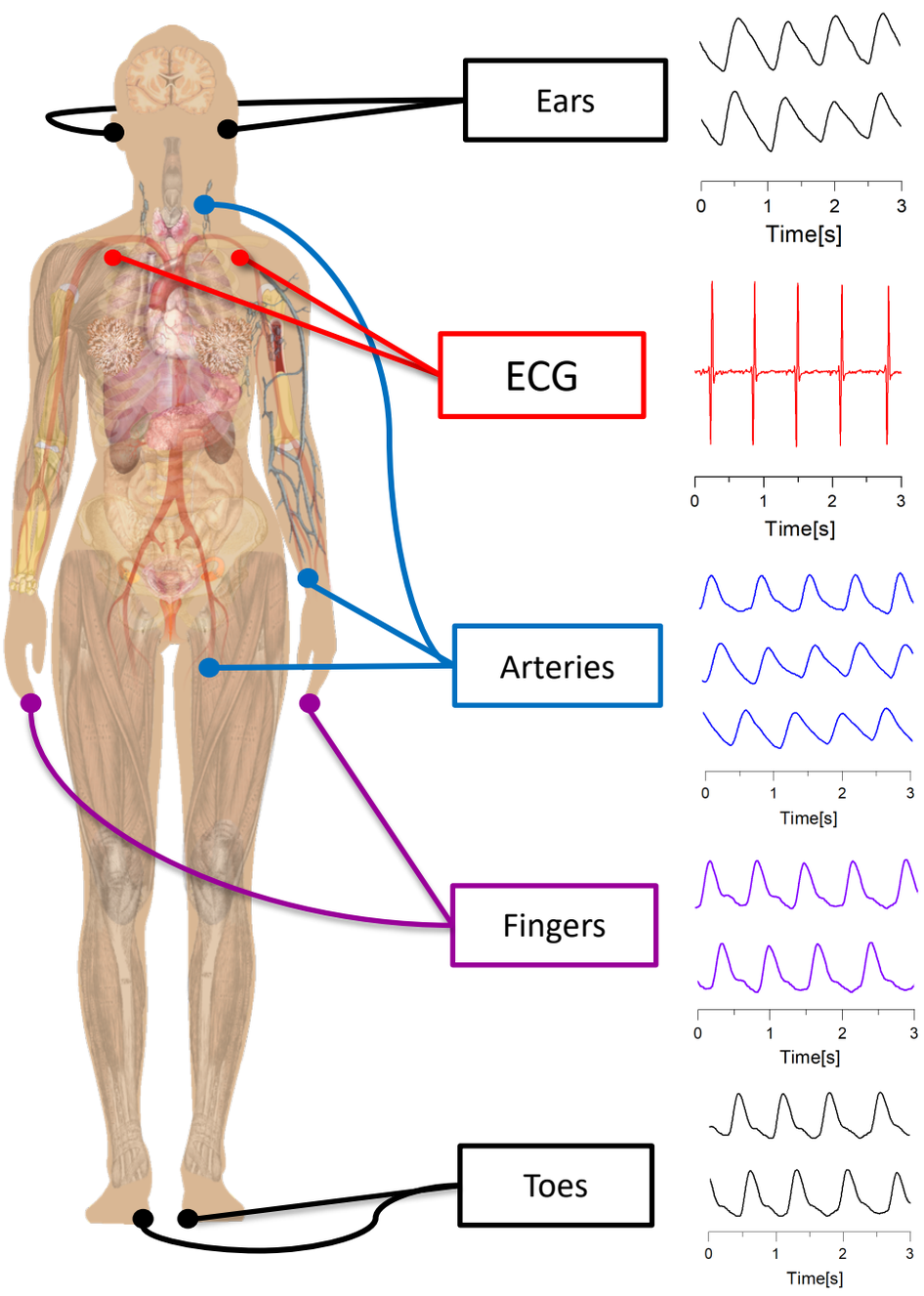
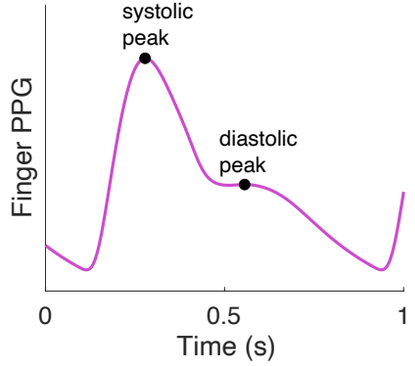
Signal acquisition



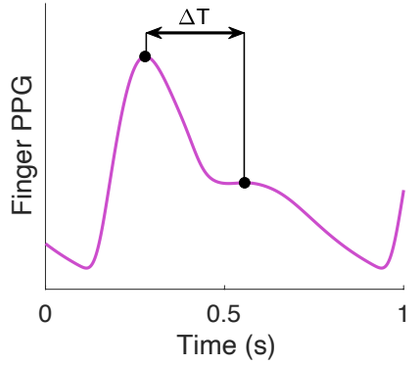
Assessing indicators of vascular age

Approach 1: Single PPG

i) Identify fiducial points



ii) Extract pulse wave feature



iii) Estimate parameter

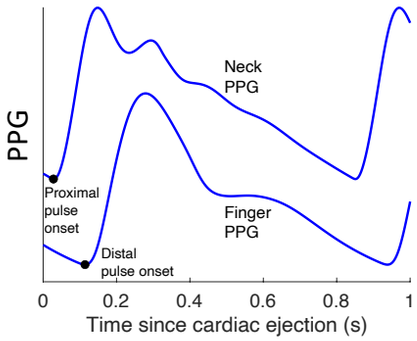
e.g. estimate aortic pulse wave velocity (PWV_a),

$$PWV_a = \alpha \frac{1}{\Delta T} + \beta$$

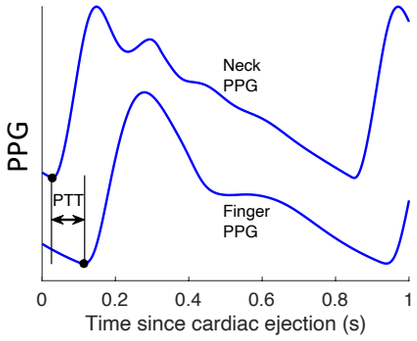
from the time delay (ΔT)

2. Multiple PPGs

i) Identify pulse onsets



ii) Extract pulse transit time



iii) Estimate parameter

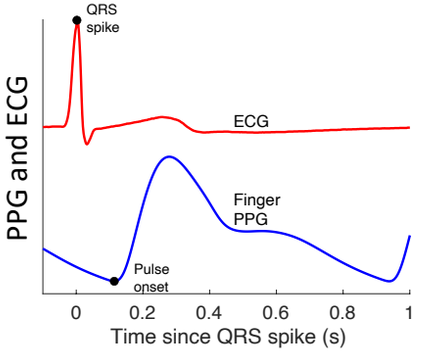
e.g. estimate carotid-radial pulse wave velocity (PWV_{cr}),

$$PWV_{cr} = \alpha \frac{1}{PTT} + \beta$$

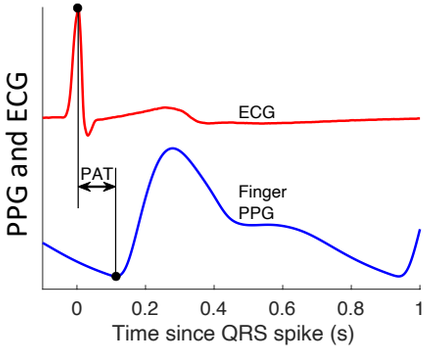
from pulse transit time (PTT)

3. PPG and other(s)

i) Identify QRS and pulse onset



ii) Extract pulse arrival time



iii) Estimate parameter

e.g. estimate systolic blood pressure (SBP),

$$SBP = \alpha \frac{1}{PAT} + \beta$$

from pulse arrival time (PAT)