

ACELEROMETRÍA

EXPLICACIÓN DEL INSTRUMENTO

El acelerómetro modelo GT3X BT de Actigraph es un instrumento que mide el movimiento que realizamos durante el día. Es de tamaño pequeño (4.5 x 3.5 x 1 cm) y ligero (43 gr) aprox. lo que resulta en una elevada comodidad al llevarlo puesto. Solamente se detecta el movimiento humano, los movimientos de elevada frecuencia como vibraciones producidas por los coches, autobuses, trenes, etc. se filtran de forma electrónica y se eliminan.



El instrumento no sirve para otra cosa que para medir la actividad física a través de un cifrado de operaciones internas que requieren de un software específico, por consiguiente, no sirve para otra cosa ni es utilizable para otro fin. No produce ni provoca ningún efecto secundario.

INSTRUCCIONES:

- Debe colocarse a la altura de la cintura mediante un cinturón elástico bien ajustado.
- Siempre debe colocarse el acelerómetro vertical, de manera que una vez puesto, las letras "Actigraph" queden en la parte baja del acelerómetro y pueda leerlas una persona que se coloque frente a nosotros.
- El acelerómetro debe colocarse por la mañana y retirarse antes de acostarse. No se deja puesto cuando dormimos, si no queremos.
- El acelerómetro se puede mojar (duchas, baños, clases de aquaerobic, etc.) aunque no es conveniente, sin embargo, si se va a realizar natación tradicional (nado libre) se recomienda retirarlo.
- Queremos que cuando lleve el acelerómetro haga su vida normal, no pretendemos que haga más o menos actividad física, queremos medir solamente la habitual.
- Por su puesto, toda la información será tratada de forma estrictamente confidencial, de manera que ningún nombre figurará en los archivos, y se elaborará un informe para cada familia junto con unas recomendaciones de salud y actividad física.

POSIBLES MOLESTIAS

Ninguna. El acelerómetro tiene que estar bien sujeto a la altura de la cintura, pero no necesariamente tiene que estar en contacto directo con la piel.



INFORMACIÓN QUE PROPORCIONA.

Software ActiLife



ActiLife v6.13.4 - 1 Device Connected

File Edit Tools Help

Devices Wear Time Validation Scoring Sleep Batch Sleep PLM Graphing NHANES GPS Feature Extraction CentrePoint Data Vault

Initialize Download Refresh Refresh All Identify Advanced

Automatic Refresh 48 seconds until refresh...

Device	Serial #	Subject Name	Status	Firmware	Battery	Total Memory	Current Data Recorded	Model(s)	Epoch / Sample Rate	Start Date & Time	Stop Date & Time	Filter	Axis Enabled	More Info
wGT3X-BT	MOS2D45160832	jesus1	Refreshed downloading	1.9.2	4.19V (99% Charging)	3648 MB	1370M		30 Hz	21/09/2021 13:10	22/09/2021 12:00	N/A	3	More Info...

AGD File Viewer: MOS2D45160832 (2021-09-22)10sec.agd

Select File... [Graph]ActiLife[Downloads]MOS2D45160832_2021-09-22)10sec.agd

Basic AGD Information

Device Type: wGT3XBT Epoch Length: 15 seconds
 Serial Number: MOS2D45160832 First Epoch: 21/09/2021 13:10
 Epoch Count: 5480 Last Epoch: 22/09/2021 11:59
 Firmware: 1.9.2 Validated Data: Automatic (22/09/2021)
 Battery: 4.18V
 Filter: Normal Number of Axis Enabled: 3
 Software: ActiLife 6.13.4
 Modes: Axis1, Axis2, Axis3, Steps, Lux, Incline

Subject Biometric Information

Subject Name: jesus1
 Gender: N/A Date of Birth: N/A Limb: N/A
 Height: N/A Age: N/A Side: N/A
 Weight: N/A Race: N/A Dominance: N/A

Daily Graphs

Graph Axis: Axis 1 Graph Scale: 15000

Date	Epoch	Axis 1 (y)	Axis 2 (x)	Axis 3 (z)	Vector Magnitude	Steps	Lux
21/09/2021	13:10:00	1154	883	822	1669.5	8	0
21/09/2021	13:10:15	913	491	395	1109.4	5	0
21/09/2021	13:10:30	384	550	358	760.3	4	0
21/09/2021	13:10:45	502	841	654	1177.7	8	0
21/09/2021	13:11:00	664	741	787	1268.6	5	0
21/09/2021	13:11:15	957	963	1002	1687.4	6	0
21/09/2021	13:11:30	181	453	513	707.9	3	0
21/09/2021	13:11:45	165	223	246	370.8	6	0
21/09/2021	13:12:00	86	174	208	284.5	5	0
21/09/2021	13:12:15	413	390	498	755.4	10	0

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Troiano (2007) Default Custom

Define a Non-Wear Period

Minimum Length: 60 Minutes

Use Vector Magnitude

Activity Threshold: 0 counts per Min

Use Max Counts: 0 counts per Min

Spike Tolerance: 2 Minutes

Spike Level To Stop: 100 counts per Min

Require consecutive epochs outside the activity threshold

Optional Screen Parameters

Ignore wear periods less than: 0 Minutes

Minimum wear time per day: 400 Minutes

Minimum days of valid wear time:

Minimum weekdays of valid wear time:

Minimum weekend days of valid wear time:

Sleep Period Options: Ignore

Evaluate Wear Sensor Data (if available)

Validate Wear Periods and Wear Sensor Data

Filename	Subject Name	File Length	Troiano (Non-Wear)	Wear Sensor (Non-Wear)	Conflicts	Total Wear Time
MOS2D45160832 (2021-09-22)10sec.agd	jesus1	1370M	1370M (100%)	1351.833M (99%)	4	0M (0%)

MOS2D45160832 (2021-09-22)10sec.agd Apply To File: Only Troiano Results Apply

21/09/2021 13:10 22/09/2021 12:00

Legend: Non-Wear (blue), Activity (Axis 1) (red), Conflicts (purple), Troiano (Non-Wear) (green), Wear Sensor (Non-Wear) (orange)

Date/Time Start	Date/Time End	Length	Troiano	Wear Sensor	Action
21/09/2021 17:06	21/09/2021 17:08	2M	Non-Wear	Wear	Set As Wear
21/09/2021 21:58	21/09/2021 22:06	8M	Non-Wear	Wear	Set As Wear
21/09/2021 22:25	21/09/2021 22:31	6M	Non-Wear	Wear	Set As Wear
22/09/2021 8:18	22/09/2021 8:21	3M	Non-Wear	Wear	Set As Wear

Open current file in Advanced Details

Close

Files loaded: 1

Wear Periods	Non-Wear Periods	Total Dataset Length	Wear Length	Non-Wear Length
1	1370M	0M	1370M	

Calculate Show Preview Graphs Score Export

Enlaces de interés

- [What is CentrePoint? \(force.com\)](#)

ActiGraph's CentrePoint software platform **combines powerful, customized analytics** with the **flexibility of cloud and mobile technologies** to deliver high quality physical activity and sleep metrics and real-time visibility of subjects, research sites, and overall study progress.

- What is the difference between the Wear Time Validation algorithms?

The Wear Time Validation tool in ActiLife allows users to screen epoch-level *.agd files (collected from any ActiGraph device) to flag periods of non-wear, essentially filtering out those periods for further analysis. Non-wear is estimated by analyzing periods of little or no activity and applying algorithms to those periods to determine if the user was actually wearing the device or not.

[What is the difference between the Wear Time Validation algorithms? \(force.com\)](#)

- SAS Programs for Analyzing NHANES 2003-2004 Accelerometer Data
 - o [SAS Programs for Analyzing NHANES 2003-2004 Accelerometer Data | EGRP/DCCPS/NCI/NIH \(cancer.gov\)](#)
- Validation of Accelerometer Wear and Nonwear Time Classification Algorithm.
 - o doi: [10.1249/MSS.0b013e3181ed61a3](#)