BodyCAP
Your e-health partner

eTact introduction
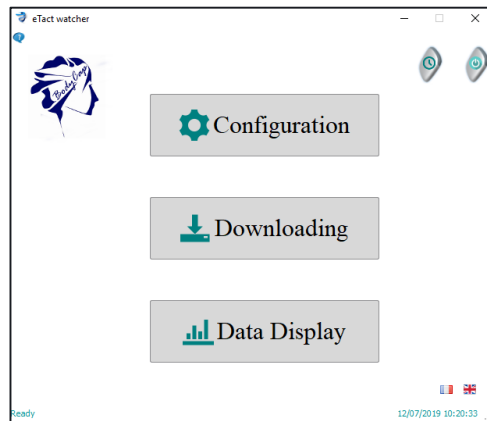
eTact: Human activity monitoring device

41 × 37 × 5 mm

eTact is a patch that continuously monitors and records human activity.
The patch is configurable through a PC/MAC software.

A PC/MAC software allows to process the data collected to especially assess sleep quality and day life activity.

Software in development

The patch may be directly stuck on the skin using 2 tegaderm bandages
or
worn as a watch using the dedicated bracelet.

eTact: Human activity monitoring device

Key benefits of the device:

An accurate actimetric monitoring

Accurate and reliable actimetry monitoring is critical for subjects facing sleep disorders, chronic diseases or included in a rehabilitation program.
Scientific publications indicate that current podometer / smart watch are not accurate due to the processing of the raw data in a number of steps.
The eTact solution allows to track the day life activities of your at-risk subjects and to assess the effectiveness of the program proposed.

A user-friendly solution

The solution has been designed in order to be highly agile and to fit many use cases.
The form factor of the patch allows to adapt the position of the patch and the eTact watcher PC/MAC software allows to set the patch depending on the use case.
The easy to use PC/MAC software eTact analysis allows to process the data to accede simple indicators to improve the sleep and day life activities understanding.

A cost-effective solution

In comparison with the gold standard solutions, the cost of the eTact device allows to enlarge the use of this kind of monitoring solution.

eTact: Innovative wearable device

Use cases

Sleep disorders

The actimetry monitoring during the night allows to support the qualitative approach of the sleep analysis.

The main advantage of the actimetric solution in sleep disorders analysis is that the monitoring could be performed in ecologic conditions and very easily. That is generally an interesting first approach in sleep disorders understanding.

31/3/2019

Wrist TAT activity shows restless sleep periods

TAT activity / Time
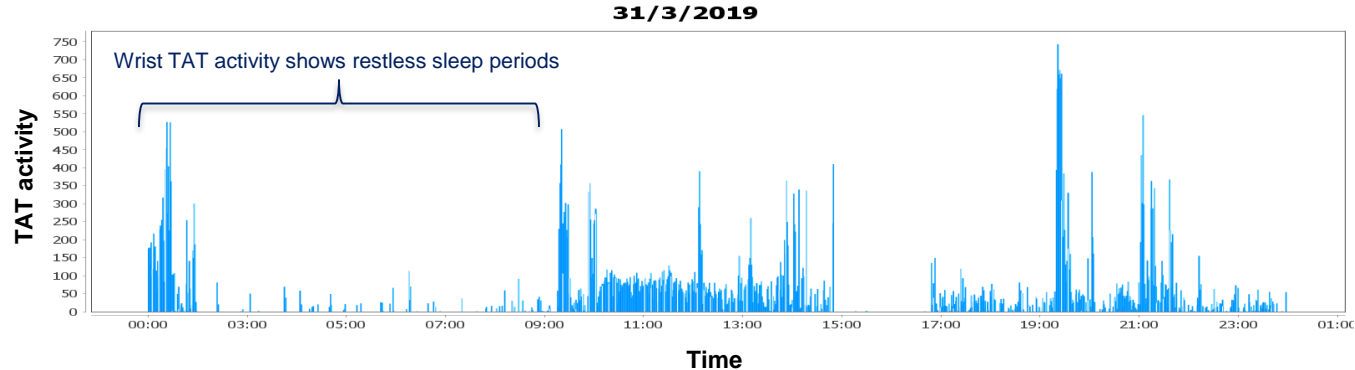
Added value:
- Simple and quick sleep quality assessment
- Standardized sleep quality indicators
- Cost effective solution
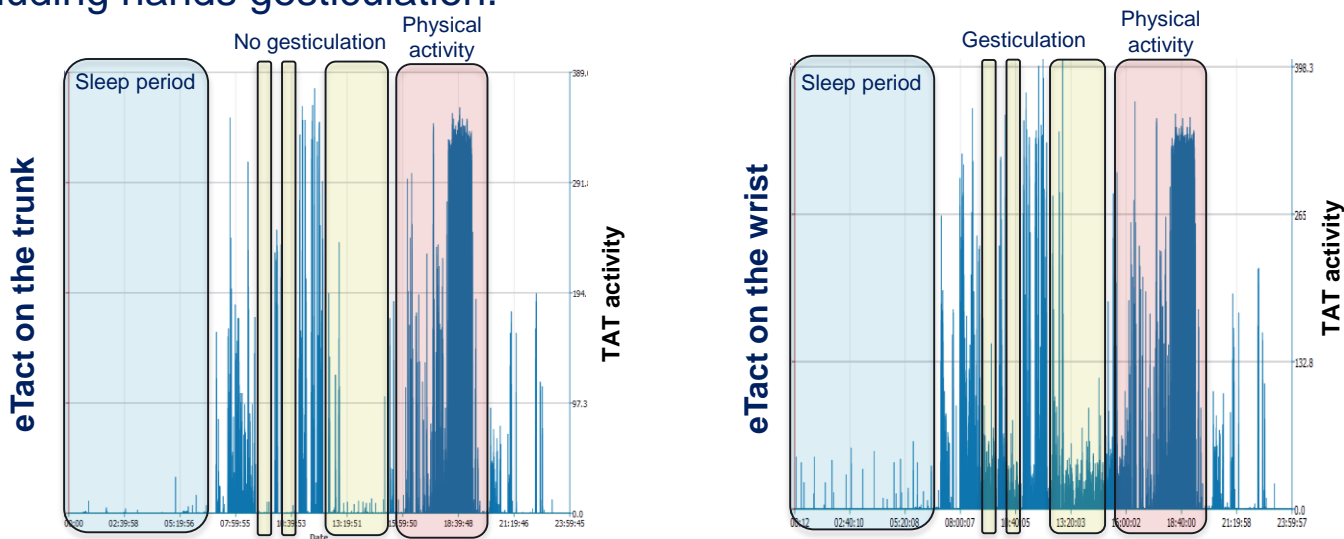
eTact: Innovative wearable device

Use cases

Physical activity monitoring – real *vs* gesticulation

eTact provides an objective overview of physically active vs sendetary periods.
Directly worn on the trunk, eTact gives an accurate estimation of locomotion activity, excluding hands gesticulation.

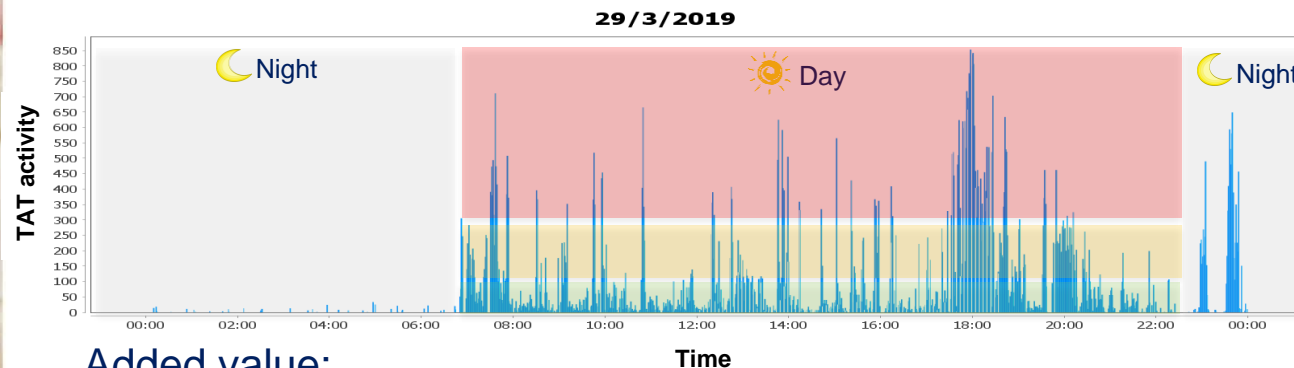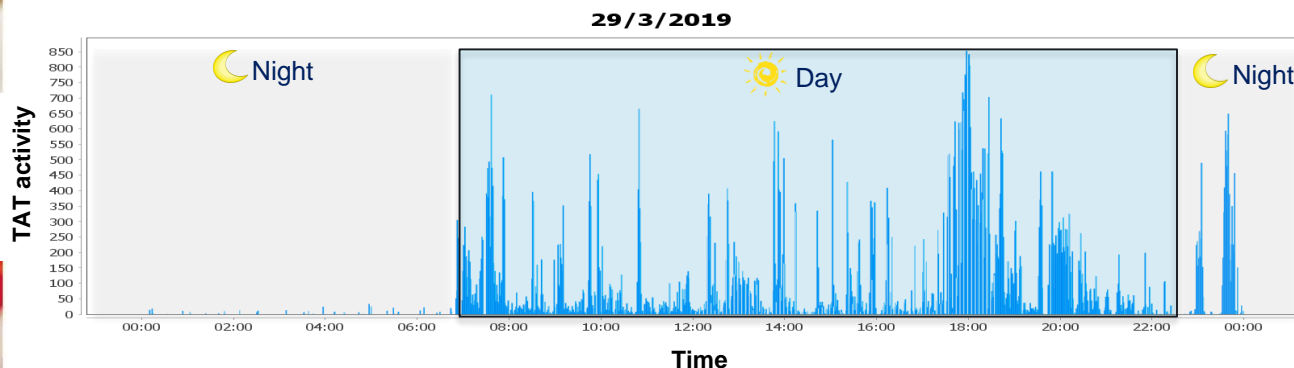**Actimetry monitoring on a 24H period with 2 devices**

Added value:
- Simple and quick day life activity assessment
- Activity intensity assessment
- Cost effective solution

eTact: Innovative wearable device

Use cases

Physical activity monitoring – intensity level scoring

eTact provides an objective classification of the physical activities depending on the intensity. Through the PC/MAC eTact analysis software, it is possible to access to the time spent in each level set.

29/3/2019

29/3/2019

- High intensity level
- Moderate intensity level
- Low intensity level

Added value:
- Simple and quick day life activity assessment
- Activity intensity assessment
- Cost effective solution

eTact: Innovative wearable device

Use cases

Physical activity monitoring – day life activities evolution

In the context of a rehabilitation program, eTact provides objective indicators allowing to monitor the positive/negative impact of the program on day life activities and sleep quality.

Rehab program T0

Rehab program T+XX

Added value:
- Simple and quick day life activity assessment
- Activity intensity assessment
- Cost effective solution
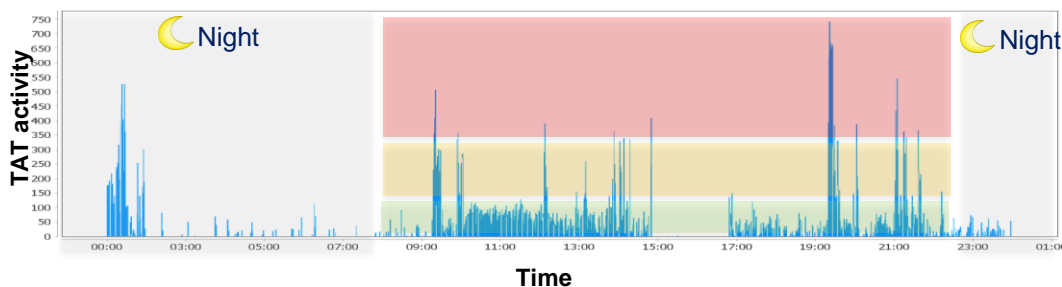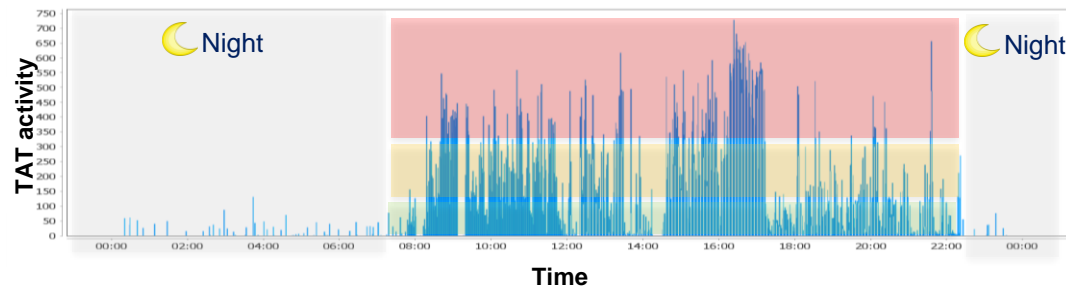
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Data available through eTact watcher

The CSV file gives a full access to raw data.

Data index

TAT value

Event marker

Time and date

T° value

Raw acceleration data of the 3 axis

	index	Date	Temperature	Activity	X-axis	Y-axis	Z-axis	Marker
2	0	09-10-18 17:31						FLASH
3	60	09-10-18 17:32			0.0510449	-0.0157144	1.05792	
4	120	09-10-18 17:33		38	0.0510449	-0.0157144	1.05792	
5	180	09-10-18 17:34			0.0510449	-0.0157144	1.05792	
6	240	09-10-18 17:35		2	0.0510449	-0.0453516	1.05792	
7	300	09-10-18 17:36	24.84		0.0510449	-0.0157144	1.05792	
8	360	09-10-18 17:37		0	0.0510449	-0.0157144	1.05792	
9	420	09-10-18 17:38			0.0510449	-0.0157144	1.05792	
10	480	09-10-18 17:39		0	0.0510449	-0.0157144	1.05792	
11	540	09-10-18 17:40			0.0510449	-0.0157144	1.05792	
12	600	09-10-18 17:41	24.35	0	0.0510449	-0.0157144	1.05792	
13	660	09-10-18 17:42			0.0510449	-0.0157144	1.05792	
14	720	09-10-18 17:43		0	0.0510449	-0.0157144	1.05792	
15	780	09-10-18 17:44			0.0510449	-0.0157144	1.05792	
16	840	09-10-18 17:45		0	0.0510449	-0.0157144	1.05792	

eTact: Innovative wearable device

Data available through eTact Analysis

The CSV file gives access to many indicators.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Date	Time start	Time end	Sleep or Wake	Sleep time(Minute)	Sleep latency(Minute)	Number of wake bouts	Mean time wake(Minute)	WASO score(Minute)	Sleep efficiency(%)	Low activity(Minute)	Medium activity(Minute)	High activity(Minute)
2	21/03/2019	11:38	23:35	W							561	33	0
3	21/03/2019	23:36	06:50	S	388	20	16	1.0	27	87.7			
4	22/03/2019	06:50	22:40	W							865	83	3
5	22/03/2019	22:41	07:15	S	444	6	26	2.0	65	85.0			
6	23/03/2019	07:15	22:19	W							801	104	0
7	23/03/2019	22:20	07:47	S	495	7	35	1.0	66	86.0			
8	24/03/2019	07:47	22:20	W							740	134	0
9	24/03/2019	22:21	07:01	S	431	9	29	2.0	82	81.6			
10	25/03/2019	07:01	22:01	W							858	42	1
11	25/03/2019	22:02	06:50	S	380	2	29	5.0	147	70.8			
12	26/03/2019	06:53	09:03	W							115	16	0

Night analysis 🌙

- → Sleep time
- → Awake time
- → Sleep / Wake status
- → Sleep efficiency

- → Number of wake bouts
- → Mean time wake
- → WASO Score
- → Sleep latency

Diurnal analysis ☀

- → Low activity time
- → Moderate activity
- → High activity

The time spent in each zone set is calculated

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