

Calcium And Bone Disorders In Children And Adolescents Endocrine Development Vol 16

Bone

(January 2020). “Association between dietary calcium intake and BMD in children and adolescents”. *Endocrine Connections*. 9 (3): 194–200. doi:10.1530/EC-19-0534

A bone is a rigid organ that constitutes part of the skeleton in most vertebrate animals. Bones protect the various other organs of the body, produce red and white blood cells, store minerals, provide structure and support for the body, and enable mobility. Bones come in a variety of shapes and sizes and have complex internal and external structures. They are lightweight yet strong and hard and serve multiple functions.

Bone tissue (osseous tissue), which is also called bone in the uncountable sense of that word, is hard tissue, a type of specialised connective tissue. It has a honeycomb-like matrix internally, which helps to give the bone rigidity. Bone tissue is made up of different types of bone cells. Osteoblasts and osteocytes are involved in the formation and mineralisation of bone; osteoclasts...

Endocrinology

obesity, high cholesterol, and gout. Calcium and bone disorders: Endocrinologists also treat conditions that affect calcium levels in the blood, such as hyperparathyroidism

Endocrinology (from endocrine + -ology) is a branch of biology and medicine dealing with the endocrine system, its diseases, and its specific secretions known as hormones. It is also concerned with the integration of developmental events proliferation, growth, and differentiation, and the psychological or behavioral activities of metabolism, growth and development, tissue function, sleep, digestion, respiration, excretion, mood, stress, lactation, movement, reproduction, and sensory perception caused by hormones. Specializations include behavioral endocrinology and comparative endocrinology.

The endocrine system consists of several glands, all in different parts of the body, that secrete hormones directly into the blood rather than into a duct system. Therefore, endocrine glands are regarded...

Phosphate diabetes

for burosumab in the treatment of XLH in children and adolescents: British paediatric and adolescent bone group recommendations”. Endocrine Connections

Phosphate diabetes is a rare, congenital, hereditary disorder associated with inadequate tubular reabsorption that affects the way the body processes and absorbs phosphate. Also named as X-linked dominant hypophosphatemic rickets (XLH), this disease is caused by a mutation in the X-linked PHEX (phosphate regulating endopeptidase X-linked) gene, which encodes for a protein that regulates phosphate levels in the human body. phosphate is an essential mineral which plays a significant role in the formation and maintenance of bones and teeth, energy production and other important cellular processes. phosphate diabetes is a condition that falls under the category of tubulopathies, which refers to the pathologies of the renal tubules. The mutated PHEX gene causes pathological elevations in fibroblast...

Pubarche

is vital in adolescent development. Failure to meet average nutritional needs, such as calcium and vitamin D for bone growth, may result in growth stunting

Pubarche () refers to the first appearance of pubic hair at puberty. It is one of the earliest physical changes of puberty and can occur independently of complete puberty. It is usually the second sign of puberty, after thelarche in females and gonadarche in males (though in females, it can also happen before thelarche, but this is less common).

The early stage of sexual maturation, also known as adrenarche, is marked by characteristics including the development of pubic hair, axillary hair, adult apocrine body odor, acne, and increased oiliness of hair and skin. The Encyclopedia of Child and Adolescent Health corresponds SMR2 (sexual maturity rating) with pubarche, defining it as the development of pubic hair that occurs at a mean age of 11.6 years in females (range 9.3–13.9 years) and 12...

Osteoporosis

skeletal disorder characterized by low bone mass, micro-architectural deterioration of bone tissue leading to more porous bone, and consequent increase in fracture

Osteoporosis is a systemic skeletal disorder characterized by low bone mass, micro-architectural deterioration of bone tissue leading to more porous bone, and consequent increase in fracture risk.

It is the most common reason for a broken bone among the elderly. Bones that commonly break include the vertebrae in the spine, the bones of the forearm, the wrist, and the hip.

Until a broken bone occurs, there are typically no symptoms. Bones may weaken to such a degree that a break may

occur with minor stress or spontaneously. After the broken bone heals, some people may have chronic pain and a decreased ability to carry out normal activities.

Osteoporosis may be due to lower-than-normal maximum bone mass and greater-than-normal bone loss. Bone loss increases after menopause in women due to lower...

Signs and symptoms of Graves' disease

of calcium and phosphorus in the urine (hypercalciuria) and stool, and, rarely, hypercalcemia. In hyperthyroidism, the normal cycle duration of bone resorption

The signs and symptoms of Graves' disease generally result from the direct and indirect effects of hyperthyroidism, although they can also be caused by other thyroidal conditions, such as Graves' ophthalmopathy, goitre and pretibial myxedema. These clinical manifestations can involve virtually every system in the body.

The mechanisms that mediate these effects are not well understood. The severity of the signs and symptoms of hyperthyroidism is related to the duration of the disease, the magnitude of the thyroid hormone excess, and the patient's age.

Although the majority of patients experience significant improvement and remission after proper medical care, health care providers should be aware of variability in individual response to hyperthyroidism and individual sensitivity to thyroid...

Vitamin D

Canada "Adequate calcium and regular exercise may help achieve strong bones in children and adolescents and reduce the risk of osteoporosis in older adults

Vitamin D is a group of structurally related, fat-soluble compounds responsible for increasing intestinal absorption of calcium, and phosphate, along with numerous other biological functions. In humans, the most important compounds within this group are vitamin D3 (cholecalciferol) and vitamin D2 (ergocalciferol).

Unlike the other twelve vitamins, vitamin D is only conditionally essential, as with adequate skin exposure to the ultraviolet B (UVB) radiation component of sunlight there is synthesis of cholecalciferol in the lower layers of the skin's epidermis. Vitamin D can also be obtained through diet, food fortification and dietary supplements. For most people, skin synthesis contributes more than dietary sources. In the U.S., cow's milk and plant-based milk substitutes are fortified with...

Anorexia nervosa

2024). "Social Media Effects Regarding Eating Disorders and Body Image in Young Adolescents". *Cureus*. 16 (4): e58674. doi:10.7759/cureus.58674. ISSN 2168-8184

Anorexia nervosa (AN), often referred to simply as anorexia, is an eating disorder characterized by food restriction, body image disturbance, fear of gaining weight, and an overpowering desire to be thin.

Individuals with anorexia nervosa have a fear of being overweight or being seen as such, despite the fact that they are typically underweight. The DSM-5 describes this perceptual symptom as "disturbance in the way in which one's body weight or shape is experienced". In research and clinical settings, this symptom is called "body image disturbance" or body dysmorphia. Individuals with anorexia nervosa also often deny that they have a problem with low weight due to their altered perception of appearance. They may weigh themselves frequently, eat small amounts, and only eat certain foods. Some...

Osteogenesis imperfecta

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Osteogenesis imperfecta (IPA: ; OI), colloquially known as brittle bone disease, is a group of genetic disorders that all result in bones that break easily. The range of symptoms—on the skeleton as well as on the body's other organs—may be mild to severe. Symptoms found in various types of OI include whites of the eye (sclerae) that are blue instead, short stature, loose joints, hearing loss, breathing problems and problems with the teeth (dentinogenesis imperfecta). Potentially life-threatening complications, all of which become more common in more severe OI, include: tearing (dissection) of the major arteries, such as the aorta; pulmonary valve insufficiency secondary to distortion of the ribcage; and basilar invagination.

The underlying mechanism is usually a problem with connective tissue...

Autism therapies

treatment options for autism spectrum disorders in children and adolescents". Harvard Review of Psychiatry. 16 (2): 97-112. doi:10.1080/10673220802075852

Autism therapies include a wide variety of therapies that help people with autism, or their families. Such methods of therapy seek to aid autistic people in dealing with difficulties and increase their functional independence.

Autism is a neurodevelopmental disorder characterized by differences in reciprocal social interaction and

communication as well as restricted, repetitive interests, behaviors, or activities. There are effective psychosocial and pharmacological treatments for associated problems with social interaction, executive function, and restricted or repetitive behaviour. Treatment is typically catered to the person's needs. Treatments fall into two major categories: educational interventions and medical management. Training and support are also given to families of those diagnosed...

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