



MYODYNAMIK HUMAN

Me-Mover Trial

CURO & ESTi™

Nov 2015





The CURO system



Weight: 290 g

Width: 9.5 cm

Length: 14.5 cm

Breadth: 3.5 cm

12 V dc charger + USB link

4 muscles (2 antagonist/agonist groups)

Real-Time assessment

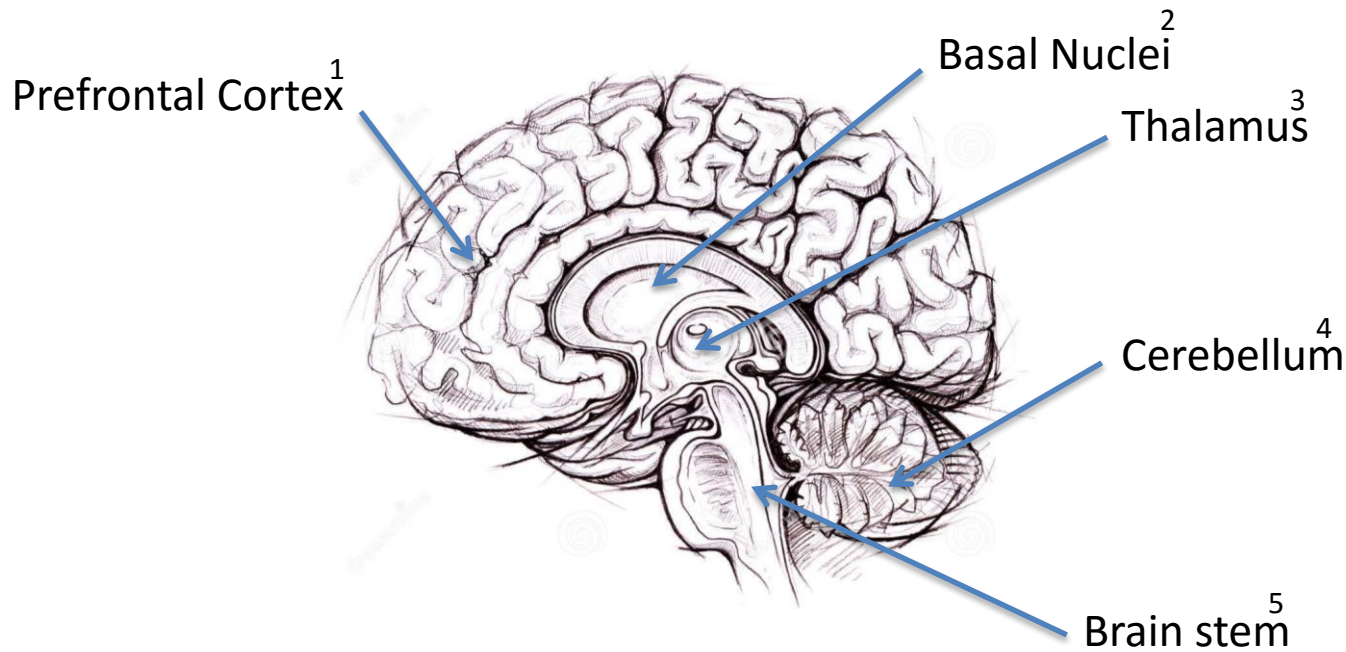
ESTi™ Analysis & Balance Score

Recording time: 7 hours non-stop



VOLUNTARY MOVEMENT¹ → **MOVEMENT PLANNING**² → **MODULATION**³

FINE TUNING⁴
↓
POSTURE⁵
↓
MUSCLE CONTRACTION



ESTi™

E – efficiency/synchronization

S – spatial summation – number of active fibres

T – temporal summation – rate of active fibres

**CONTRACTED
MUSCLE**



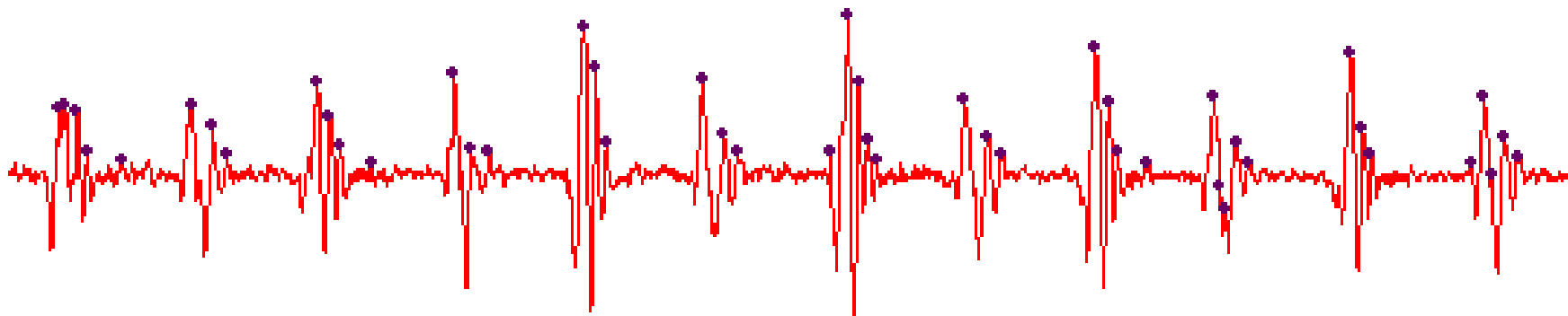


The CURO system .. compared

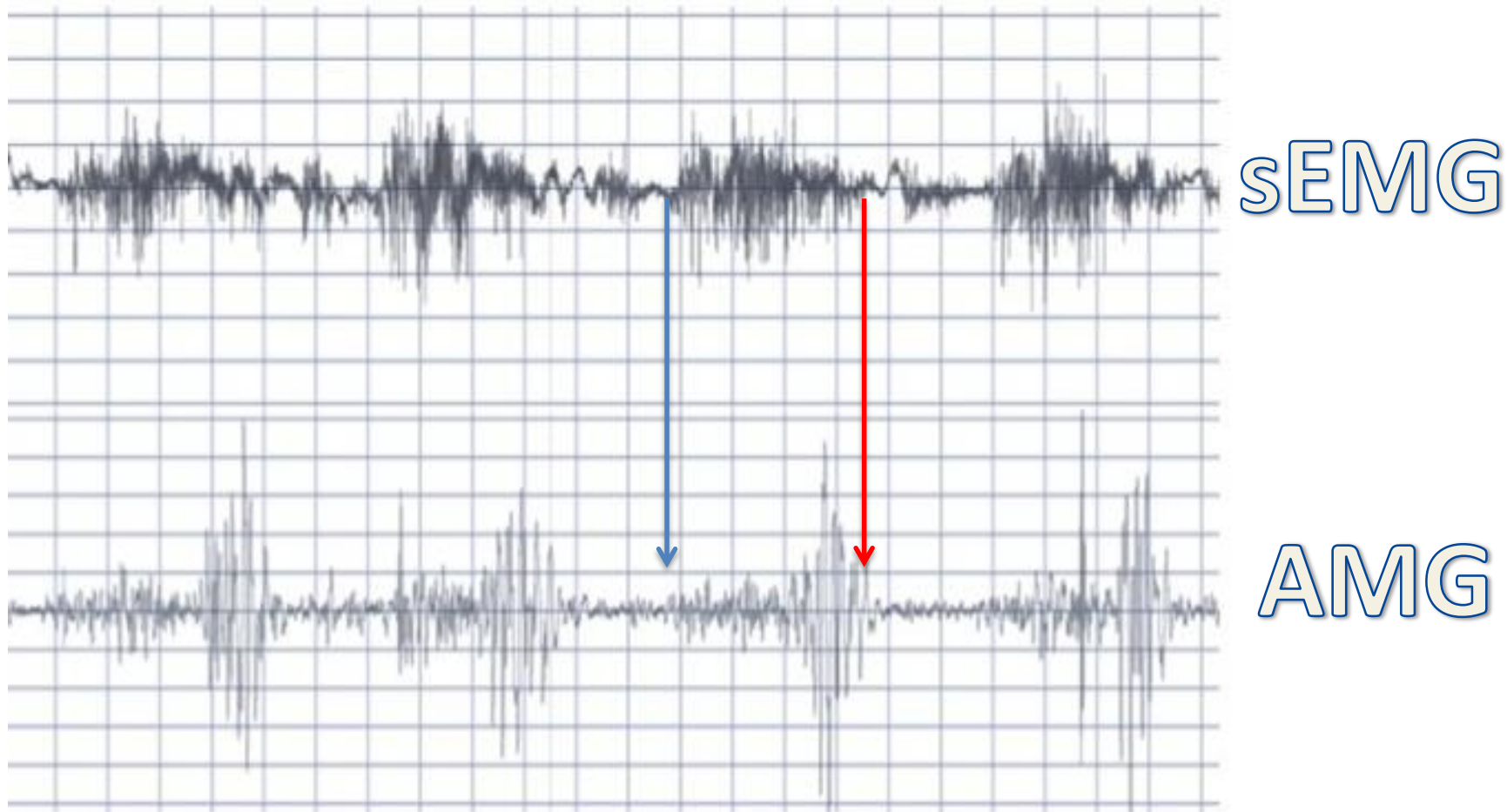
	CT Scanning	MR Scanning	X-ray	Ultra-Sound	Biopsy	EMG	AMG
Fiber composition		(x)			x	x	x
Injuries on muscles	x	x	(x)	x		x	x
Usage of muscles	x					x	x
Fiber recruitment						(x)	x
Measuring during activity						(x)	x







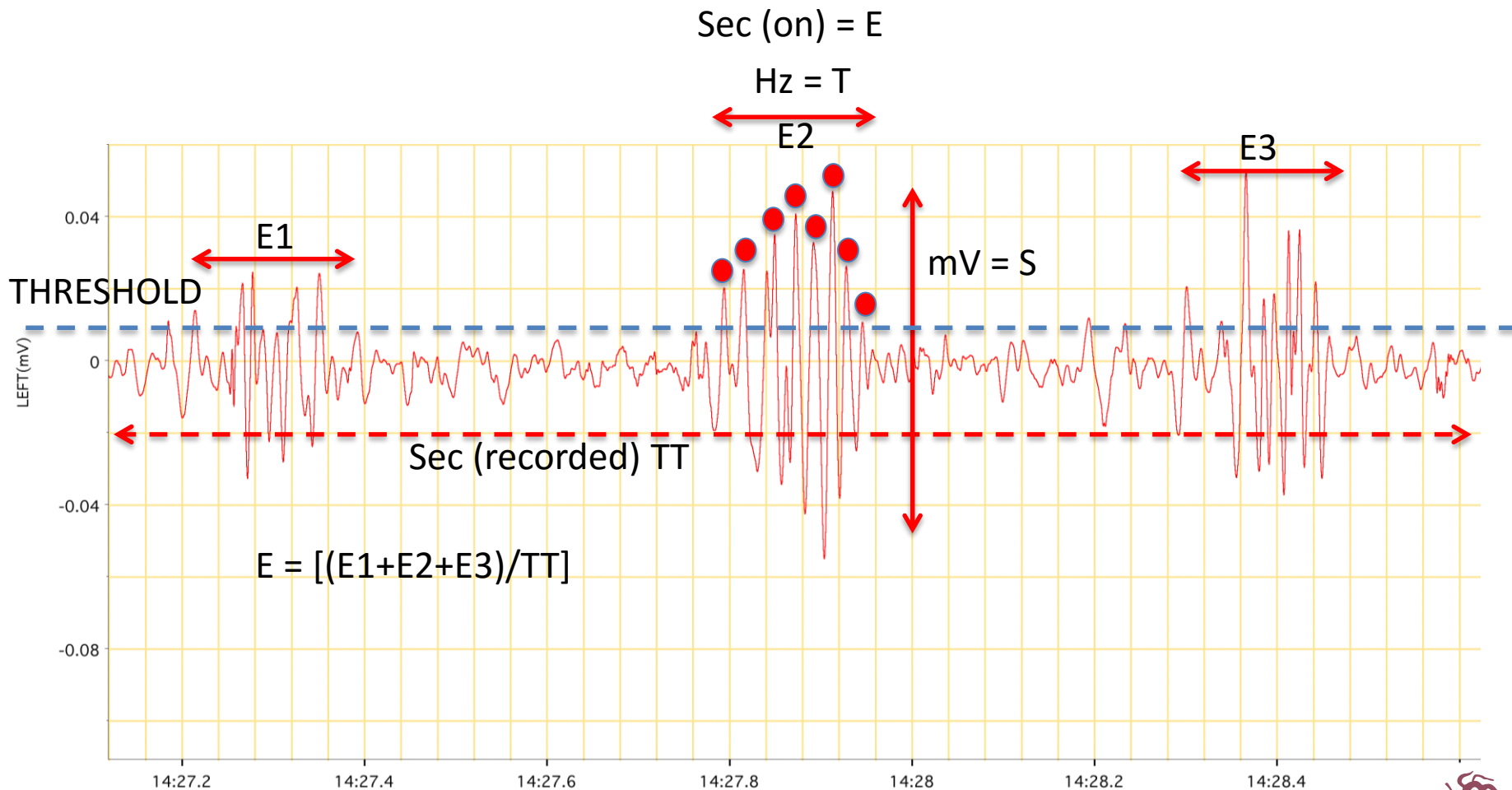
AMG Signal .. *validation*



Harrison et al. Physiological Reports, 1 (2), 2013, e0029



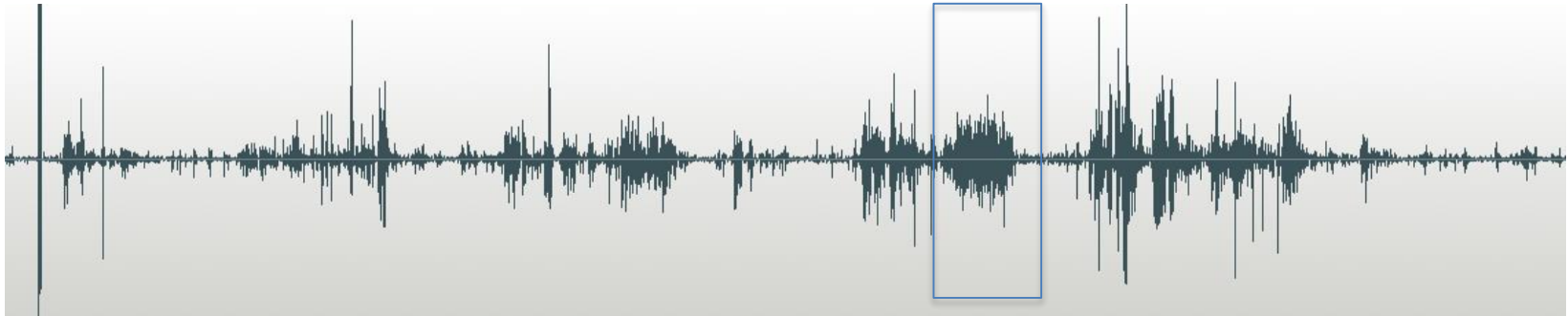
RAW – AMG SIGNAL & EST index (ESTi) components



m. Latissimus dorsi – core muscle – back support/rotation

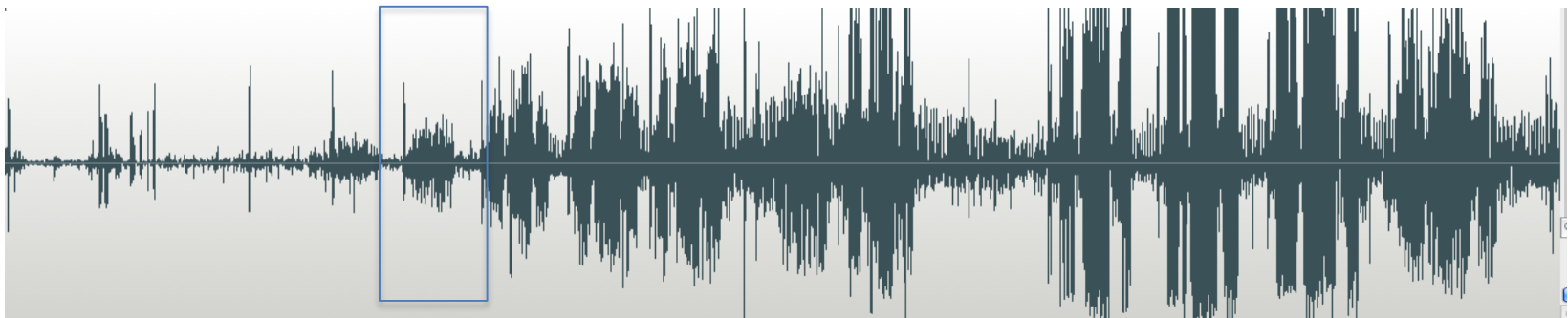
Me-Mover activity

(kangaroo jumps)



Normal activity

(natural
running)



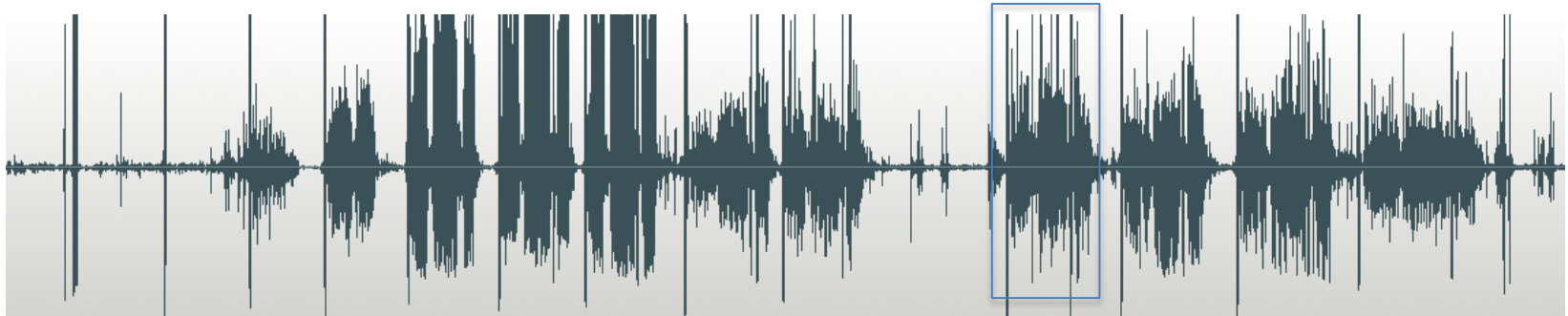
- Gentle and consistent training for the back muscle using a Me-Mover



m. Rectus femoris – leg muscle – hip flexion

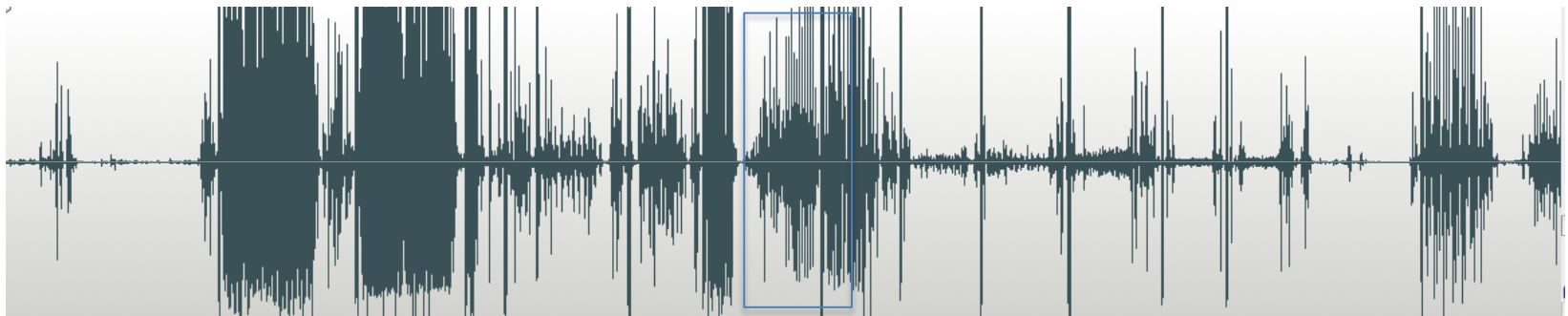
Me-Mover activity

(big steps lean forward & push)



Normal activity

(high knees)



- Gentle and consistent training for the thigh muscle using a Me-Mover



m. Rectus abdominus – stomach muscle – flexion of trunk & lumbar

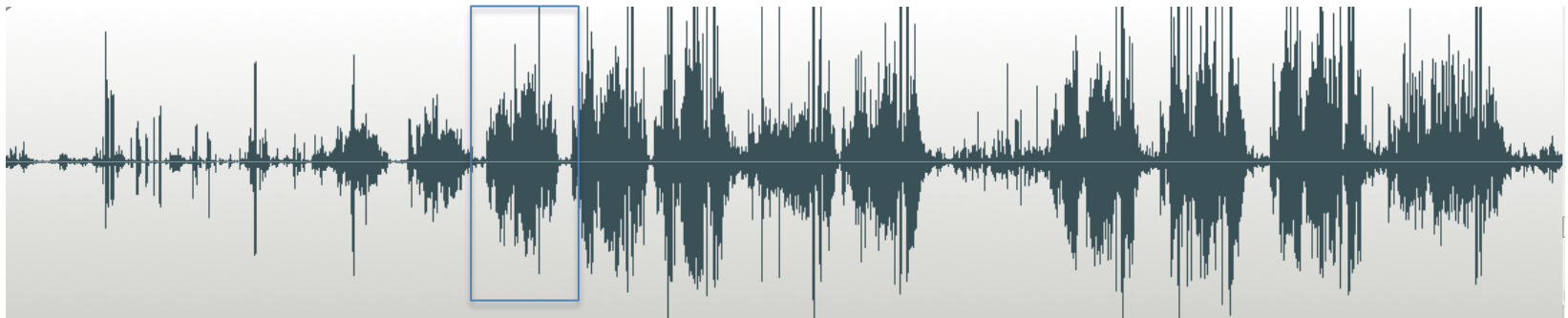
Me-Mover activity

(kangaroo jumps)



Normal activity

(step ups)



- Abdominal training for the stomach muscle when performing kangaroo jumps on a Me-Mover



This trial shows:

- That use of a Me-Mover activates not only peripheral muscles, but also core body muscles such as back and abdomen.
- That the type of activity is intense in terms of a good work-out, but also gentle on joints such as the knees and hips, being free from impact related problems associated with running and jogging on hard surface for example.
- That an array of exercise techniques can be combined into one device – the Me-Mover.
- That a more sustained work-out can be achieved with a Me-Mover, activating a greater number of body muscles more of the time.

