

Aim: Recording of heart rate and pulse rate

REFERENCE: 1. Physiological Parameters, Practical Human Anatomy And Physiology, S.R. Kale et al., Nirali Prakashan, Eight Edition, 2002, pp. 43- 44

Background: Heart rate may be defined as the number of heartbeats per unit time, usually per minute. During the ventricular systole, heart size is reduced. At this time, the apex of the heart tenses and strikes against the thoracic wall. This is referred to as a heartbeat. It is measured with a stethoscope.

Normal Values:

- **Adult male:** 72 per minute. In adult females, it is slightly higher than in males.
- **Children:** 140 per minute

Significance: The examination of pulse rate is of great clinical importance as the condition of the heart can be found while examining the heart rate.

REQUIREMENTS: Stethoscope & Stop Clock.

PROCEDURE:

- 1) Allow the subject to sit or lie in a calm environment.
- 2) Place the stethoscope's chest piece against the subject's thoracic wall.
- 3) Record the heartbeat for 1 minute.

Pulse Rate

Pulse means expansion and elongation of the arterial valves or a regular rhythmic pulsation felt over the arterial wall, passively produced by the pressure changes during systole and diastole of the ventricles.

Normal values:

- born baby: 140 beats/minute
- Adults: 60-80 beats/minute
- An Increased pulse rate above the normal value is called tachycardia, while decreased pulse rate is called bradycardia.

Significance: The examination of pulse rate is of great clinical importance as the condition of the heart, arteries, and the extent of B.P. can be found while examining the pulse. Pulse rate means the frequency of pulses per minute.

REQUIREMENTS: Clock.

PROCEDURE:

- 1) Allow the subject to sit in a calm and quiet environment.
- 2) Palpate the superficial arteries with the middle three fingers against the underlined bones. Usually, the radial artery at the wrist level is taken.
- 3) The pulse rate is recorded for 1 minute.

Report: The Heart Rate and pulse rate observed for a given subject was found to be
