MyotonPRO[1] is a unique and reliable[2] device which measures non-invasively important physiological parameters of superficial soft biological tissues, mainly muscle Tone, Stiffness and Elasticity.

These parameters enable to detect the changes in a patient's health condition!

Myoton is practical and cost-effective solution that can be used in clinical settings as a clinical outcome measure, to monitor the progress of medical treatments.

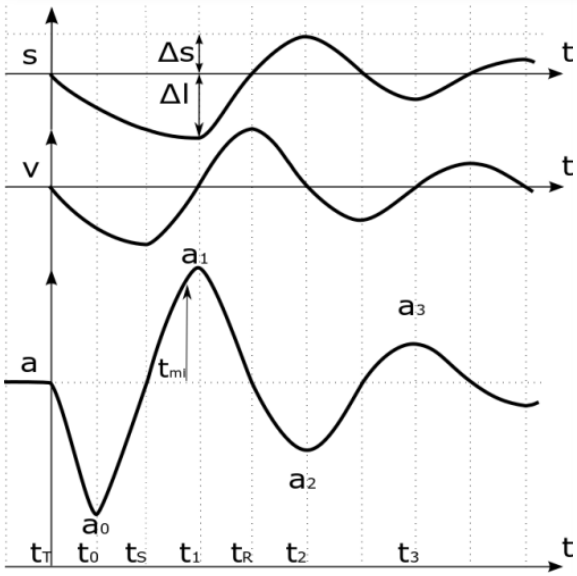
1 For research use only

2 Scientific literature: https://www.myoton.com/publication/

Measurable parameters

Parameters	Characteristics	Parameter type	Unit	Formula
Natural Oscillation Frequency	Tone or Sate of Tension	State of Tension	[Hz]	$F = f_{max}$ of the signal spectrum, computed by the FFT algorithm
Dynamic Stiffness	Stiffness	Bio-mechanical property	[N/m]	$S = a_1 \cdot m_{probe} / \Delta l$ a_1 = max displacement m_{probe} = probe mass
Decrement Log	Elasticity	Bio-mechanical property	-	$D = \ln (a_1 / a_3)$
Mechanical stress relaxation time	Relaxation time	Visco-elastic property	[ms]	$R = t_R - t_1$
Ratio of Deformation and Relaxation time	Creep	Visco-elastic property	-	$C = R / (t_1 - t_T)$

Method



The method of measurement consists of four main stages:

1. pre-compression to subcutaneous adipose tissues
2. exertion of a light mechanical impulse to the muscle
3. recording the muscle's response in the form of an acceleration signal
4. computing of parameters

Δs – pre-compression of the subcutaneous adipose tissues

Δl – maximum displacement

a - acceleration, **v** - velocity, **s** - displacement, in the process of damped natural oscillation

Applications

Myoton solution is essential in neurology and neuro-rehab, in physiotherapy, but also in all medical or sports use cases where soft tissues need to be objectively monitored.

The measurable parameters allow objectively to assess the efficacy of medical interventions, sports exercise, recovery, symmetry or aging.

Latest scientific articles suggest Myoton solution is highly reliable also for skin measurements.

Myoton AS | Lootsa 8a, Tallinn, Estonia 11415 | www.myoton.com
✉ contact@myoton.com | ☏ +372 609 8242