



ActiLife5™ Software



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The ActiLife5 desktop software application is ActiGraph's premier actigraphy analysis platform. Used by researchers around the world, ActiLife5 allows users to quickly interface with multiple ActiGraph devices for data collection preparation, downloading, post-processing, data graphing, and comparison to industry standards. ActiLife5 has an extensive selection of integrated customer-driven analysis tools and features designed to meet a wide range of research objectives.

ActiLife5 Features

- Multiple device initializations
- High speed, multiple device downloads
- Wear time compliance screening
- Data scoring with current industry standard algorithms
- Customizable initialization & download templates
- Automatic application and device firmware updates
- Exportable file formats compatible with third party analysis programs

ActiLife5 Processing & Analysis

Data Screening

Eliminate invalid data with ease by setting customized validation requirements relating to wear time, non-zero epochs, and minimum and maximum count values. Individual days within datasets or entire datasets that do not meet the criteria are identified and can be excluded from the scoring process. ActiLife5's wear time validation tool also quickly summarizes bouts of activity and inactivity for fast screening.

Graphing

Generate customizable graphs for simple visual identification and comparison of activity levels and patterns across multiple days. Users can highlight and zoom in on sections of the graph to view the selected period in greater detail. Graphs can be exported to shareable PDF files and can even maintain zoom levels to help highlight areas of interest.

Sleep Scoring

Score sleep episodes using the Sadeh or Cole-Kripke algorithms to accurately determine sleep onset, sleep latency, total sleep time (TST), wake after onset (WASO) and sleep efficiency. Scored data is generated in tabular, graphical and actogram formats for simple visual identification of circadian patterns and cycle shifts across multiple sleep episodes.

Batch Data Scoring

Process and compare multiple datasets with ActiLife5's powerful batch data analysis toolkit.

- **Energy Expenditure:** Calculate energy expenditure using the Work Energy Theorem, the Freedson Equation, a combination equation or Vector Magnitude. Kcalcs are displayed for the entire dataset, by day, by hour and by epoch.
- **Cut Point Analysis:** Quickly categorize activity intensity levels over multiple datasets. Default cut points for adults are provided and can be customized by the user.
- **Activity Bout Detection:** Define custom bout boundary criteria and detect the number and length of such bouts across multiple datasets.
- **Children's METS:** Categorize activity intensity levels in children between the ages of 6 and 18 years. Default MET levels are provided and can be adjusted by the user.

Data Comparison

Compare data and population profiles against standardized, large scale datasets including the National Health and Nutrition Examination Survey (NHANES). Import entire datasets or filter by specific population criteria, and ActiLife5 will generate exportable graphs comparing physical activity intensity, energy expenditure and physical demographics.