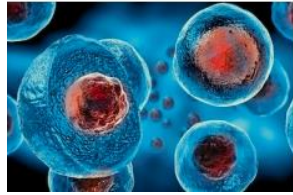


HUMAN BODY

WHAT IS THE SMALLEST UNIT OF LIFE?

The human body functions as a whole, but it is *composed of* (skládá se z) many **separate** [se-p-r@t] (oddělených) functional [fan-kš-nl] **units** that must **work together**. **THE CELL** [sel](buňka) is the **smallest and basic unit of life**.



WHAT DO CELLS CONSIST OF?/WHAT ARE CELLS MADE OF?

Cells have **3 parts**: **cytoplasm** [sajto-plasm](cytoplasma), **cell membrane** [sel mem-brejn](buněčná membrána) & **the nucleus** [njukli@s](jádro). Inside there is **protoplasm**, a watery substance that *consists of* **proteins**[proteíns], **carbohydrates** [karbo-hajdrejts] and **nucleic acids** [esids](kyseliny).

WHAT IS THE NUCLEUS?

THE NUCLEUS is inside cells. It is responsible for **the cell reproduction**.

It contains **48 chromosomes** [krou-m-souns] important for the hereditary factors (dědičné faktory).

They are *made up of* (/they consist of) **ribonucleic** [rajbou-njukleik] **acid** (ribonukleová kyselina) known as **RNA** [ár-en-ej] and **deoxyribonucleic** [dyoksi-rajbou-njukleik] **acid**, or **DNA** [dý-en-ej].

- all cells have **3 functions** [fank-šns]: **reproduction**, **movement of fluid through cell membrane** & **metabolism**.

What are TISSUES?/ What are groups of cells called?

TISSUES [tyšjús](tkáň) are **groups of similar cells**. There are: **connective tissues** (pojivové tkáň), **muscle tissues** [masl](svalové tkáň), **nerve tissues** (nervové tkáň) & **epithelium** [epi-šíli@m](epitely=krycí tkáň).

Epithelium contains (obsahuje) no nerve or blood vessels and **its main function** is **protection** (ochrana).

Connective tissue (pojivová tkáň) **supports and shapes body** and **muscle tissues** (svalová tkáň) enable contractions (umožňují stahy), enable movement (pohyb).

Nerve tissue (nervová tkáň) is composed of **cells that transmit electrical impulses** in the body, which *provides* (poskytuje) **communication between body parts**.

WHAT 3 PARTS DOES THE HUMAN BODY CONSIST OF?

The human body *consists of* **3 major areas**: the **HEAD**, the **TRUNK** and the **EXTREMITIES/ upper and lower LIMBS** (končetiny).

My body has three parts



THE HEAD consists of **the cranium** (lebka) and **the face**.

The cranium contains **the brain** and its membranes and is covered by **the hair**. **The face** is made up of **the forehead, eyes, cheeks** (tváře), **nose, ears** and **the chin** (brada). **The mouth** has **two lips** (rty) and contains **the tongue** [tang](jazyk) and **the teeth** (zuby).



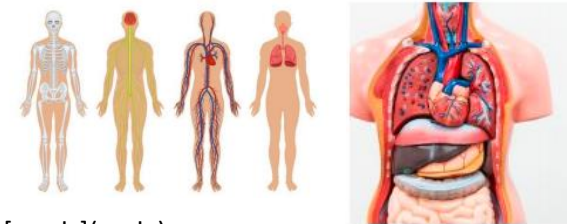
THE TRUNK [trank](trup) is made up of the vertebral column, **the chest** (hrudník), **the abdomen** (břicho) and **the pelvis** (pánev). **Each vertebra** has a **spinal canal** [k-nal] through which the spinal chord runs. **The chest** contains oesophagus, the trachea, **the heart, the lungs and the great vessels**. On the chest there are **two nipples** (bradavky), and in women [wimin], **2 breasts** (prsa),

THE UPPER LIMB [limb](horní končetina) *is made up of* **the shoulder** (rameno), **upper arm** (horní paže), **elbow** (loket), **forearm** (předloktí), **wrist** (zápěstí) and **the hand** with a **thumb** and **4 fingers** (palec a prsty).

THE LOWER LIMB is composed of the pelvic girdle [pelvik gr-dl](pleteneč pánevního dna), **the hip** (boky/kyčel), **tights** [šájs](stehna), **knee** [ný](koleno), **lower leg** with **the calf** [káf](lýtko) and the shin (holeň), **the ankle** [enk](kotník) and **the foot** with **5 toes** (prsty na noze). **Fingers and toes** are called **digits**. [dydžits]prsty.

WHAT IS A BODY SYSTEM AND WHAT SYSTEMS DOES HUMAN BODY CONSIST OF?

It *consists of* a group of organs that form/ create systems.



THE MUSCULOSKELETAL SYSTEM [maskju-l@skeletl]

The musculoskeletal system is composed of **BONES and MUSCLES** [masls](svaly).

1. **THE SKELETAL SYSTEM** *provides* (poskytuje) a **framework** (kostra) for the body and **protects vital organs** [vajt](chrání životně důležité orgány). It *consists of* **bones** and **joints** (kosti a klouby) and its functions are **connected with the muscle system** (systém svalů).



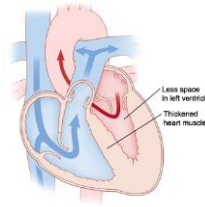
THE SKELETON (kostra) of an adult *consists of* usually **206 BONES** (kosti) of various shapes and sizes. They are made up of hard osseous tissue (kostní tkáň) and are described as **long, short, flat** (ploché) or **irregular**. The point **where two bones meet** is called **A JOINT** (kloub) which *contains* an oily substance called **synovia**. The bones are held together by the **ligaments** [ligaments](šlachy).

2. The purpose (účel) of **THE MUSCULAR SYSTEM** is a **movement of the body** caused by **contraction and extension of muscles**. (pohyb způsobený stahy a roztahováním svalů). There are two kinds of muscles: **voluntary** and **involuntary muscles**. Most of the voluntary (or transversely striped - příčně pruhované) muscles are found **in the extremities (končetiny), in the trunk** and **in the head**. Involuntary (or smooth – hladké) muscles provide only mechanical movement **in the walls of** the tracts and **organs**.



3. **THE CIRCULATORY = CARDIOVASCULAR SYSTEM**[s@kjułatori] (oběhový) The key organ of the cardiovascular system is **the HEART** and a network of **blood vessels** [vesls](krevní cévy):

THE HEART is a muscular organ *situated in the mediastinum* [mídyá-stájnum] (mezihrudí). It is *divided into*(dělí se na)/ It has **4 chambers [čembrys](komory)**, 2 on the right and 2 on the left. **The upper chambers are called atria [atryria] předsíň, the lower chambers are called ventricles [ventrykls] komora.**



The function of heart is **to pump blood** throughout the body **via vessels**.

There are **3 types of VESSELS (cévy)**:

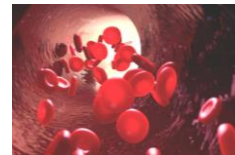
Arterias [artýrias] (artérie) – they transport **blood from the heart**, the largest is **AORTA**

Capillaries [k-pil@rís] (kapiláry) – they get blood from the arterioles (arterioly)

Veins (žily) – they carry **blood back to the heart**

THE BLOOD [blad] (krev) has many important **functions**, e.g.

- transportation of **oxygen [oksidže@n](kyslík) from lungs (plíce)** to the cells and carbon dioxide [dajoksájd](oxid uhličitý) from the tissues **to the lungs**
- **distribution of hormones** and
- **transportation of nutrients in the body (výživa)**

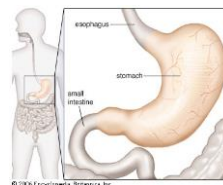


The section of **medicine** dealing with (pojednávající o) blood is called **haematology**.

The blood is composed of plasma and blood cells: erythrocytes [-sájt@s], leukocytes [ljuko-sájts] and thrombocytes. The most common **diseases [dysísis]** are **anemia** and **leukemia [ljukýmija]**.

We have **4 blood groups: A, B, AB and O**. They are important in **blood transfusion**.

4. **THE DIGESTIVE SYSTEM** [daj@džestiv](trávicí) The key organ of the digestive system is **the stomach**, then the **mouth**, oropharynx (horní část hltanu), oesophagus(hltan), **small and large intestines (tenké a tlusté střevo)** and **the anus**.



5. **THE RESPIRATORY SYSTEM** (dýchací)

The key organ of the respiratory system is **the lungs(plíce)**, then **the nose**, nasopharynx(nosohltan), trachea (průdušnice) and bronchi(průdušky). **It exchanges oxygen and carbon dioxide.**

6. **THE URINARY SYSTEM** [jurnary](vylučovací) **consists of the kidneys (ledviny),** ureters[jurý-trs](močovod), bladder [bledr](měchýř) and the urethra [jurýtra](močová trubice)

7. **THE NERVOUS SYSTEM** controls our **behaviours**.(řídí naše chování)

The key organ of the nervous system is **the brain** (mozek), then **spinal chord** [spajnl kórd](mícha) and peripheral and autonomic **nerves**.

8. **THE ENDOCRINE SYSTEM** (endokrynní-žlázy s vnitřní sekrecí)

It consists of **seven glands** and its **function is to produce hormones**

9. **THE REPRODUCTIVE SYSTEM [rýproudaktiv]** which is *divided into*(rozdělený)

the male's (mužský reprodukční systém): the testes (varlata),epididymis [epidyd@-mis](nadvarle),seminal vesicles (semenné vāčky) and the prostate [prostejt](prostata);and **the female's (ženský): the ovaries** (vaječníky) Fallopian tubes (vejcovody), **uterus [ju-t@-rs] děloha** and **the vagina [v_đžájna]**

10. **THE INTEGUMENTARY SYSTEM** [integjúmentry] (krycí) which **protects the body against pathogenic organisms and injury** (chrání tělo proti patogenům a zranění) and *consists of* (skládá se z) **the skin** (kůže)

11. **THE LYMPHATIC SYSTEM** - lymph canals [kenls]and the lymph nodes (lymfatická soustava- mizní, lymfatické/ mizní uzliny)



WHAT CAVITIES DO WE HAVE IN OUR BODY AND WHY?

ORGANS of the body are positioned [pozi-šnt](jsou umístěné) **within** (mezi) /in spaces called **CAVITIES** [kevitýs] (dutiny).

- **the cranial cavity** is surrounded by the **skull** (lebka) (obklopena/vyplněna) [krejnýj](lebeční) that *contains* (obsahuje) **brain (mozek)**.
- **the spinal cavity** [spajnl](spinální-páteřní) *formed by vertebrae* [vertebrei](obratle) *contains the spinal chord* [spajnl kórd](páteř)
- **the thoracic cavity** [so-re-sik](hrudní dutina) *contains the heart [hárt](srdce), bronchial tubes (bronchiální trubice) and the lungs [langs](plíce).*
- **the abdominal cavity**[@b-domini](břišní) *contains organs of the digestive system* [daj-džestiv]trávicí and
- **the pelvic cavity** (pánevní dutina) where we can find organs of **the reproductive and urinary systems** [rýprou-daktiv,jurin@ri](rozmožovací a vylučovací system).