalamic or pituitary function in obesity that is not due to known feedback mechanisms. Current studies will tease out the site of the defect and help clarify the relationship between fertility and body mass.

Patients have questions. We have answers. Here are some commonly asked questions to help patients have an informed discussion with your health care provider. She also serves as a Councilmember at large for the Endocrine Society.

How are bone loss and menopause related?

After menopause your ovaries substantially reduce production of estrogen, which is the hormone that helps to keep your bones strong. Even during perimenopause (the period of more than three to five years, or even longer before menopause), when your periods start to become irregular, your estrogen levels may start to drop off and you could start to lose bone more rapidly. Over time, this bone loss can lead to osteopenia (low bone mass) or even osteoporosis, a condition in which bones become weak and are more likely to break (fracture).

Throughout life your body keeps a balance between the loss of bone and the creation of new bone. You reach your highest bone mass at about age 30. Then, sometime between age 30 and 35, your body begins to lose bone faster than it can be replaced. Menopause — the time when menstrual periods end, which usually happens in your late forties or early fifties — dramatically speeds up bone loss. As hormone levels decrease, you are at an increased risk for low bone mass and density, which increases your risk for fractures and other injuries.

What the Endo Says: Menopause and Bone Loss Edition

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How do you minimize and treat bone loss?
Diet and lifestyle can help prevent and treat bone loss. Successful treatment of osteoporosis, however, usually involves a combination of dietary supplements, lifestyle changes, and medication.

• Calcium. Throughout early adulthood and until age 50, all women should get 1,000 mg of calcium each day. After age 50 (when menopause typically begins), women should get 1,200 to 1,500 mg of calcium each day. To get enough calcium, you should eat a well-balanced diet, including dairy products rich in calcium, and take a daily calcium supplement if necessary.

• Vitamin D. Your body needs vitamin D to absorb calcium and move it into bone. Sunlight produces vitamin D in the skin. The main food sources are milk and cereals enriched with vitamin D, egg yolks, salt-water fish, and liver. Some calcium supplements and most multivitamin tablets contain vitamin D. Adults under the age of 70 should get at least 600 IU (international units) of vitamin D each day. Adults over the age of 70 need at least 800 IU daily.

• Exercise. Bones remain stronger if you use them in daily weight-bearing activities such as walking or lifting weights. Lack of exercise increases the speed of bone loss after menopause. At least 20 minutes a day of exercise can reduce bone loss.

• Medications. Several medicines can help prevent or even reverse osteoporosis. These medicines can be used in addition to calcium, vitamin D supplements, and exercise:
  • Bisphosphonates (alendronate, risedronate, ibandronate, and zoledronic acid)
  • Raloxifene
  • Hormone therapy (estrogen only, or if you have a uterus, combined estrogen plus progestin) in some women for short intervals
  • Human parathyroid hormone (teriparatide) for severe osteoporosis
  • Other recently available medications

All of these medicines are effective, but they may have side effects. Your doctor will work with you to find the best treatment option for you.

Questions to ask your doctor:
• Am I at risk for osteoporosis?
• How often should I have a bone density test?
• Should I take calcium and vitamin D supplements? How much do I need?
• Do I need medication for my bone loss?
• What else can I do to keep my bones strong?
• Should I see an endocrinologist?

Where can I find additional resources?
• Find-an-Endocrinologist or call 1.800.HORMONE (1.800.467.6663)
• Menopause Map
• National Osteoporosis Foundation
• Red Hot Mammas Education and Support Program

Who is at risk for bone loss?
Your risk of bone loss is higher if you have a family history of osteoporosis, or if you are:
• White or Asian
• Thin or have a small frame
• Taking steroid medications (such as prednisone or cortisone)
• Eating a diet low in calcium and vitamin D
• Getting little or no exercise
• Smoking cigarettes
• Drinking too much alcohol

If you are skipping menstrual periods, have had both ovaries surgically removed, or are postmenopausal (the time after menopause; especially past the age of 65), you are also at risk for bone loss.

How do you know if you have bone loss?
To measure the strength of your bones, your doctor may do a bone density test (DEXA scan). This test gives exact measurements of the density (or thickness) of the bone in the spine, hip, and sometimes forearm.