

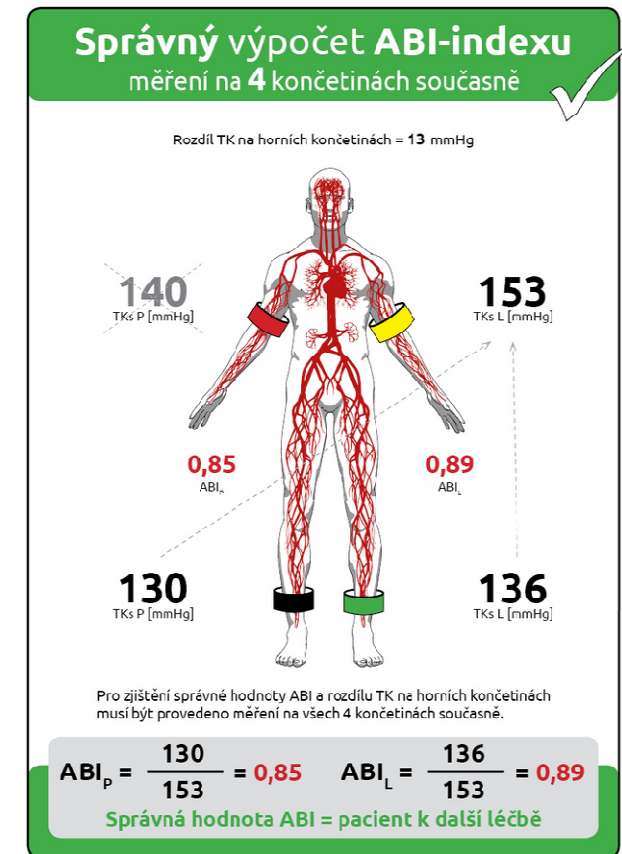
**M U N I  
M E D**

# **Ankle – Brachial index (ABI).**

# Ankle – Brachial Index

- The Ankle – Brachial Index (ABI) is a non-invasive diagnostic method providing information about the ratio of arterial pressures in the upper and lower extremities.
- Under physiological conditions in the lying position, blood pressure in the upper and lower limbs has the same value.
- ABI is a quick and easy way to detect peripheral artery disease (Peripheral artery disease = PAD).
- PAD is a common circulatory problem in which narrowing of the arteries reduces blood flow to the extremities, usually the legs. It is commonly caused by atherosclerosis.
- The ABI index is determined separately for each lower limb.
  - the normal value of the ABI index is 1.00 – 1.29
  - the cut-off value of the ABI index is 0.91 – 0.99
  - the clearly **pathological ABI value** (indicative of the presence of PAD) is **below 0.9**

$$\text{ABI} = \frac{\text{Systolic pressure in the lower limb}}{\text{Higher systolic pressure from both upper extremities}}$$



# Preparation of ABI measurements

- Measurements must be taken with the patient in a supine position in order to obtain comparable pressure conditions for the upper and lower extremities.
- The legs must not be crossed.
- Before starting the measurement, the patient must lie still for about 5 minutes.
- Put on the individual cuffs according to their colour coding on the air connection hoses: red – right arm above the elbow, yellow – left arm above the elbow, green – left leg above the ankle, black – right leg above the ankle.
- Attach the upper arm cuffs so that the lower edge of the cuff is about 2-3 cm above the elbow socket. The cuff must be positioned so that the marking (white stripe) is located above the brachial artery.
- Fit the ankle cuff so that the bottom edge of the cuff is about 1-2 cm above the ankle. Place the cuff so that the white stripe is located on the posterior tibial artery.

