“THE WALKING” Validation ~ Comparison with VICON (motion capture system using camera)

Results of VICON data and our system data are mutually correlated.

- Sacrum: $R^2=0.933$, $p<.01$
- 6th thoracic Vertebra: $R^2=0.811$, $p<.01$

“Development Of Walking Ability Evaluation Method With Accelerometer And Gyrometer”
Tasuku Ito, Macky Kato (Waseda University)

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Experienced people have a tendency for the lateral sway of the lower trunk to be small.

**Horizontal sway: upper body trunk > lower body trunk**

<Research conditions>
- **Subjects**: over 60 years old 111 people
- **Average age**: 67.3
- **Walking length**: 10m
- **Walking with barefoot**
- **Measurement position**:
  - Upper body trunk: T10
  - Lower body trunk: sacral
- **Measuring equipment**:
  - VICON MX-System (200Hz)
  - AMTI Floor reaction force meter (1000Hz)

Source: LIFE 2017
(September 15 - 17, 2017: Ochanomizu University)

"Relationship between kinetic characteristics of upper body trunk and lower body trunk during walking and fall risk"

National Institute of Advanced Industrial Science and Technology
Yoshiyuki Kobayashi / Miho Ono

Red : Gait of those who have fallen (past 1 year)
Blue : Average gait
Green: Gait of those who have never fallen (past 1 year)