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Actiwatch 7®

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Main Features

- Wrist-worn light-weight activity monitor for ambulatory monitoring
- Recording of physical activity by means of an accelerometer
- Data transfer to a PC via a reader for analysis with custom activity and sleep analysis software
- Records for up to 180 days with a 1 minute epoch
- Models available for measuring activity plus other parameters such as light and subjective scoring
- All recorded data is fully exportable

Applications

- Physical activity intervention studies
- Circadian rhythm research
- Detection of sleep disorders
- Numerous other applications

The Actiwatch is a wrist-mounted device which detects and logs movement intensity and duration. The data is stored in the watch and can be downloaded to a PC for analysis. As such, it is a convenient tool for the ambulatory recording of either limb activity or general physical activity for clinical use and for research purposes.

Physical Activity

The activity plots coupled with specialised software serve to quantify the intensity and duration of daily physical activity as an indicator of a particular lifestyle or to monitor the effects on mobility of a medical condition as well as the efficacy of treatment for that condition.

Sleep

The Actiwatch is also useful for screening patients with suspected sleep disorders before resorting to tests in a sleep clinic.

Sleep analysis software serves to analyse sleepwake patterns and to calculate the sleep onset latency, sleep efficiency and sleep fragmentation.

Validation

The Actiwatch has been validated against polysomnography, the 'gold standard' for use in sleep studies[1],[2] and it has been used extensively for other applications. A full bibliography of papers published using the Actiwatch is available on our website.

Fields of Applications

The Actiwatch is in use in the fields of physical activity monitoring, sleep, respiratory medicine, paediatrics, psychiatry, health psychology, pain, Alzheimer's & Parkinson's research, geriatric medicine, dermatology and urology.

Technical Specification

Weight:	10.5 grams*
Battery life:	8 years
Memory:	256kB
Waterproof:	Yes#
Warranty:	2 years*
Size (mm):	39 x 32 x 9
Epoch Range:	2s-15min
PC Analysis:	Windows® XP/Vista Windows®7

tested to 6 BAR *excluding strap

Bibliography

1. Kushida C, Chang A, Gadkary C, Guilleminault C, Carrillo O, Dement W.

Comparison of actigraphic, polysomnographic, and subjective assessment of sleep parameters in sleep-disordered patients. ***Sleep Medicine 2 (2001) 389-396***

2. Kevin So, Pat Buckley, T. Michael Adamson, and Rosemary S. C. Horne

Actigraphy correctly predicts sleep behavior in infants who are younger than six months, when compared with polysomnography. ***Pediatric Research, Vol. 58, No. 4, 2005, 761-765***

Epoch length	2 sec	5 sec	10 sec	15 sec	30 sec
Recording time (days)	6	15	30	45	90
Epoch length	**1 min**	**2 min**	**5 min**	**10 min**	**15 min**
Recording time (days)	180	360	900	1800	2700

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Actiwatch® data output and display

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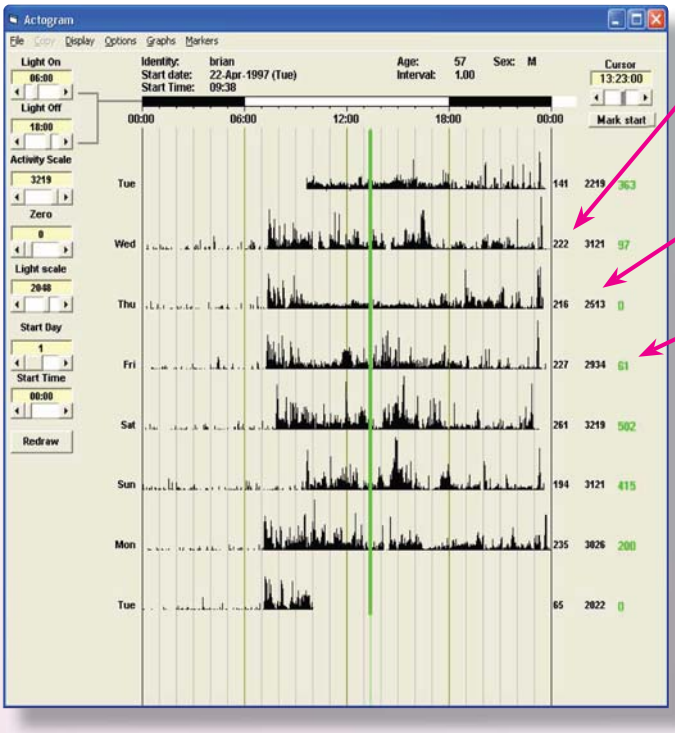
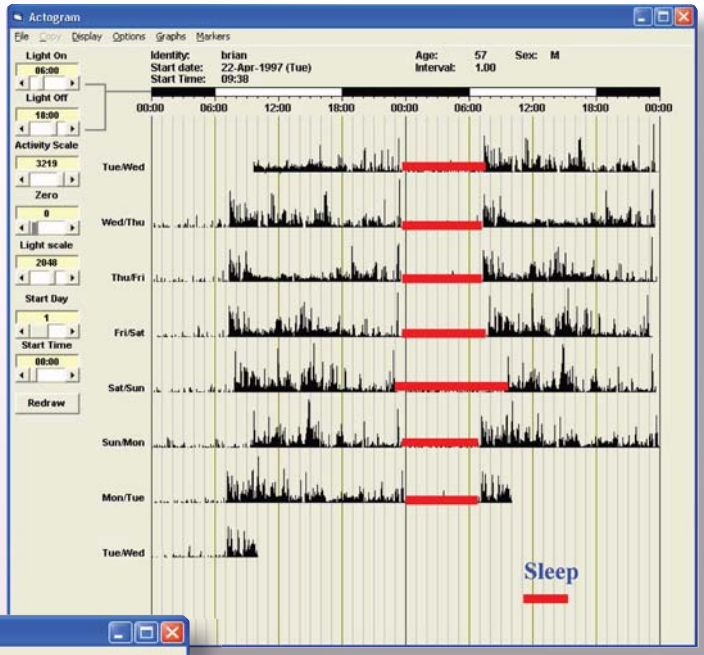
Activity Measurement



Circadian Rhythm Analysis



Sleep Analysis