

Pressure ulcers prevention: insights from postural adjustments of healthy persons



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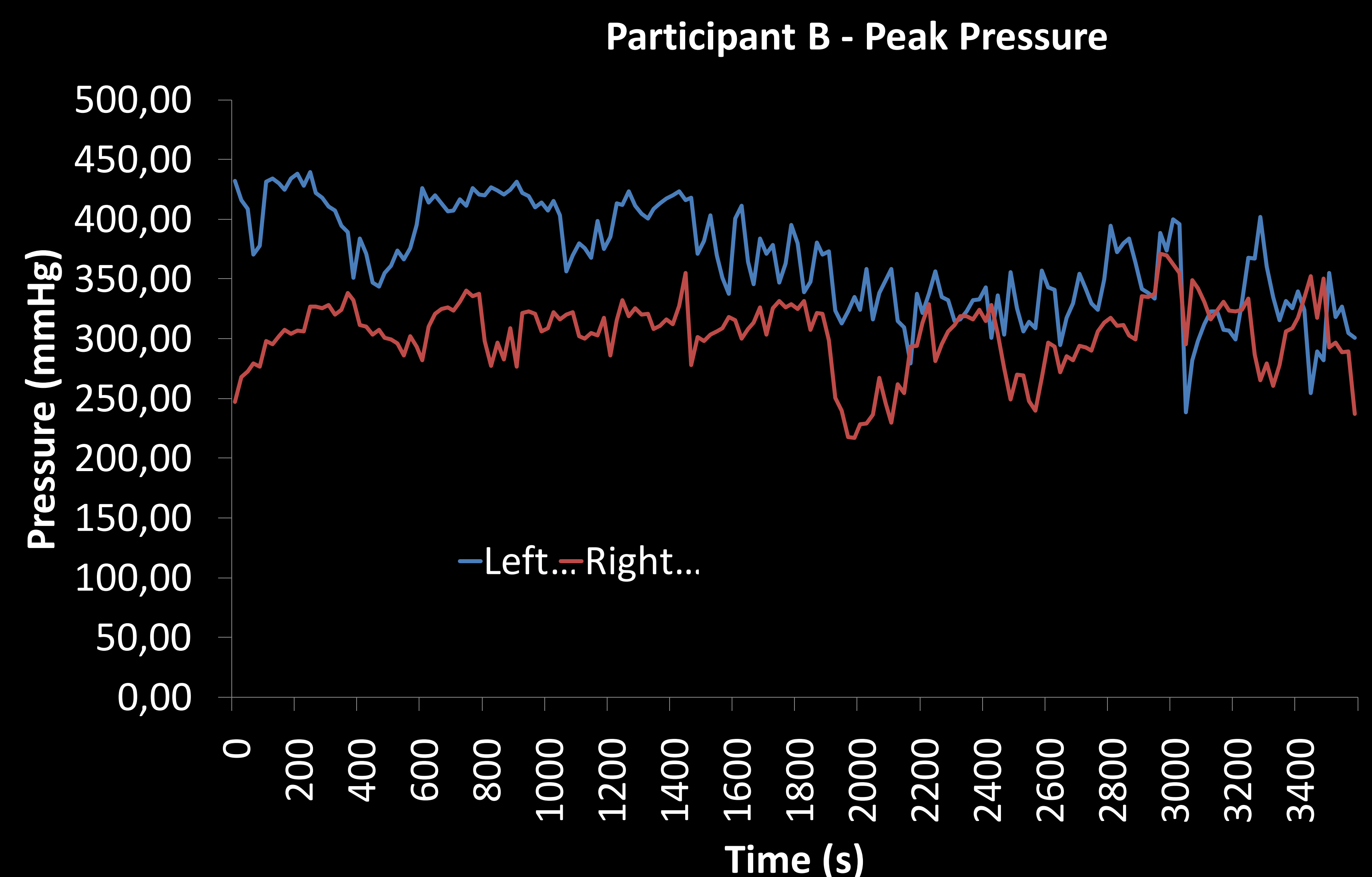
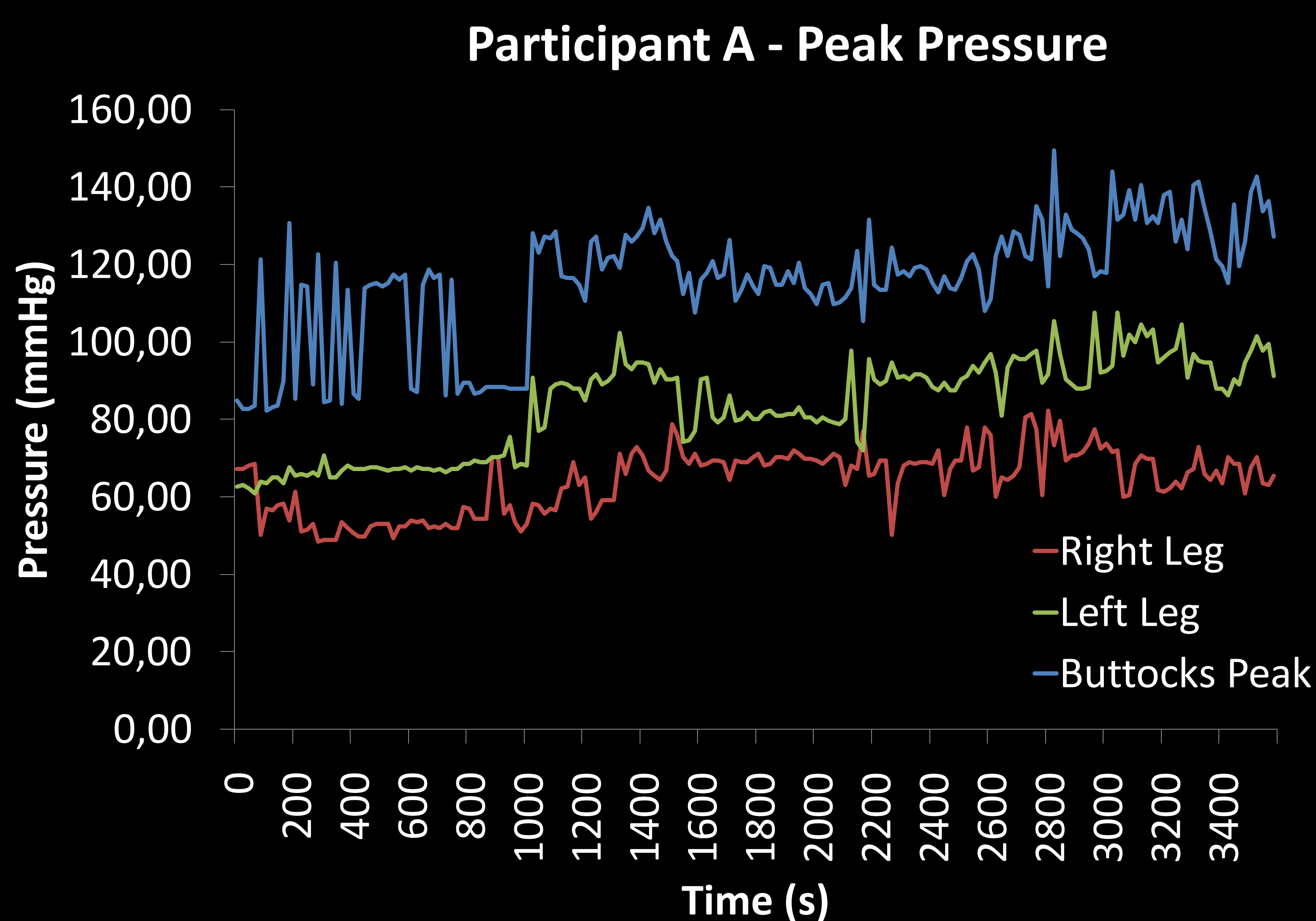


Objectives: to develop an automated system to monitor and control pressure in conditions of restricted mobility.



By using computational algorithms inspired on “natural” postural adjustments of healthy persons.

Example: healthy people sat on a hard surface without foot or back support for one hour. Pressure was recorded using *Tekscan*’s pressure sensor mat and postural adjustments were monitored with *Vicon*’s motion capture system. Subjective ratings of discomfort were taken every five minutes.



Participant A – BMI = 31

Participant B – BMI = 21



Front-back and left-right movements
 Higher pressure for B

Ongoing research:

- search for patterns in pressure and adjustments
- relationship between these patterns and anthropometric characteristics