



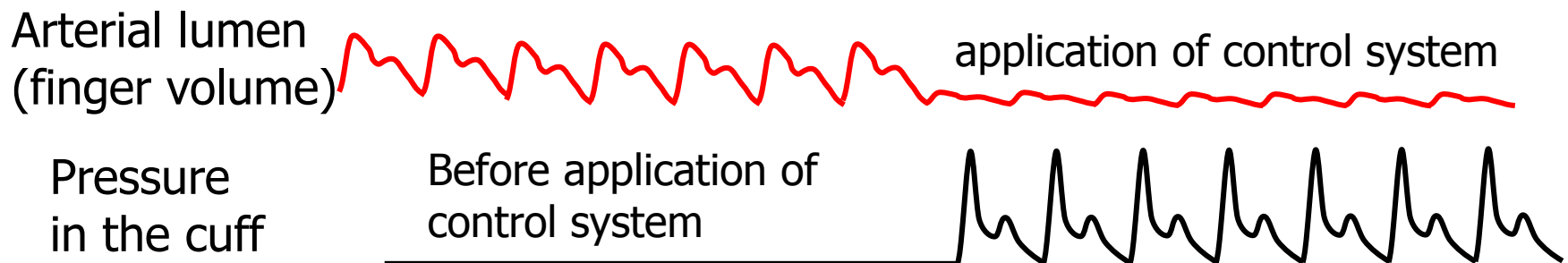
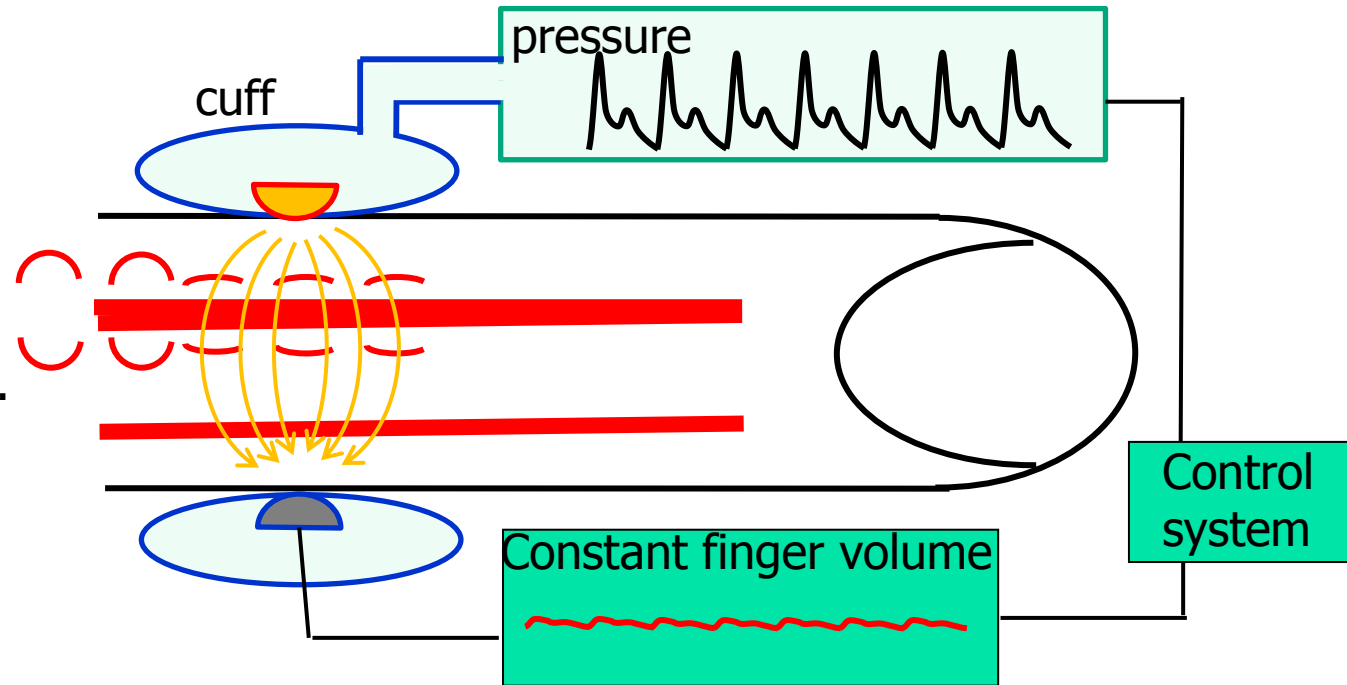
Photoplethysmographic blood pressure measurement

Peňáz's method,
volume-clamp
method



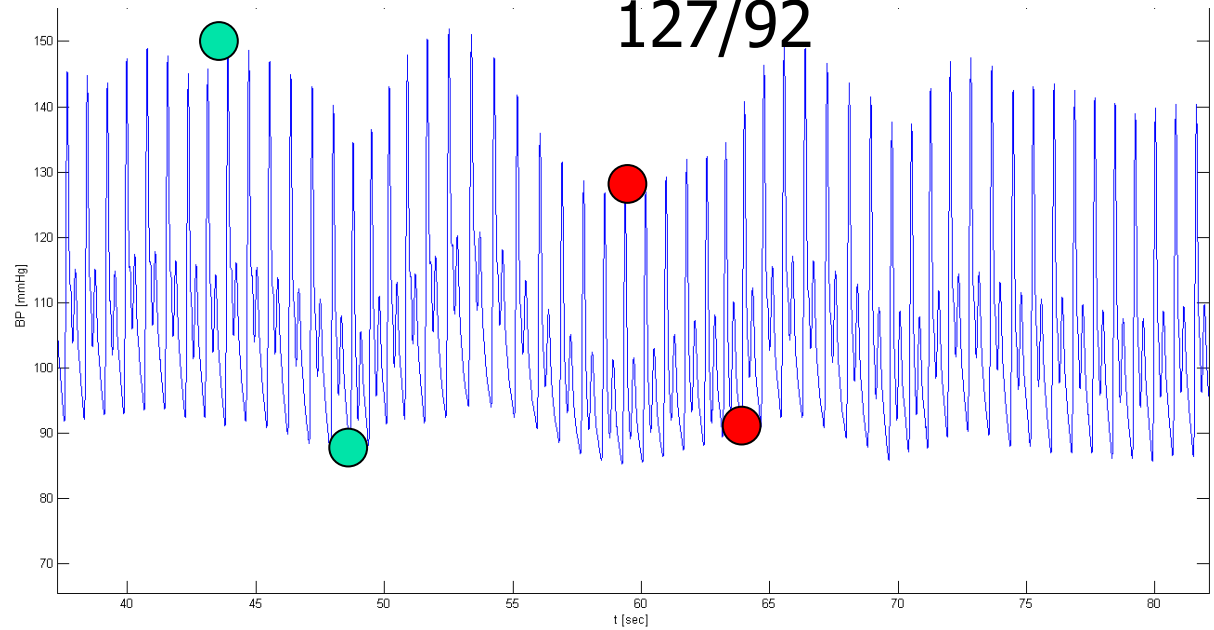
Principle of continual blood pressure measurement

Control system:
 Correction of the pressure in the finger cuff according to the arterial lumen changes. Aim: maintaining of constant arterial lumen through pressure changes in the cuff.

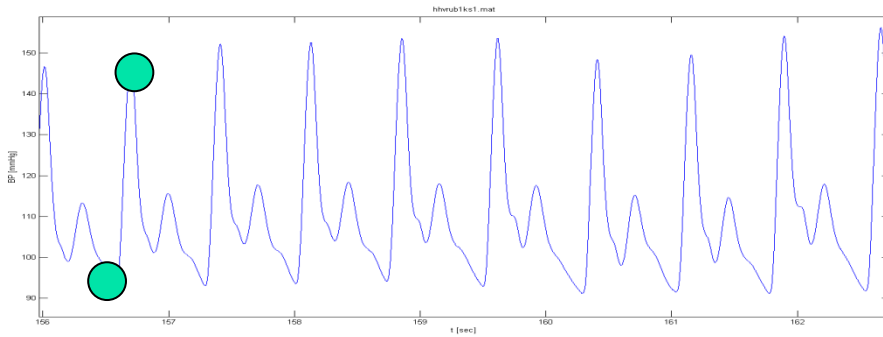


150/90

127/92



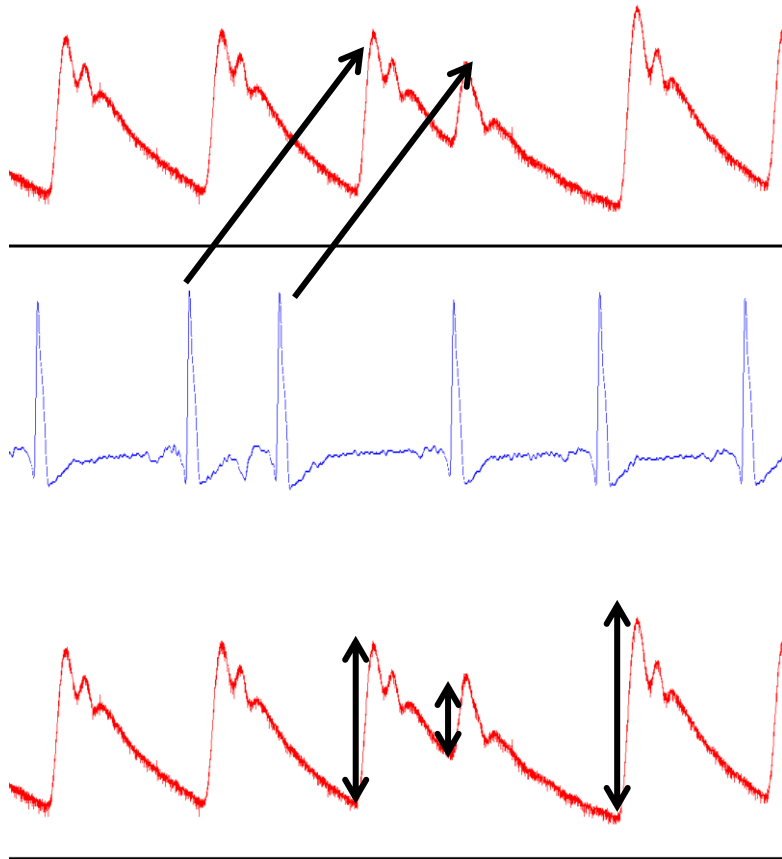
SBP



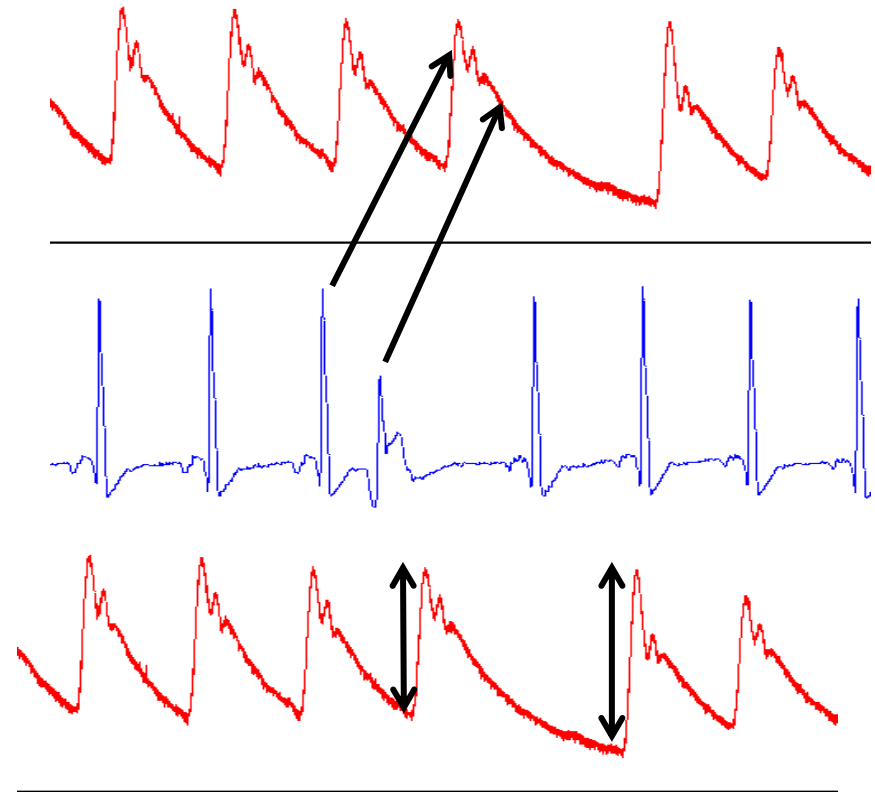
DBP

Extrasystoles

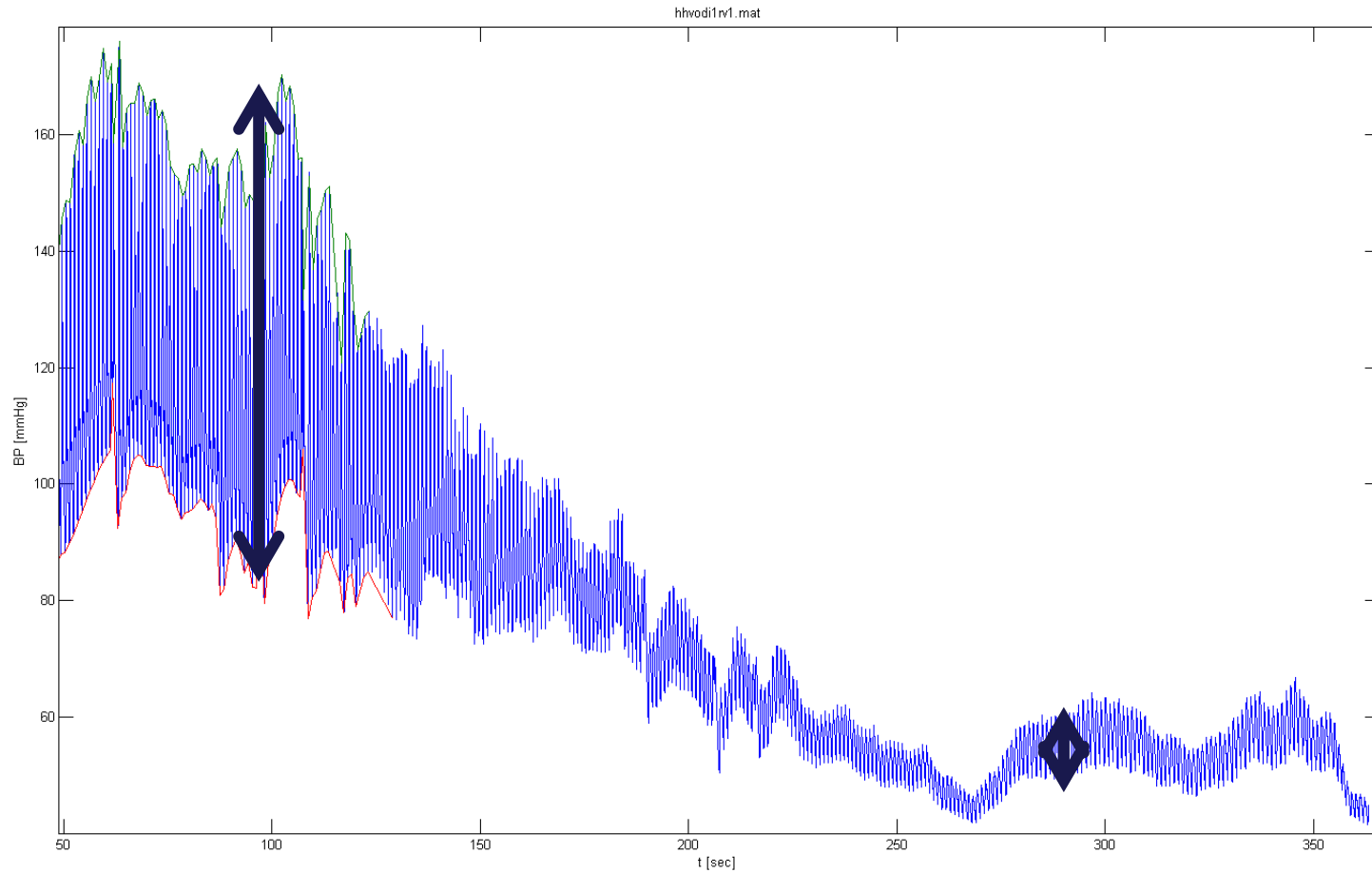
supraventricular



ventricular

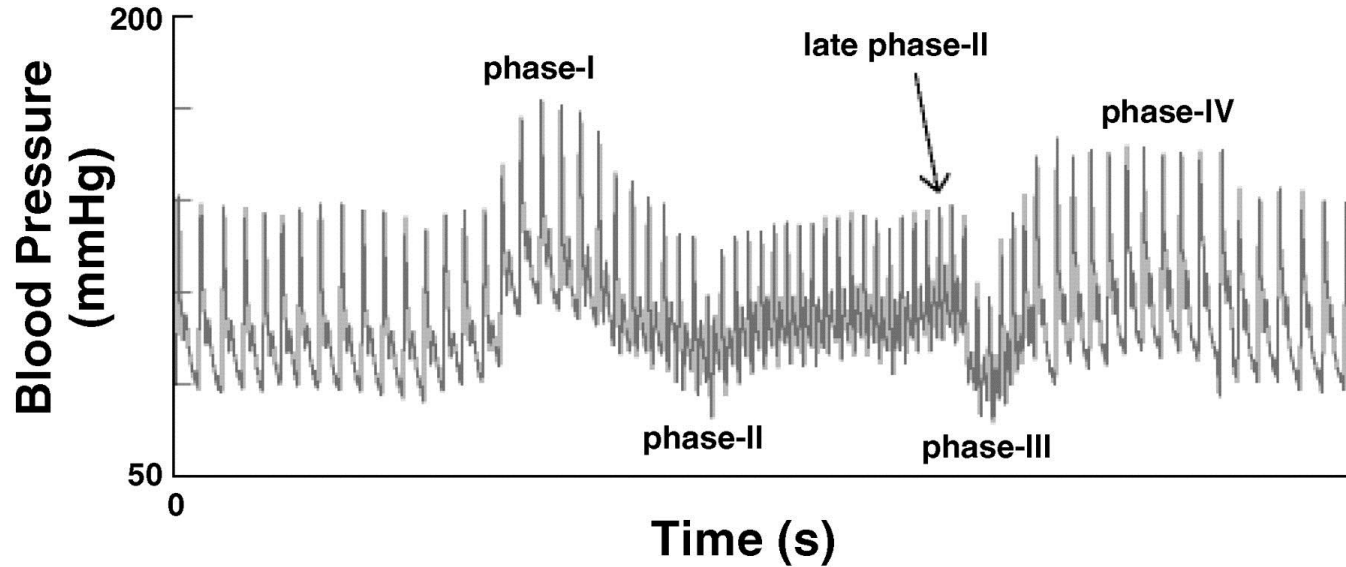


Orthostatic hypotension

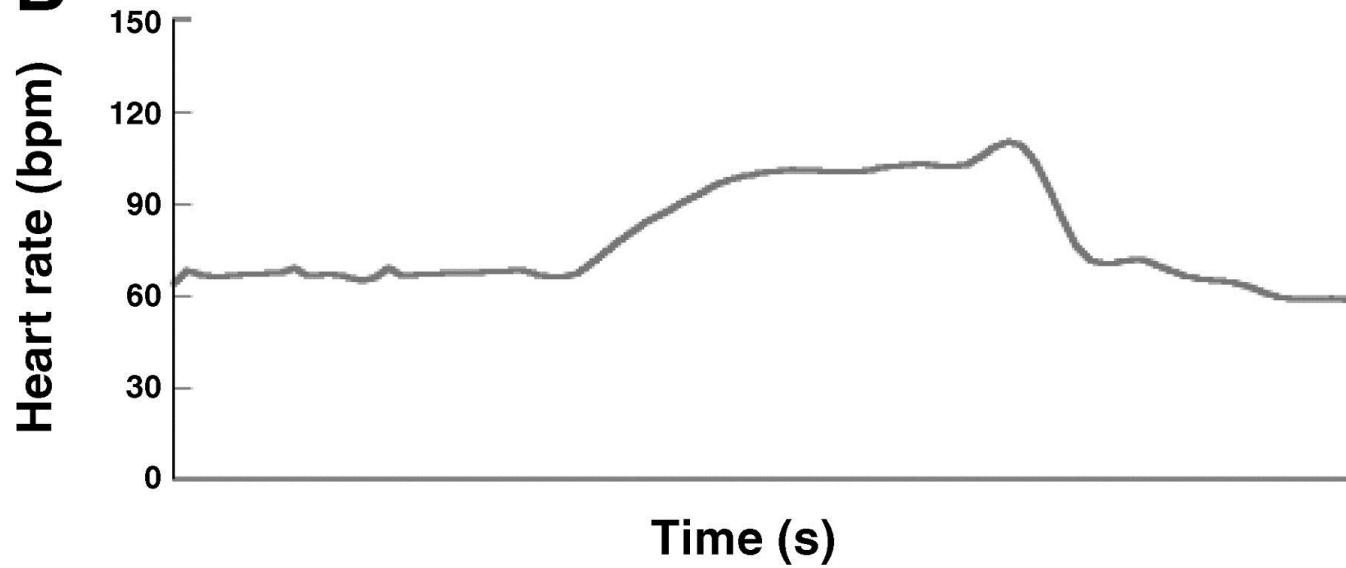


Valsalva manoeuvre

A



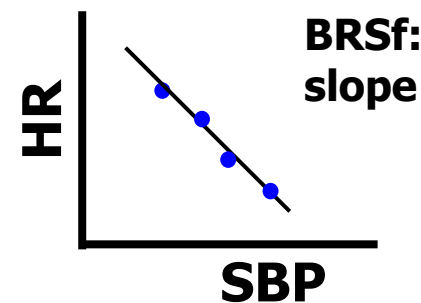
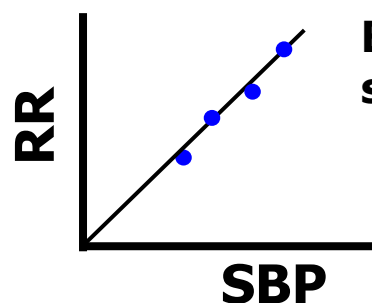
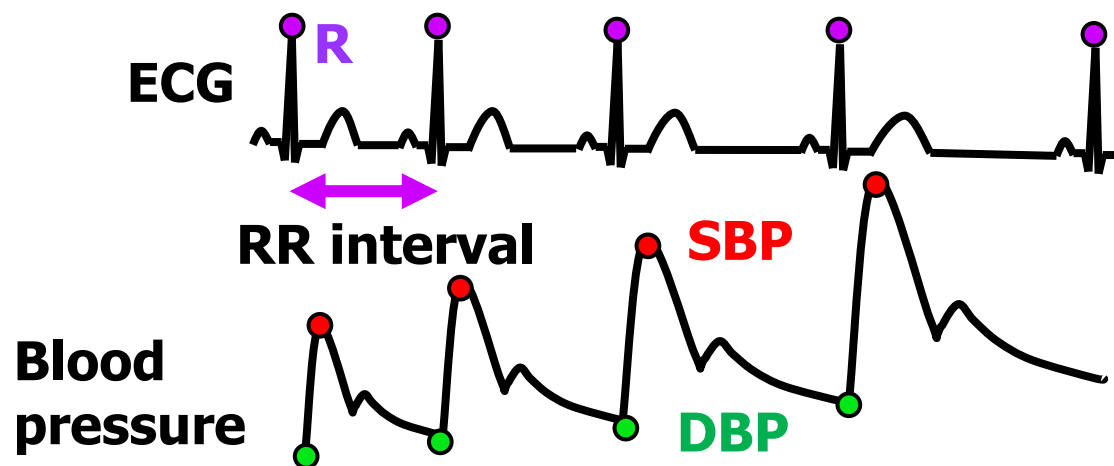
B



Baroreflex sensitivity, BRS

Evaluation of cardiac baroreflex function through SBP and heart rate (cardiac cycle) changes

BRS: change of cardiac cycle caused by SBP change by 1 mmHg [ms/mmHg]



Evaluation of BRS

Standard(oxford) method:

- Application of phenylephrine (vasoconstrictor)

decreased BRS

- Physiologically
 - stress
 - exercise
- Pathologically
 - hypertension
 - diabetes
 - Heart failure
 - Myocardial infarction

Bolus injections of vasoactive drugs

