SYSTEMATIC ANATOMY BONES – OSTEOLOGY

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Abstract: This article provides detailed information on the science and tasks of osteology, anatomy, anthropology and paleontology, skeletal elements, morphology of microbones, ossification process, long tubular bones, hollow bones, flat bones, and immobile and mobile joints.
Key words: osteoblasts, osteocyte, ossein, periosteum, rickets, erythrocytes, leukocytes, thrombocytes.

Osteology (from the Greek "osteon" - "bone") is the scientific study of bones by osteologists. A branch of anatomy, anthropology, and paleontology, osteology studies the morphology, function, disease, pathology, ossification process, and resistance and stiffness of bones, skeletal elements, teeth, and microbones.
Osteologists are often in the public and private sectors; working as consultants in museums, scientists in research laboratories, and consultants for companies producing osteological reproductions in an academic context. The skeletal system makes up the human skeleton, and its function is multifaceted. Most importantly, it acts as a support and protection in the body. Due to the supporting function of the skeleton, a person keeps his figure correctly. The skeleton also protects internal organs, blood vessels and the nervous system. For example, the brain is inside the skull cap, the spinal cord is in the spinal canal; lungs, trachea and bronchi, heart and large blood vessels are protected from adverse effects of the external environment due to their location in the chest. Blood-like elements (erythrocytes, leukocytes, thrombocytes) are produced in the bone marrow. In addition, bones serve as a depot (place of accumulation) of mineral salts. The human skeleton consists of 206 bones, of which 85 are even and 36 are odd. Bones come in 4 different shapes. Tubular bones - these in turn are two xiI. Long tubular bones (shoulder, wrist, thigh, shin bones); short tubular bones (palm and finger bones of the hands and feet). Porous bones - these are also of two types: long porous (ribs, sternum, spine), short porous (spine, palmar, metacarpal bones of the hands and

feet). Flat bones are the top, neck, face, scapula, and iliac bones in the skull. Gular bones - gular and gular bones of the upper jaw, forehead, lower base of the skull. All 206 bones in the human body are connected to each other in two ways: immobile and mobile. An example is the joints of the head, spine and pelvis, which are non-moving (intermittent 3 continuous) joints of bones. They are connected to each other with the help of ligaments, tendons, bone sutures. The skull consists of separate bones, such as the forehead, top, temple, and nape, and as the child grows, they are joined together with the help of sutures to form a single skull. Because these bones are tightly connected to each other, they are immobile. In most textbooks, the spine is included in the immobile union of bones. But in some sources, the spine is included in the semi-mobile joint of bones. The joints of the arms and legs are movable, jointed, including the joints of the arms and legs: shoulders, elbows, palms, hips, knees, shins, and one of the bones of the hands and feet. - is an example of this when it joins with one another to form a joint. The end of one of the two bones joining to form a joint is convex and smooth, and the end of the other is more concave. The joint consists of three parts: the joint sac, the joint surface of the bones, and the joint cavity. includes tissues. Bone cells (osteoblasts) form the basis of bone composition. These cells synthesize ossein (intermediate protein substance), which is an organic part of bones, and ensure its connection with mineral substances. Bones consist of two layers, the upper layer has a hard, dense plate-like structure, and the inner layer has a porous structure. There are many thin channels in the inner layer, where blood vessels and nerve fibers are located. The surface of the bones is covered with a mature thin membrane (periosteum) - the periosteum. This membrane consists of connective tissue, which contains many small blood and lymph vessels, nerve fibers. Bones have their own characteristics depending on the age of a person. When a child is born, most of the bones in his body are made up of cartilage. Therefore, the bones of young children are soft and flexible. As the child grows, the upper part of the bones turns into bone. This process takes place differently in different parts of the human skeleton.

In newborns, the skull consists of several bones that are not connected to each other. Therefore, there are soft spaces (spaces) in the skull cap, that is, between the bones that are not connected to each other, and they are called lilikdok. The skull grows especially fast during the period of 3-4, 6-8 and 11-15 years of age of the child. Its growth and formation last until 20-25 years. The bones of the body have the following age-related characteristics. Vertebral bones begin to ossify between 17-25 years of age. But the transformation of the tail part of the spine into bone

continues until the age of 30. As mentioned above, the three parts of the sternum in children consist of separate bones, and at the age of 20-25 they join together and become a single sternum. The bones of the scapula, spine, shoulder, wrist, and elbow continue to turn into bones until the age of 20-25. The turning of the palm of the hand into a bone lasts until 15-16 years old, and the turning of the fingers into a bone lasts until 16-20 years old. The normal course of the ossification process depends to a large extent on the composition of food, sufficient amount of protein, mineral salts and vitamins in it, as well as regular use of the ultraviolet rays of the sun in the open air. Also, engaging in physical training and sports has a positive effect on the normal course of the ossification process. On the contrary, the lack of vitamins, especially vitamin D, or the insufficient use of sunlight causes a violation of the metabolism of calcium and phosphorus salts in the body, and the ossification process slows down. As a result, rickets occurs.

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