

## Field-Based Physical Activity Measurement Core Services & Pricing

**Data collection planning/startup support.** The core can assist with physical activity measurement-related aspects of study planning and startup, including creating customized data collection protocols and participant materials for funded projects. These services are for when you want your team to lead the accelerometer data collection but need support with project startup, protocols/materials, and training of staff. If more specialized support is needed requiring more than 10 hours (e.g., for projects with unique needs), we can provide a customized budget.

Service	Pricing
Project startup support package – includes creating customized accelerometer protocols and participant materials for your project and training your project staff (limited to 10 hours of consulting/support)	\$700

**Monitor rental.** The core has an inventory of physical activity monitors that are frequently available for investigators to rent. This generally excludes Garmin wearables as they are typically used as single use monitors that participants keep, not shared across research participants. To estimate the number of monitors your project will require, you need to determine the number of participants that will be assessed each month and the total number of months the monitors are needed. Most projects that use the recommended 7-day wear protocol will need 1 monitor per every participant that is assessed per month (0.75 monitors per participant per month are typically needed when the monitors are not being distributed and collected in the mail). A project that aims to assess 30 participants per month over 4 months (120 total participants) would need 30 monitors for 4 months if using postal mail for distribution and collection. Rental fees are waived when the core's data collection services are used. Costs are determined up front based on the number of monitors you will need and number of months.

Rentals	Pricing
ActiGraph wGT3X-BT rental with belt or wristband	\$5.00 per monitor per month
Qstarz BT-100XT rental with charger	\$2.50 per monitor per month
activPAL4 rental	\$5.75 per monitor per month
activPAL 11 port rental	\$3.25 per item per month
activPAL 7 port active rental	\$9.50 per item per month
USB charging hub and cable rental	Included with monitor rental
Consumables	Pricing
GPS pouches – each pouch is typically used 1-4 times	\$9.00 per pouch
activPAL dressing – each participant typically uses 2-5 sets	\$0.30 per set

**Distribution and management of monitors for data collection.** The core can manage accelerometer data collection for your project, including distributing and collecting monitors from your study participants at our offices, in community locations, and through the postal mail. We can also monitor wear compliance and data quality throughout the data collection period. Costs is based on the number of participants and determined up front based on your target sample size. Monitor rental fees are waived for investigators who use any of the data collection services. For larger sample sizes, please contact us. For data collection services involving Garmin wearables, please see 'Garmin project integration' section below. If your project has unique needs that do not fit within the packages below, we can provide a customized budget.

Service	Pricing
Basic data collection package – we create customized accelerometer protocols and participant materials for your project, lend and prepare the monitors, distribute	

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and collect the monitors via postal mail or at large group events your team organizes, send reminder messages, extract data, monitor wear compliance, conduct re-wears, prepare monthly reports, attend monthly project meetings, and follow up with participants who have not returned the monitor (this package requires that our team have minimal contact with the study participants outside of any group events and calls to track down unreturned monitors)	
1-50 participants or assessment time points	\$120 per participant or assessment
51-500 participants or assessment time points	\$100 per participant or assessment
501-1000 participants or assessment time points	\$80 per participant or assessment
Advanced data collection package – we create customized accelerometer protocols and participant materials for your project, lend and prepare the monitors, communicate with participants individually to coordinate the distribution and collection of the monitors in person via individual or small group appointments, send reminder messages, extract data, monitor wear compliance, conduct re-wears, prepare monthly reports, attend monthly project meetings, and follow up with participants who have not returned the monitor (this package involves more contact between our team and the study participants, such as arranging visits at our office or in a clinic setting; there will be additional costs if substantial travel time is required)	
1-50 participants or assessment time points	\$140 per participant or assessment
51-500 participants or assessment time points	\$120 per participant or assessment
501-1000 participants or assessment time points	\$100 per participant or assessment

**Data processing.** The core has many tools for processing data to derive end variables for various needs. These services can be stand alone or in addition to any of the other core services. The core’s processing services range from simply implementing data processing techniques in ActiLife software, to integrating data across systems and/or customizing our macros for specialized project needs. Our team has extensive tools and knowledge around processing GPS data to identify trips and trip modes (i.e., walking, cycling, vehicle) and integrating GPS, accelerometer, and GIS (Geographic Information Systems) information to identify activity levels in various locations. We have expertise in PAL Technology’s software for processing activPAL data and have developed several of our own tools outside of the PAL software suite to support advanced processing of the events files, such as integrating sleep logs and deriving additional sedentary pattern variables. Some of the most exciting work in which we have been involved, with partners at UC San Diego, was the development of a new algorithm (CHAP) for capturing posture from hip-worn ActiGraph accelerometers. CHAP uses the raw data from the ActiGraph to generate the primary outputs provided by activPAL (sitting, standing, and sit-stand transitions), allowing ActiGraph users to better measure sedentary bout patterns. We can implement this tool for investigators or provide guidance on its use. All of our core’s processing services beyond the standard processing service are unique and specialized capabilities we have developed over many years. For larger samples or customization (processing beyond what is described below), we can provide a customized budget. We typically process all data together at the end of the project, so if you need data to be processed at multiple time points, there will be an additional charge per batch of processing.

Service	Pricing
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Basic data processing package – involves standard data quality checks and processing in ActiLife or PAL software; Does not include customized processing outside of these software packages	
1-50 participants or assessment time points	\$700
51-500 participants or assessment time points	\$1050
501-1000 participants or assessment time points	\$1400
Advanced data processing package – involves standard processing plus additional processing outside of ActiLife and PAL software, including bout, time-based, and/or sleep processing (for other customized processing not listed here, we can provide a customized budget)	
1-50 participants or assessment time points	\$2,000
51-500 participants or assessment time points	\$2,500
501-1000 participants or assessment time points	\$3,000
GPS data processing package – involves standard and advanced processing, plus trip detection (walking/pedestrian, bicycling, and vehicle trips), integration of GPS and accelerometry data, geocoding, shape file derivation, and location detection in GIS (at home, at school/work, in neighborhood, at park, and in other pre-defined locations) for up to 6 counties	
1-50 participants or assessment time points	\$7,200
51-500 participants or assessment time points	\$9,600
501-1000 participants or assessment time points	\$12,000
CHAP processing package – involves implementation of the CHAP algorithm via cluster computing to derive posture labels (i.e., activPAL output) and sitting bout variables from hip-worn ActiGraph accelerometers	
1-50 participants or assessment time points	\$2,000
51-500 participants or assessment time points	\$2,500
501-1000 participants or assessment time points	\$3,000
Contact us for an estimated budget based on the scope and specific needs of your project.	

**Garmin project integration.** With our partners in Research Informatics, we can obtain physical activity data in near real time through Garmin’s API (Application Programming interface). We have established protocols for setting up new Garmin accounts for participants, syncing each participant’s monitor with their mobile device, turning off/on features of the Garmin, linking each participant’s Garmin account to the API, accessing the data at scheduled frequencies, identifying wear compliance and sync problems, troubleshooting sync problems, and processing physical activity data. Monitor costs are not included in the prices listed below. Please keep in mind that Garmin studies typically result in lower wear compliance than studies that use research-grade accelerometers because in Garmin studies the participant is usually asked to wear the device for several weeks or longer. Participants may decide to stop wearing the device over time. For larger sample sizes or specialized needs, we can provide a customized budget. If you only need Garmin API setup and do not need any services from the Physical Activity Core, contact Research Informatics.

Service	Pricing
Garmin project startup support package – includes creating customized Garmin protocols and participant materials for your project and training your project staff (limited to 15 hours of consulting/support), as well as weekly data pulls from the API with reports on monitor wear adherence (requires API setup from Research Informatics at additional cost)	\$1050 + \$30 per week
Basic processing of physical activity and wear time variables – included in ‘Garmin data collection package’	\$700

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<p>Garmin data collection package – differs from the Garmin project startup support package with API integration in that we manage the distribution of monitors for your team; we create customized Garmin protocols and participant materials for your project, communicate with participants individually to coordinate the distribution and collection of the monitors, setup Garmin accounts and monitor sync with the participant’s Bluetooth device, orient the participant on how to use the Garmin and app, monitor wear compliance with weekly data pulls from the API, contact participants who require technical support over their first 6 weeks of participation, process standard physical activity variables, and attend project meetings (requires API setup from Research Informatics at additional cost)</p>	<p>\$180 per participant + \$30 per week</p>
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