

Bases of Neuropathology

**Sensitivity & its disorders.
Part I**

SENSITIVITY – the ability of an organism to respond to signals from the external environment, its own organs and tissues

Irritations are perceived by receptors

RECEPTOR – a sensor located in the skin, mucous membranes, muscles, ligaments, internal organs and vessels. The receptor reacts to irritation and encodes them into nerve impulses

TYPES OF RECEPTORS

➤ **Exteroceptors**

perceive pain, temperature and tactile irritation of the skin and mucous membranes; located in the skin and mucous membranes

➤ **Proprioceptors**

provide information about the position of the limbs and torso in space, the degree of muscle contraction; located in the muscles, ligaments and capsules of the joints

➤ **Interoceptors**

react to the pressure and chemical composition of blood and contents of the gastrointestinal tract; located in internal organs & vessels

TYPES OF SENSITIVITY

- **exteroceptive sensation (superficial)**
the ability to feel touch, temperature, pain
- **deep sensation**
posture sensitivity, sensation to pressure, weight and vibration stimuli
- **complex types of sensitivity**
spatial sense, two-point discrimination, stereognosis, kinesthesia, position sense
- **visceral sensation**
sensitivity of blood vessels and internals

EXAMINATION OF THE SURFACE SENSITIVITY

is carried out by applying the appropriate stimulus (pain, temperature, tactile) on symmetrical areas of the body. Eyes closed

EXAMINATION OF TACTILE SENSITIVITY

is carried out using a fleece or brush with soft hair. Irritation is applied not too frequent tangent movements with uneven intervals

EXAMINATION OF TEMPERATURE SENSITIVITY

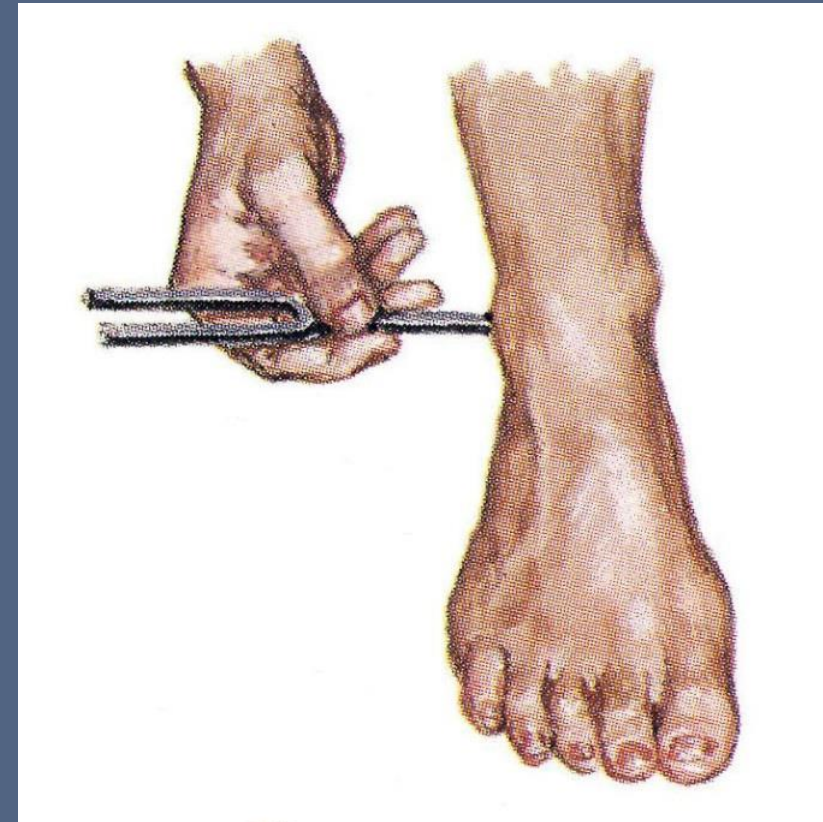
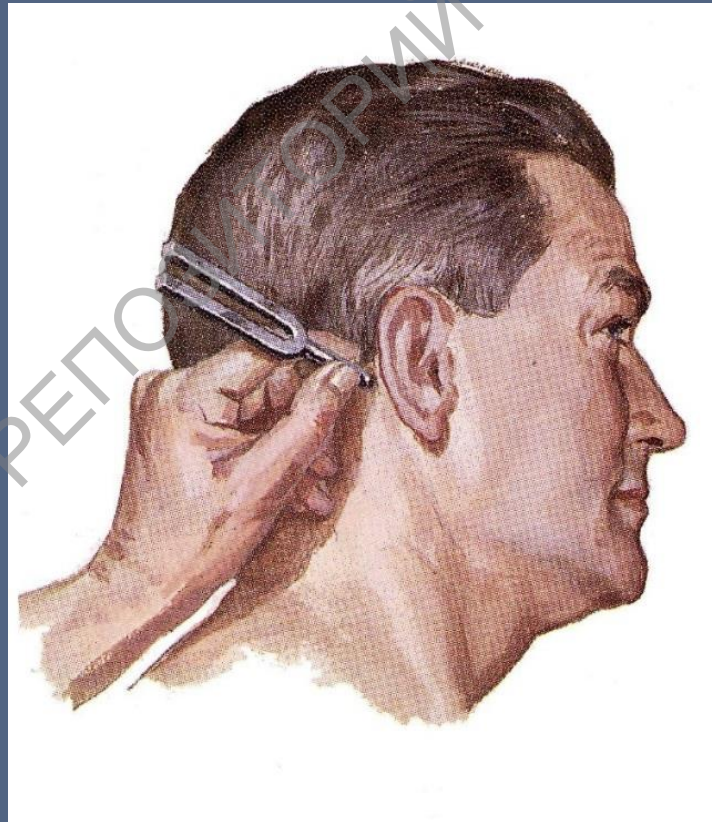
is carried out by alternately applying tubes with hot and cold water to symmetrical areas of the skin

EXAMINATION OF PAIN SENSITIVITY

is carried out using a blunt pin or needle.
Pain irritation alternates with tactile

EXAMINATION OF VIBRATION SENSITIVITY

is carried out by a vibrating tuning fork, which is applied to the mastoid process, bone protrusions of the rear of the hand and foot on both parts of the body



POSTURE SENSATION

(examination of the muscular-articular)

is carried out by passive movements in the joints of the hand & foot; the subject must recognize the direction of these movements

