

Blood pressure measurment

Blood pressure in a healthy adult is around **120/80 mmHg** (16/9,3 [kPa]). In infants, the blood pressure is around 100 mmHg (13,3 kPa). With age, systolic pressure increases due to an increase in the ratio of collagen to elastic fibers in the large arteries in favor of collagen fibers. In the case of wrtting 120/80 mmHg, the value of the pressure before the slash indicates the systolic pressure, the value of the pressure after the slash indicates the diastolic pressure.

Measurement methods

1. **Directly (invasively)** – into the artery (most often the radial artery) we introduce a special catheter, which is connected to a manometer and monitor. We use this method of measuring blood pressure mainly in patients in a serious condition (hospitalization in the ICU!).
1. **Indirectly** – tonometer with mercury manometer auscultation of the brachial artery, or with palpation of the radial artery.
1. **Automatic** – digital devices that use the method
 - **auscultation** – built-in microphone picks up classic Korotkov's murmurs; the disadvantage is there are more technical artifacts.
 - **oscillometric** – limited blood flow oscillates the artery and synchronously with it the cuff pressure, which is monitored by a pressure sensor. This method is used for outpatient monitoring of Holter-type blood pressure.

Links

Related articles

- Blood pressure • Systolic pressure • Diastolic pressure • Mean arterial pressure • Pressure amplitude
- Blood pressure monitoring
- Blood pressure regulation
- Arterial catheter and invasive blood pressure measurement
- Tonometr
- Home blood pressure monitoring

External links

Blood pressure measurment (<https://www.youtube.com/watch?v=TkDlofyWSo>) - YouTube video demonstration (english)

References

- MAREŠOVÁ, Dana and Miloš LANGMEIER, et al. *Protocols for practical excersises in medical physiology. 3rd Edition 2003. ISBN 807262234X.*
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- TROJAN, Stanislav, et al. *Lékařská fyziologie. 4., přeprac. a uprav vydání. Praha : Grada Publishing, a.s, 2003. 772 s. ISBN 80-247-0512-5.*

External links

- Bolek Lukáš, MUDr. Jiří Beneš, Ph.D., MUDr. Jiří Růžička, Ph.D., Mgr. Zdeněk Kubeš, Pavlína Rottenbornová, Recenze: RNDr. Eugen Kvašňák, Ph.D., Ústav lékařské biofyziky a lékařské informatiky 3. LF UK Praha: Vzdělávací videomateriály z biofyziky na téma: Měření tlaku a meteorologie. Výukový portál Lékařské fakulty v Plzni [online] 21.1.2011, poslední aktualizace 7.10.2011 [cit. 2011-12-22] Dostupný z WWW: <<http://mefanet.lfp.cuni.cz/clanky.php?aid=81>>. ISSN 1804-4409