

Circulation of blood through skeletal muscles

- skeletal muscle blood flow is dependent on its activity
- flow rate **at rest: about 900 - 1 200 ml/min; during maximum work up to 20 - 25 l/min'**
- skeletal muscle vessels are innervated by sympathetic fibers – vasoconstrictive and vasodilator
- **vasodilator mechanism** – controlled from the motor cortex in the gyrus praecentralis – is used in preparation for muscle activity and in its immediate beginning
- **vasoconstrictor mechanism** – involved in maintaining blood pressure
- during muscle performance, vasodilation is caused mainly by local regulatory mechanisms – the influence of increased concentration of catabolites → is dominated by metabolic self-regulation
- skeletal muscle blood flow is strongly influenced by mechanical compression of blood vessels by the working muscle, → therefore a person tolerates dynamic work (alternating contraction with relaxation) better than prolonged static work

Links

Related Articles

- Blood circulation through the splanchnik

Bibliography

- TROJAN, Stanislav – TROJAN, Stanislav. *Lékařská fyziologie*. 4. edition. Grada, 2003. 772 pp. ISBN 80-247-0512-5.