



Selección de Resúmenes de Menopausia

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Stress- and diet-induced fat gain is controlled by NPY in catecholaminergic neurons.

Zhang L¹, Lee IC², Enriquez RF³, Lau J², Vähätalo LH², Baldock PA², Savontaus E⁴, Herzog H⁵.

Neuropeptide Y (NPY) and noradrenaline are commonly co-expressed in sympathetic neurons. Both are key regulators of energy homeostasis and critical for stress-coping. However, little is known about the specific function of NPY in the catecholaminergic system in these regulations. Here we show that mice with NPY expression only in the noradrenergic and adrenergic cells of the catecholaminergic system (catNPY) exhibited exacerbated diet-induced obesity, lower body and brown adipose tissue temperatures compared to WT and NPY(-/-) mice under a HFD. Furthermore, chronic stress increased adiposity and serum corticosterone level in WT but not NPY(-/-) mice. Re-introducing NPY specifically to the catecholaminergic system in catNPY mice restored stress responsiveness associated with increased respiratory exchange ratio and decreased liver pACC to tACC ratio. These results demonstrate catecholaminergic NPY signalling is critical in mediating diet- and chronic stress-induced fat gain via effects on diet-induced thermogenesis and stress-induced increases in corticosterone levels and lipogenic capacity.

Aging Clin Exp Res. 2014 Jul 25. [Epub ahead of print]

The prevention of fragility fractures in diabetic patients.

Gonnelli S¹, Caffarelli C, Giordano N, Nuti R.

Patients with diabetes mellitus (DM) are at greater risk of fractures mostly due to not only extraskeletal factors, such as propensity to falls, but also to bone quality alteration, which reduces bone strength. In people with DM, insulin deficit and hyperglycemia seem to play a role in determining bone formation alteration by AGE accumulation which directly influences osteoblast activity. Although there are conflicting data in the literature, adequate glycemic control with hypoglycemic treatment may be an important element in preventing bone tissue alterations in both type 1 and type 2 DM. Diabetes status is a predictive of future hip and major osteoporosis fractures independently of BMD and FRAX probability. Attention should be paid to the use of thiazolidinediones, especially in older women, because the direct negative effect on bone could exceed the positive effect of glycemic control. Systematic screening for complications and fall prevention efforts, along with calcium and vitamin D repletion and adequate physical activity, represents the mainstay of fracture prevention in DM patients. All anticatabolic drugs (raloxifene, bisphosphonates, denosumab) seem to be effective in DM patients. On the basis of pathophysiological evidence that suggests low bone formation in DM patients, osteoanabolic therapies such as teriparatide might represent an important therapeutic option for DM patients with severe osteoporosis and/or multiple fractures. The search for better methods for the identification of fragility fracture risk in the growing population of adult and elderly subjects with DM might be considered a clinical priority which could improve the prevention of fracture in DM patients.

Ortop Traumatol Rehabil. 2014 Jul 3;16(3):319-25. doi: 10.5604/15093492.1112533.

The Effect of Land versus Aquatic Exercise Program on Bone Mineral Density and Physical Function in Postmenopausal Women with Osteoporosis: a Randomized Controlled Trial.

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Background. Osteoporosis is a multifactorial progressive skeletal disorder characterized by reduced bone mass. Exercise is widely recommended to reduce osteoporosis, falls and related fragility fractures. The purpose of this study was to investigate the effects of land exercise (LE) and aquatic exercise (AE) on physical function and bone mineral density (BMD). Material and methods. Fifty-eight postmenopausal women, aged 50-70 years, diagnosed with osteoporosis according to BMD measures, enrolled in this study. The subjects were randomly assigned to either the intervention group (LE group) or the control group (AE group). Physical function and BMD were assessed in all subjects in both groups before and after 10 months of intervention. Muscle strength, flexibility, balance, gait time

and pain were measured to assess physical function. Bone mineral density at the lumbar spine was measured by dual energy X-ray absorptiometry (DEXA). Results. There were no significant differences between the two groups in the baseline anthropometric data. The two groups were similar with respect to age, weight, height, and body mass index ($p>0.05$). After the exercise program, muscle strength, flexibility, gait time, pain, and bone density ($p<0.001$) improved significantly with LE compared to AE. There was no significant difference between the two groups with regard to balance at the 10-month follow-up. Conclusion. Significant improvements in physical function and BMD suggest that LE is a possible alternative for postmenopausal women with OP.

Menopause. 2014 Jul 21. [Epub ahead of print]

Use of hormone therapy in Swedish women aged 80 years or older.

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OBJECTIVE: Menopausal symptoms such as hot flashes and night sweats may persist for 10 to 20 years or even longer. Information about the extent to which older women use hormone therapy is limited. The aim of this study was to determine the use of hormone therapy in Swedish women aged 80 years or older. **METHODS:** The study is based on national register data on dispensed drug prescriptions (ie, prescribed therapy that has been provided to individuals by pharmacies) for hormone therapy and local low-dose estrogens. **RESULTS:** Of 310,923 Swedish women who were aged at least 80 years, 609 (0.2%) were new users of hormone therapy. A total of 2,361 women (0.8%) were current users of hormone therapy. The median duration of hormone therapy use in new users was 257 days (25th to 75th percentiles, 611-120 d). About one in six women aged 80 years or older had used local vaginal estrogen therapy for at least four 3-month periods. The drugs were mainly prescribed by gynecologists and general practitioners. **CONCLUSIONS:** Our results show that a number of women aged 80 years or older still use hormone therapy and that most women who started a new treatment period had only one or two dispensations despite the median duration of treatment being more than half a year. Because at least some of the women aged 80 years or older who used hormone therapy probably did so owing to persistent climacteric symptoms, vasomotor symptoms and hormone therapy are still relevant issues that need to be discussed when counseling women around and after age 80.

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Late onset hypogonadism of men is not equivalent to the menopause.

Saad F¹, Gooren LJ².

Some men between the ages 45 and 60 years develop complaints and symptoms reminiscent of menopausal complaints in women. So, parallels were sought between the changes in female and male endocrinology during that period of life. Indeed, men do show a decline of serum testosterone from age 40 to 50 years onwards but it is a slow decline of 1-2% per year and over time it may amount to hypogonadism. The mechanism of a decline in serum testosterone in men does not resemble the menopause; it is partially an aging neuroendocrine system with a less efficient testosterone production but equally or more important, the result of inhibition of testosterone production by metabolic factors in relation to visceral obesity. These effects are in part reversible with weight loss. A hypogonadal state in aging men has deleterious effects. Mortality of all causes is highest in men with low testosterone impacting on their metabolic state leading to diabetes mellitus, cardiovascular disease, osteoporosis, and sexual dysfunction. Normalization of testosterone in aging hypogonadal men has a beneficial effect on the above pathologies. The fear that testosterone treatment of elderly men would lead to prostate disease has not been substantiated in studies. So, while men do not have a 'menopause', testosterone deficiency in old age deserves serious attention.

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Personal view: hormones and depression in women.

Studd J.

Depression is more common in women, occurring at times of hormonal fluctuations as premenstrual depression, postnatal depression and perimenopausal depression. These are all related to changes in hormone levels and constitute the diagnosis of reproductive depression. There is a risk that severe premenstrual depression can be misdiagnosed as bipolar disorder and that women will be started on inappropriate antidepressants or mood-stabilizing therapy. The most effective treatment for severe premenstrual syndrome is by suppression of ovulation and suppression of the cyclical hormonal changes by transdermal estrogens or by GnRH analogs. Postnatal

depression is more common in women with a history of premenstrual depression and also responds to transdermal estrogens. Transdermal testosterone gel can be also used in women who suffer loss of energy and loss of libido which may be due to the inappropriate prescription of antidepressants. There is also a role for the Mirena IUS and laparoscopic hysterectomy and oophorectomy in women who are progestogen-intolerant. The hormonal causation of certain common types of depression in women and the successful treatment by estrogens should be understood by psychiatrists and gynecologists.