



Est-on fatigué parce qu'on est fatigable ?

Baptiste Morel, PhD



22 mars 2024

Fatigue « normale »



Post-prandial



Somnolence



*Sickness
behavior*



Exercice



Cognitive





Fatigue = sensation



≠ connotations

- le manque d'énergie
- la faiblesse
- la fatigabilité
- l'effort
- le sommeil
- l'envie de repos
- le manque de motivation
- la lassitude
- l'ennui

Fatigue = Perturbation du **fonctionnement**



Neuromusculaire



Cognitif



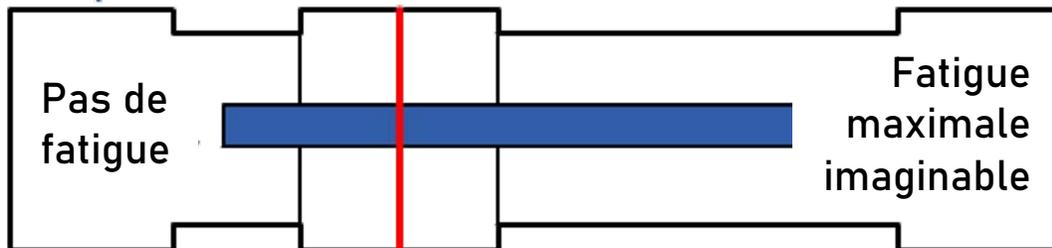
Comportement



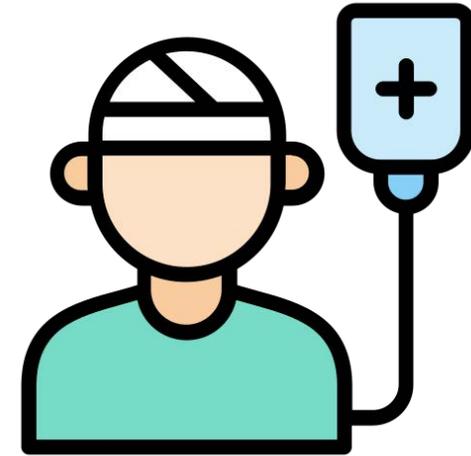
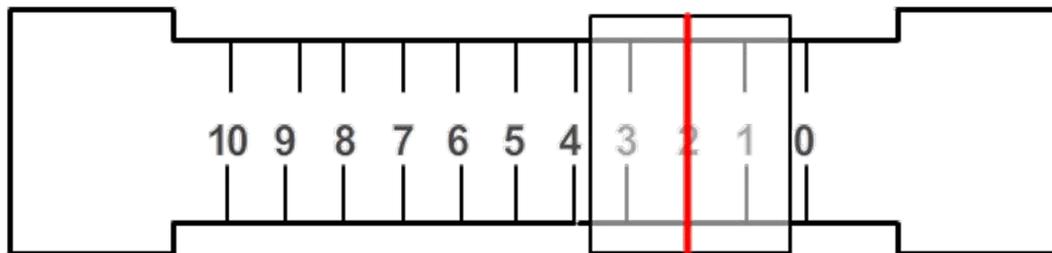
Fatigue pathologique

EVA : ECHELLE VISUELLE ANALOGIQUE

Face patient



Face de mesure



Sensation

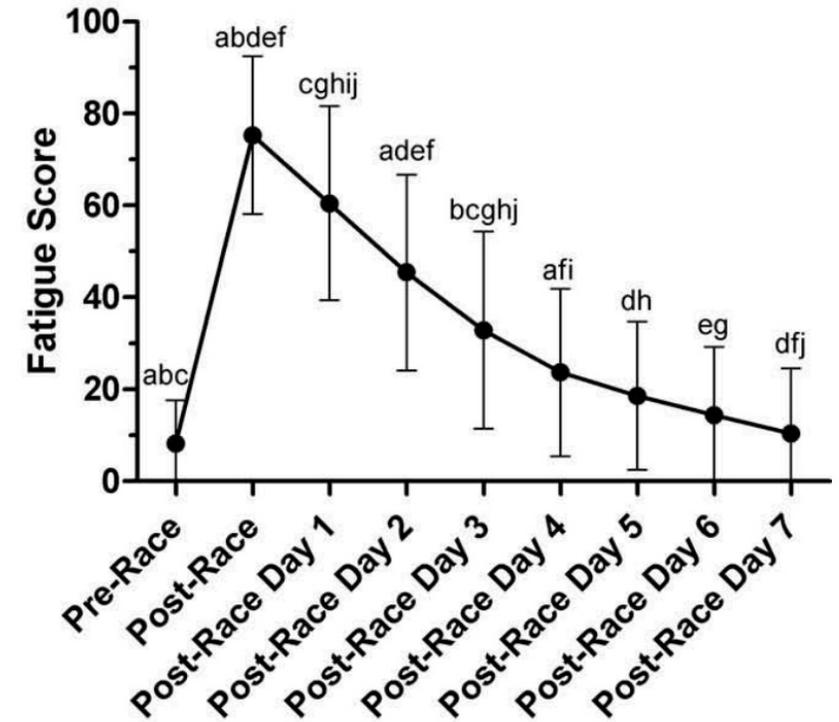
=

Subjectif

Fatigue sévère

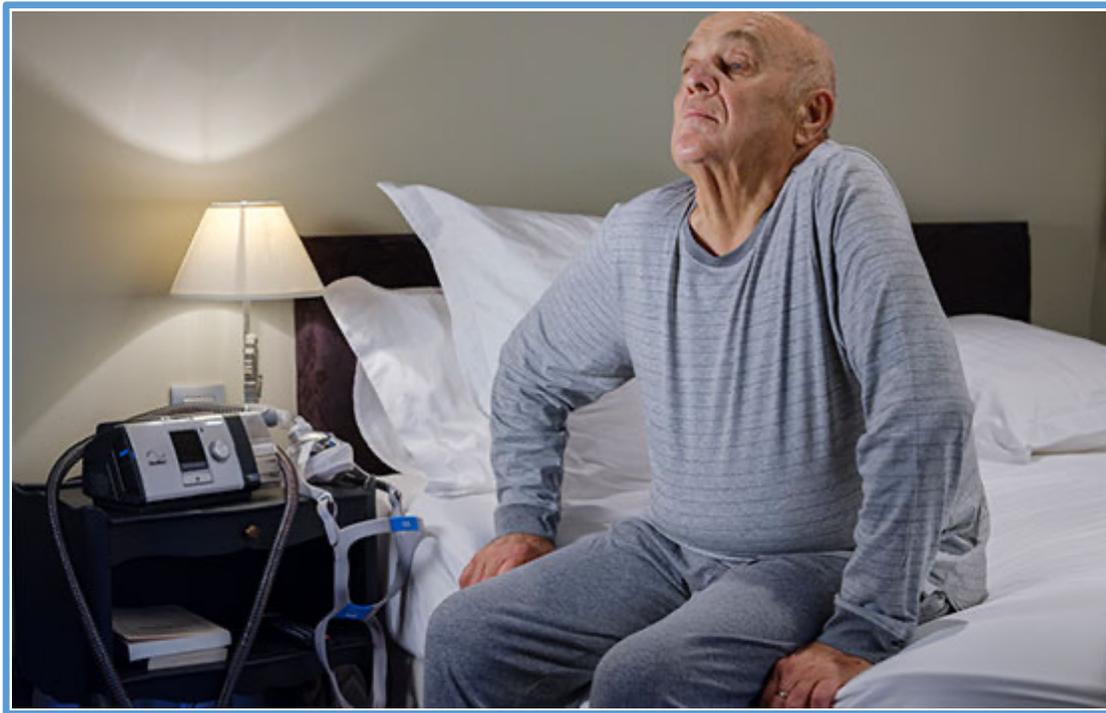


Coureur d'ultra trail – Western State 100 miles

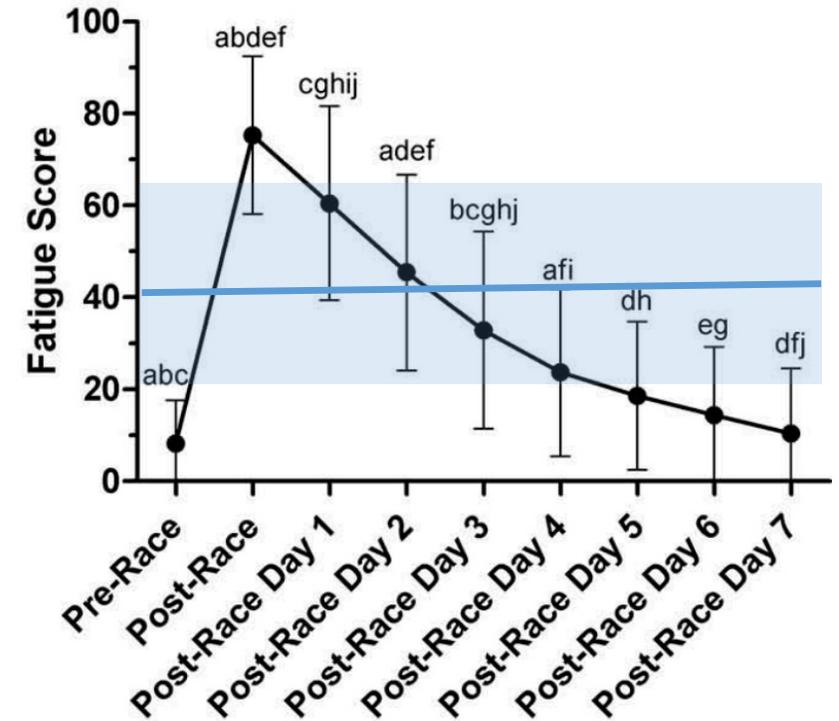


[Hoffman et al. 2017]

Fatigue sévère

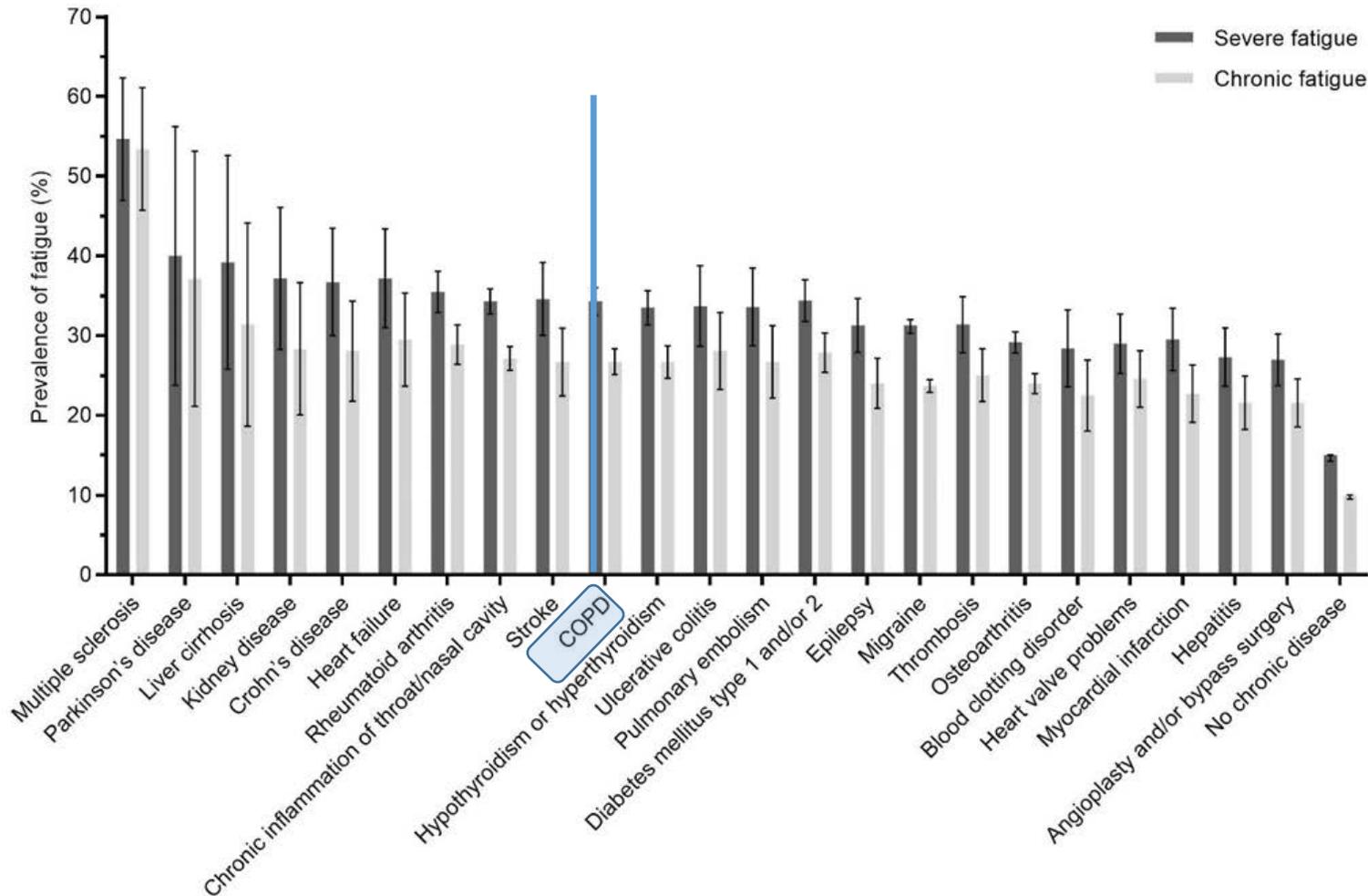


Patient BPCO



[Theander et al. 2004]

Fatigue chronique



Chronique
> 6 mois

[Peters et al. 2011]

[Goërtz et al. 2021]

Fatigue handicapante



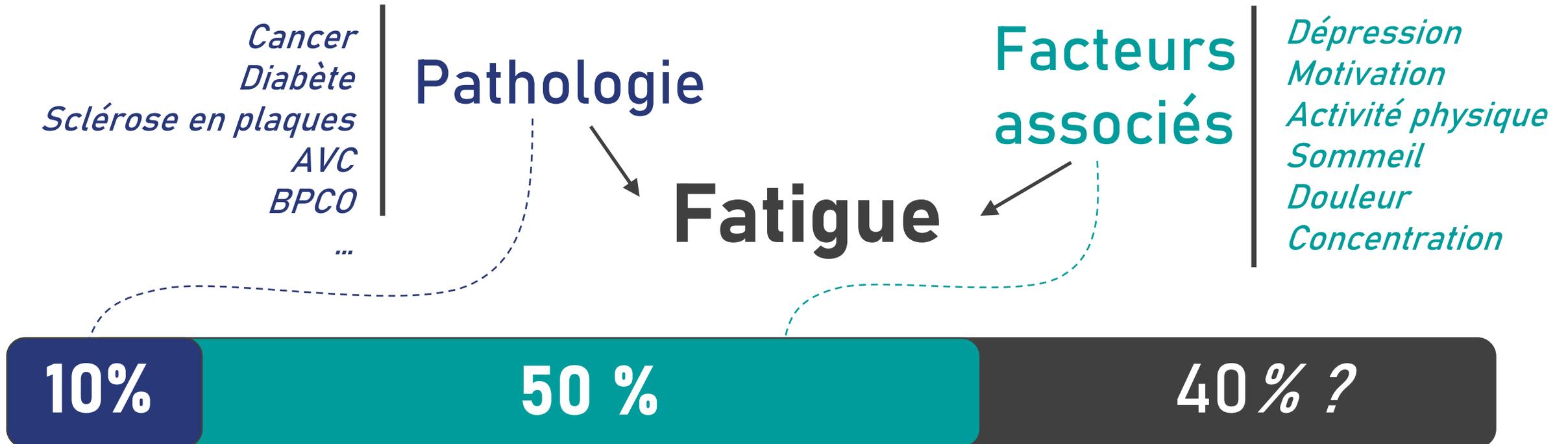
« J'ai l'impression de vivre à moitié parce que je n'ai pas d'énergie pour quoi que ce soit. »

« Les médecins veulent que je marche. Mais je n'y arrive pas. Et parfois, ces derniers temps, si je suis assis dans le fauteuil et que je veux me lever et faire quelque chose, je ne peux pas, je ne peux pas me lever du fauteuil. »

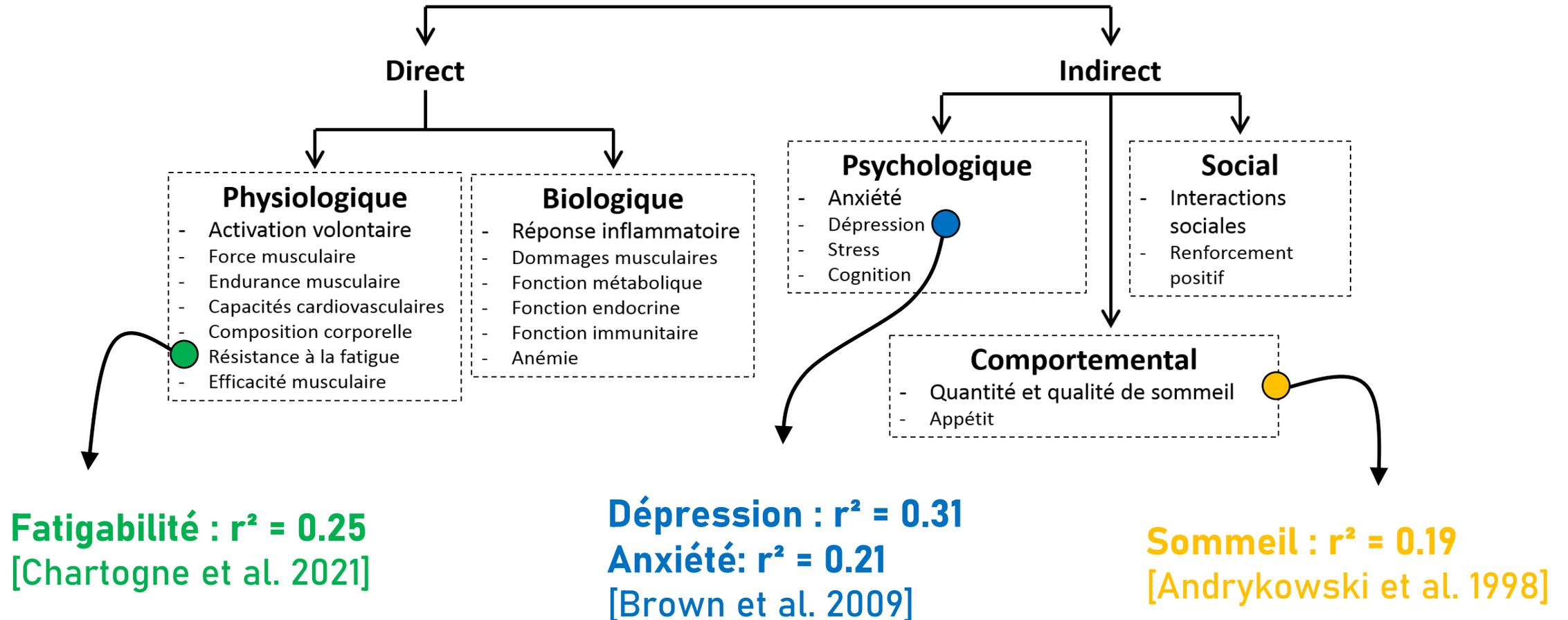


« Je ne peux pas faire beaucoup de choses que j'aimerais faire parce que je suis très fatiguée. »

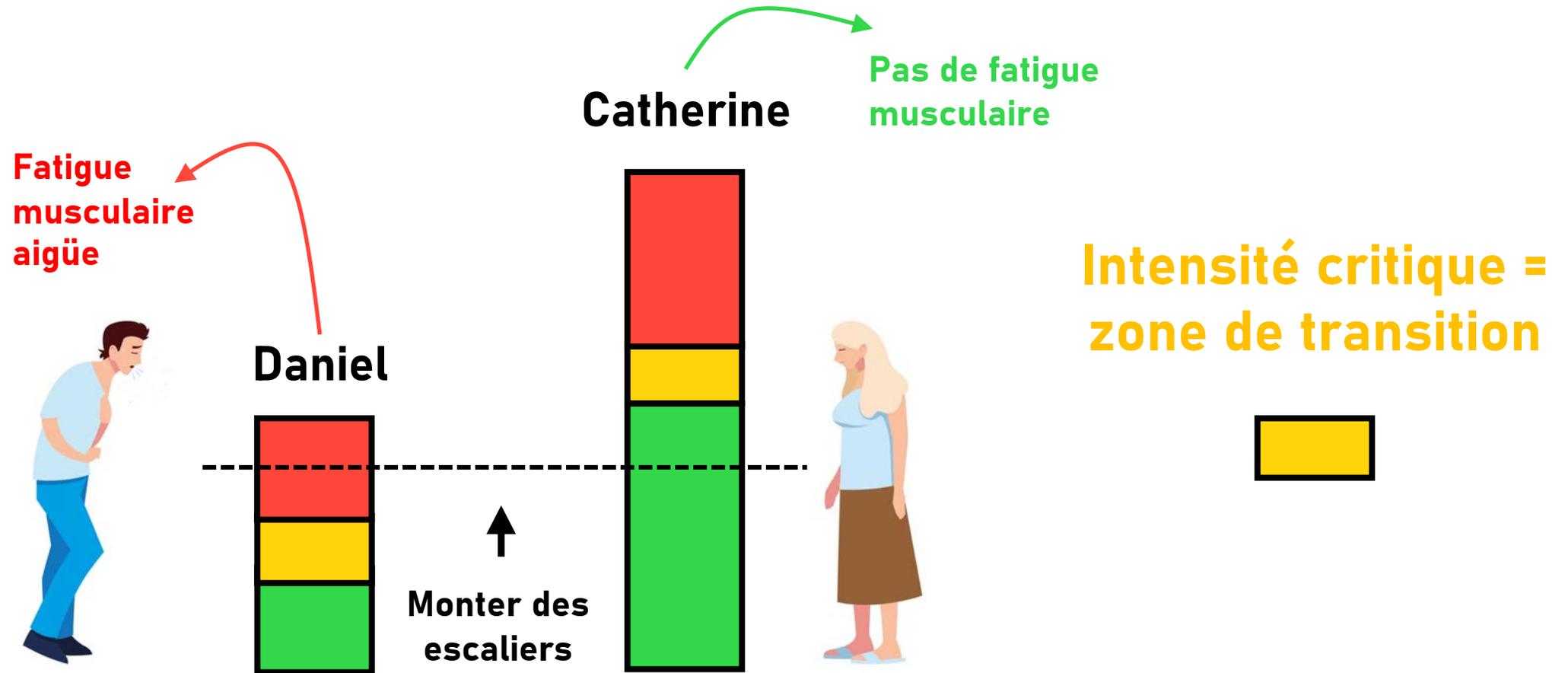
Causes & Mécanismes



Causes & Mécanismes

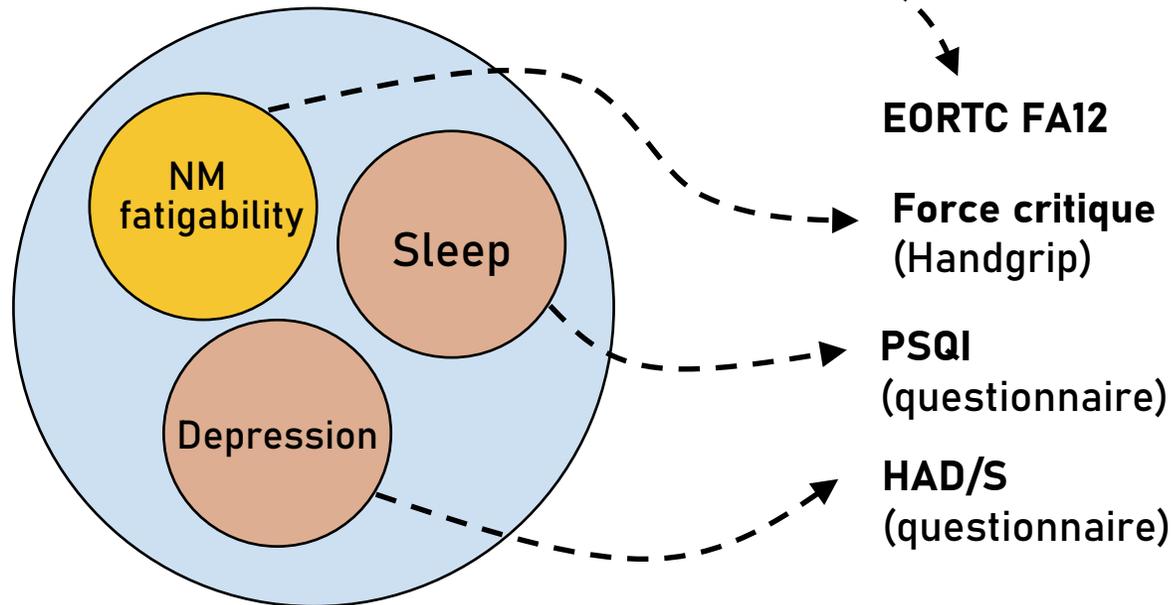


Domaines d'effort



Fatigue & Fatigabilité

Fatigue liée au cancer



Neuromuscular, Psychological, and Sleep Predictors of Cancer-Related Fatigue in Cancer Patients

Martin Chartogne,¹ Abderrahmane Rahmani,¹ Sébastien Landry,² Hugues Bourgeois,² Nicolas Peyrot,¹ Baptiste Morel³



34 patientes
cancer du sein
(étude transversale)
+ 11 patients
*Lymphome, ovaires,
colon, poumon, vessie*

Intensité critique

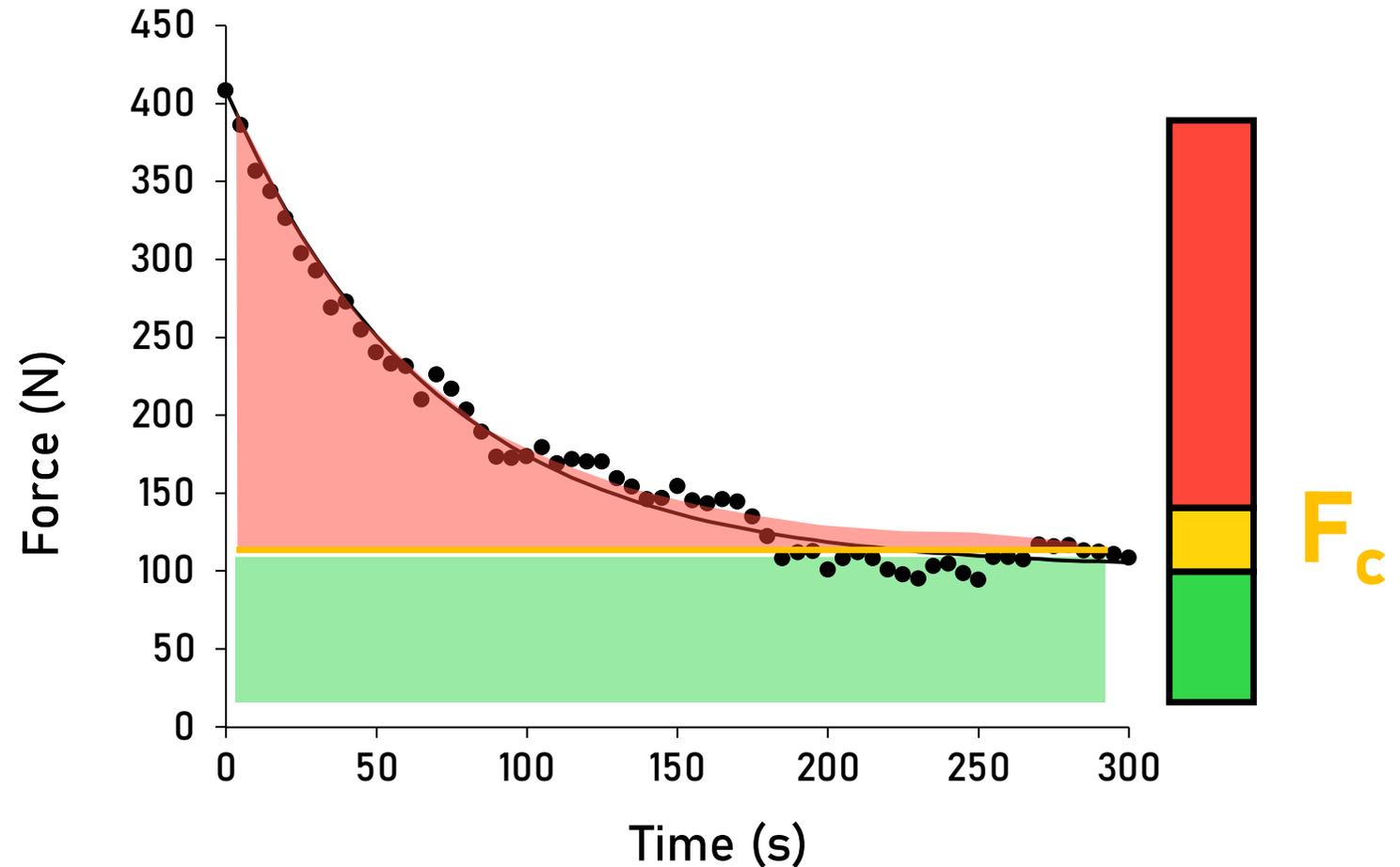
Supportive Care in Cancer
<https://doi.org/10.1007/s00520-018-4320-0>

ORIGINAL ARTICLE



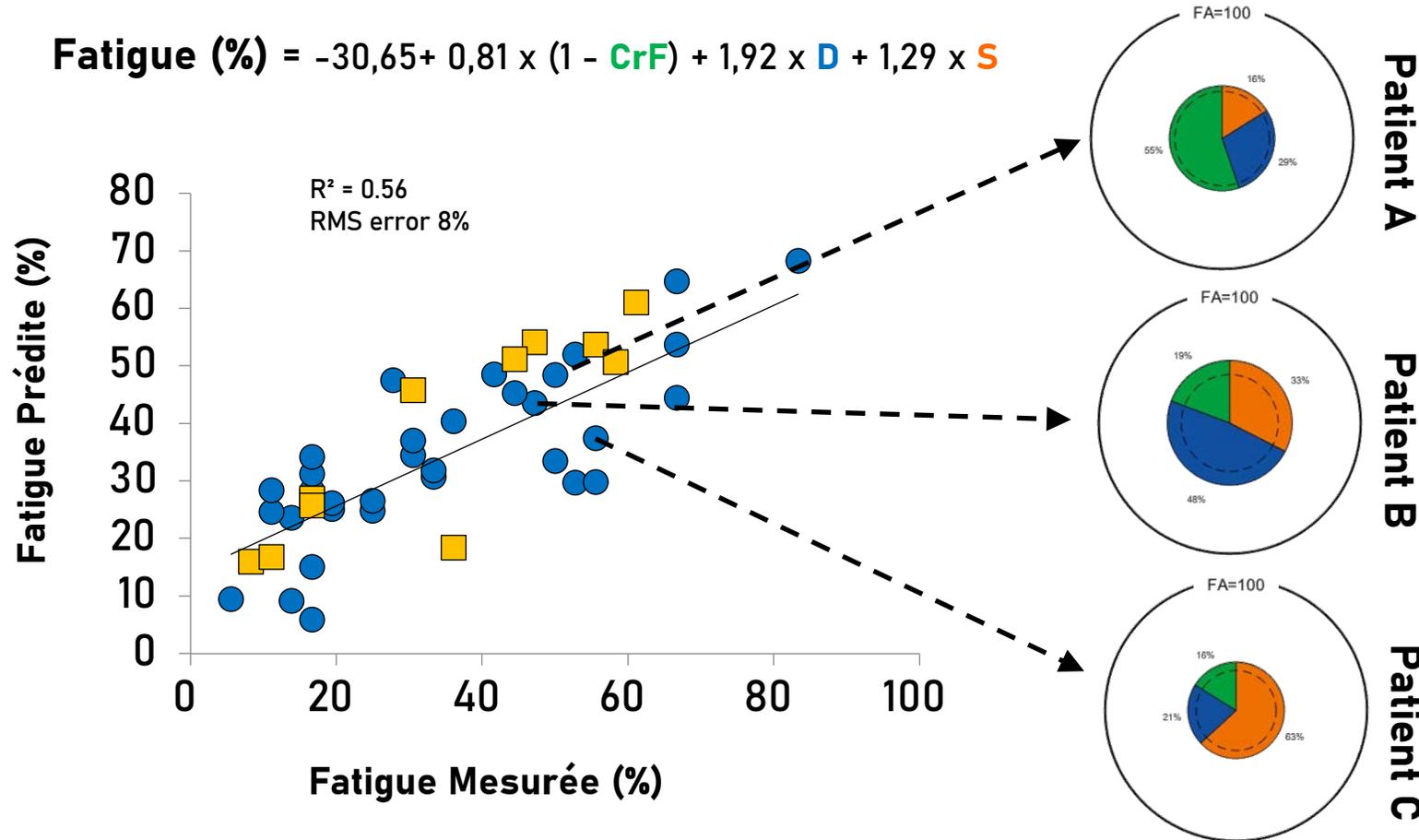
Handgrip fatiguing exercise can provide objective assessment of cancer-related fatigue: a pilot study

T. Veni¹ · S. Boyas¹ · B. Beaune¹ · H. Bourgeois² · A. Rahmani¹ · S. Landry² · A. Bochereau¹ · S. Durand¹ · B. Morel¹



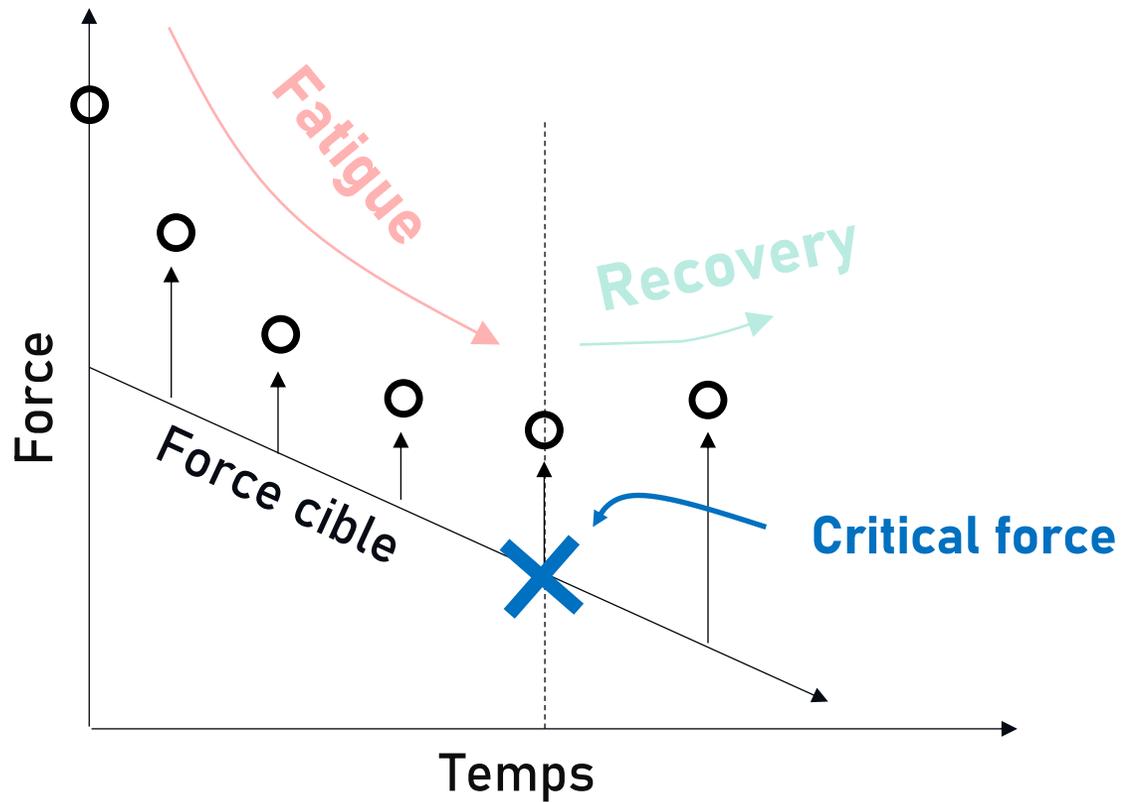
Fatigue pathologique

$$\text{Fatigue (\%)} = -30,65 + 0,81 \times (1 - \text{CrF}) + 1,92 \times \text{D} + 1,29 \times \text{S}$$

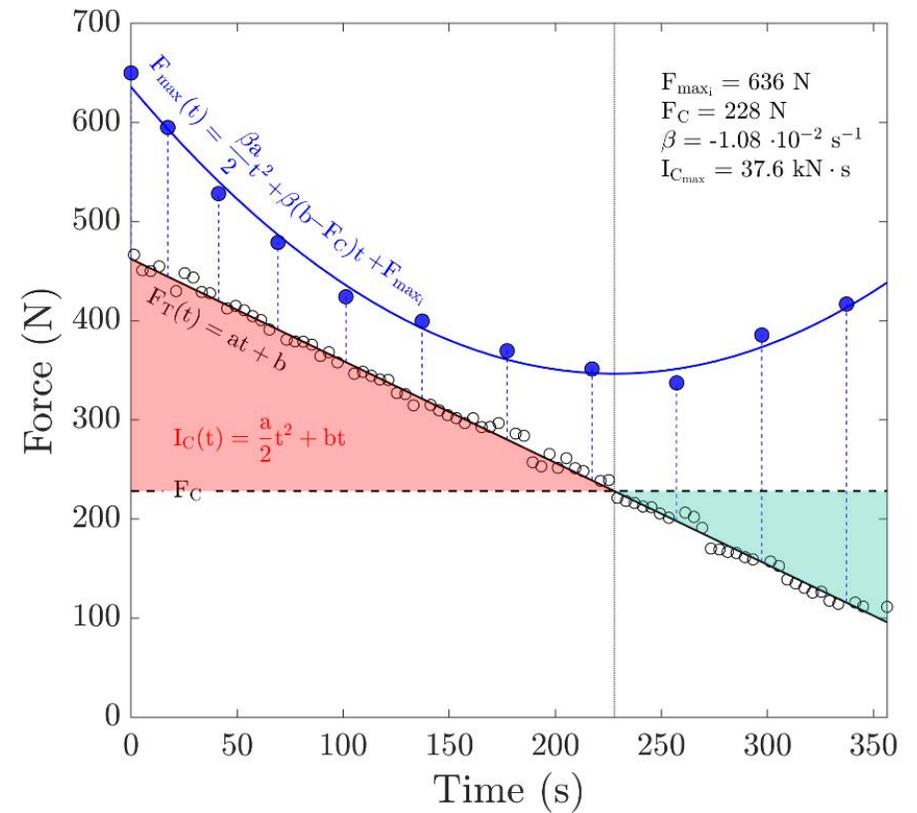


**Symptôme unique
causes variées**

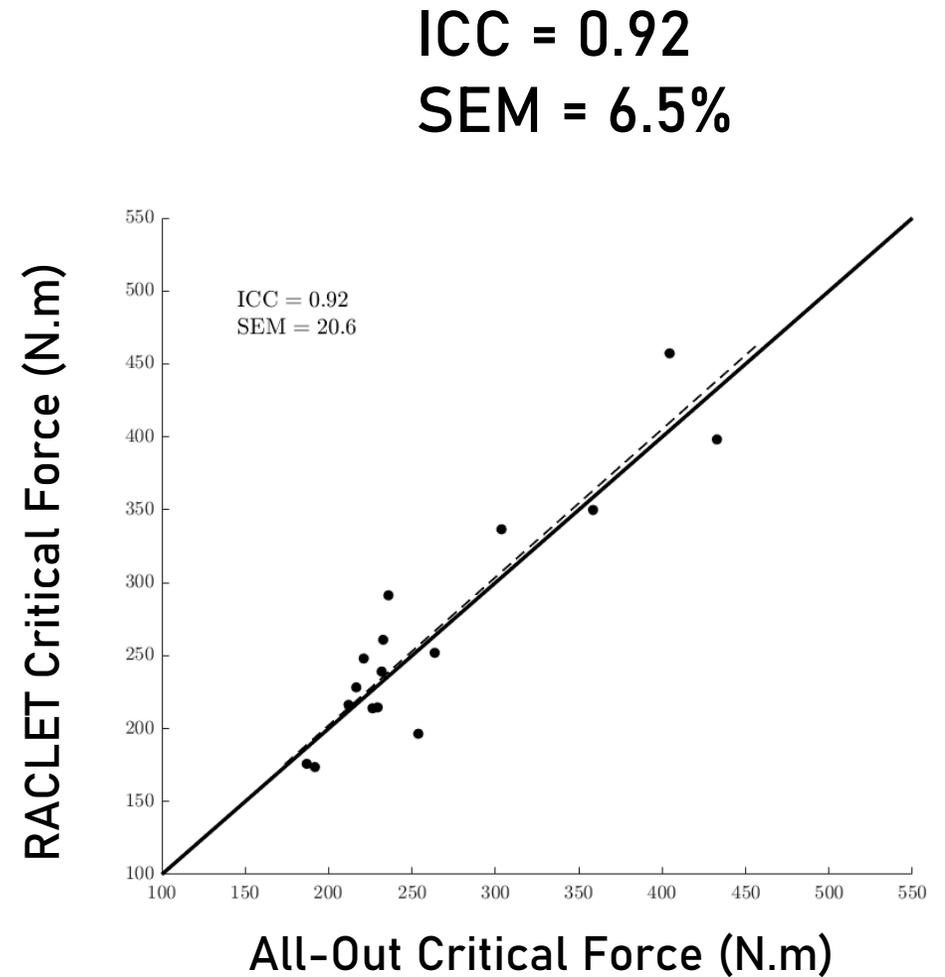
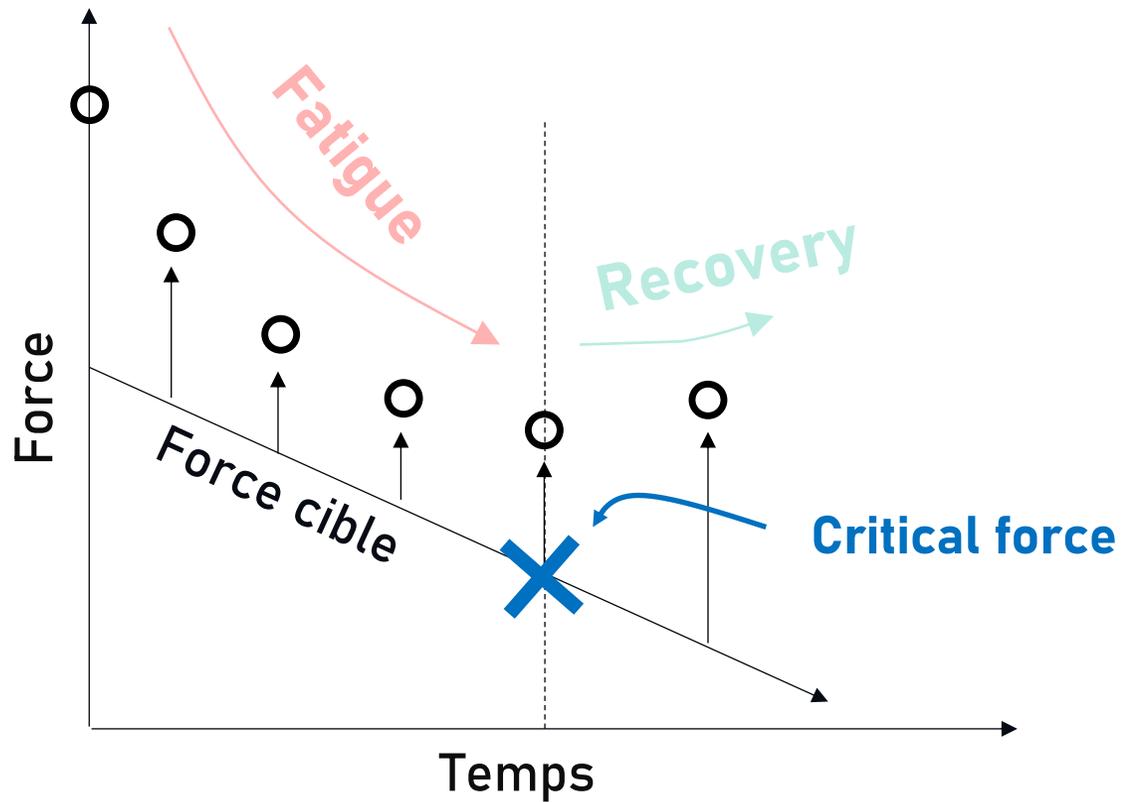
Test RACLET



Validation d'un test innovant

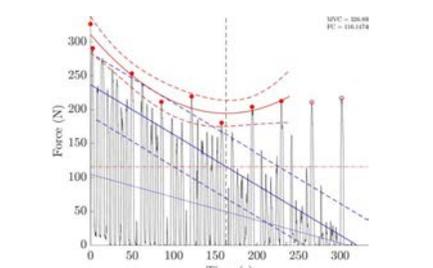
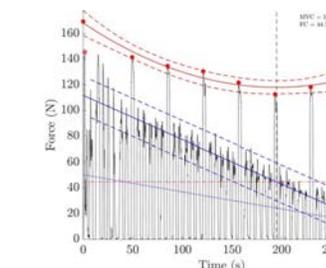
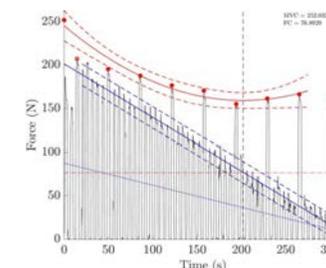
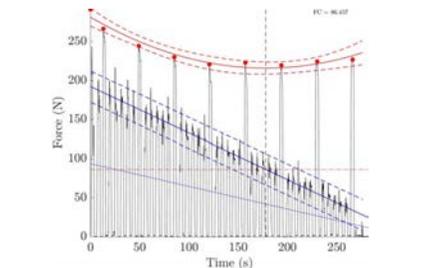
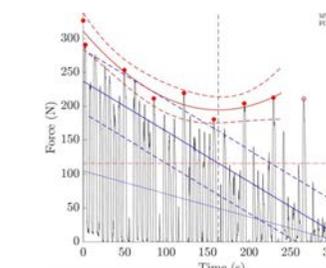
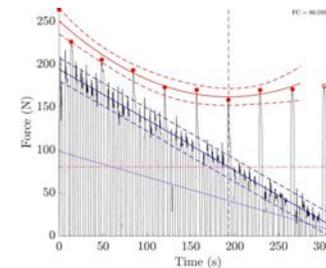
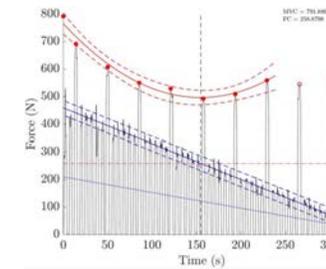
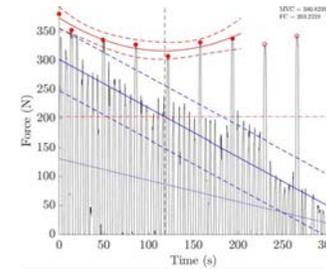
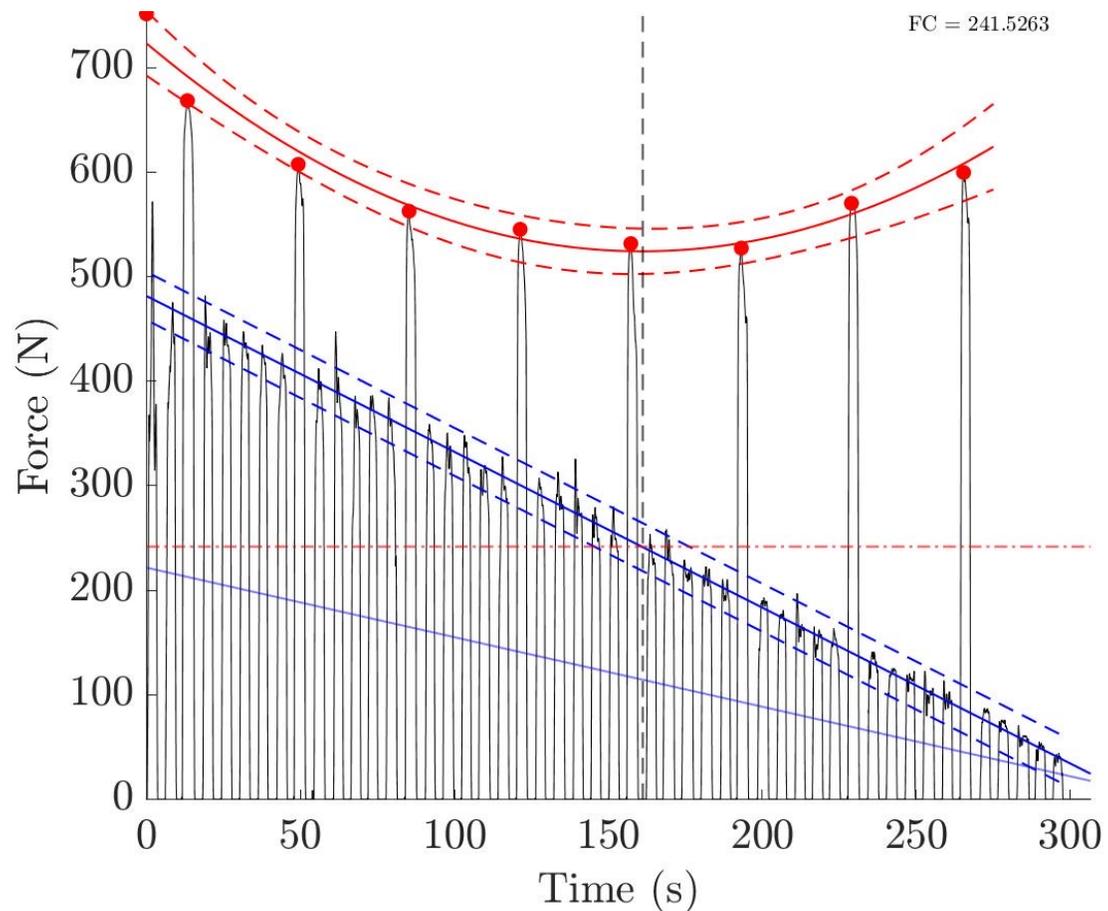


Test RACLET

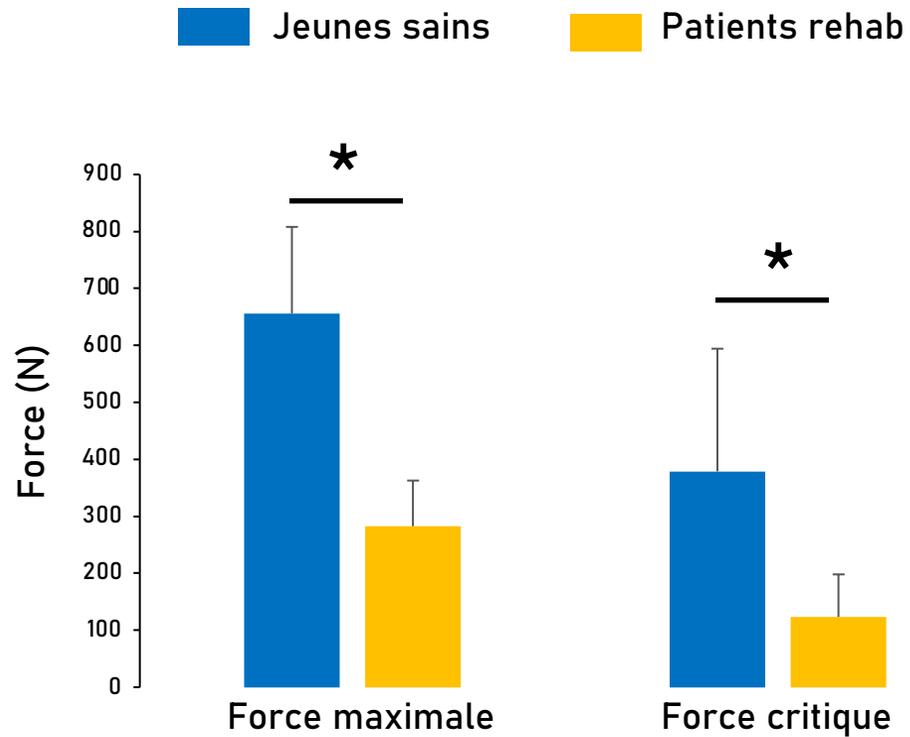


Faisabilité clinique

Di Domenico, Blervaque, Bowen, Pernot, Samozino, Morel



Résultats préliminaires



Force Critique normalisée

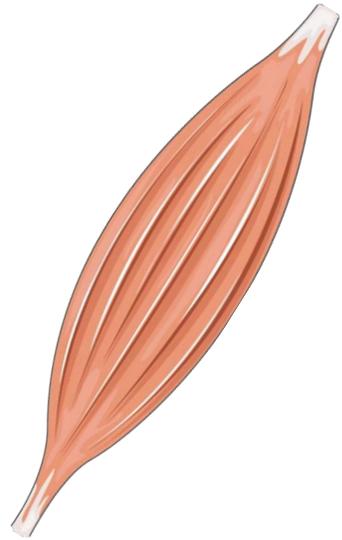
43 ± 22 %

Vs.

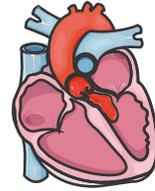
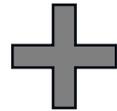
29 ± 17 %

*

Du muscle a la locomotion



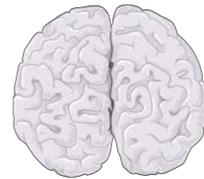
Muscle
(organ)



Cardiovascular
system



Respiratory
system

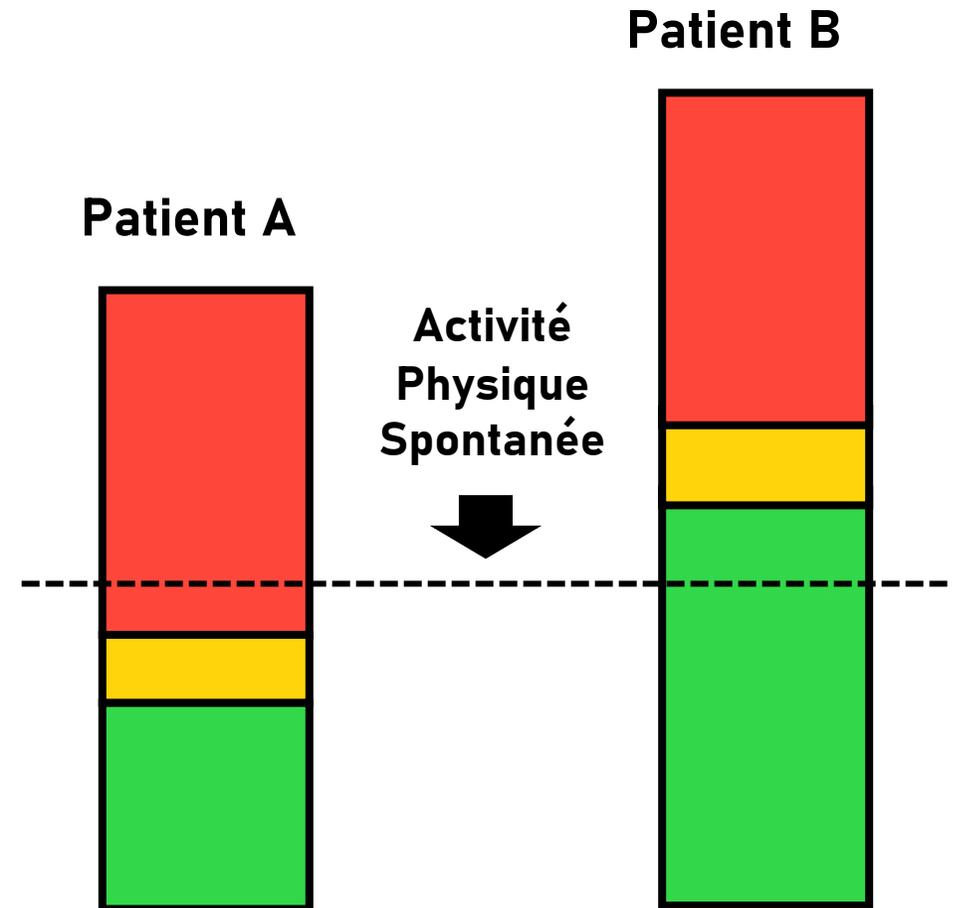
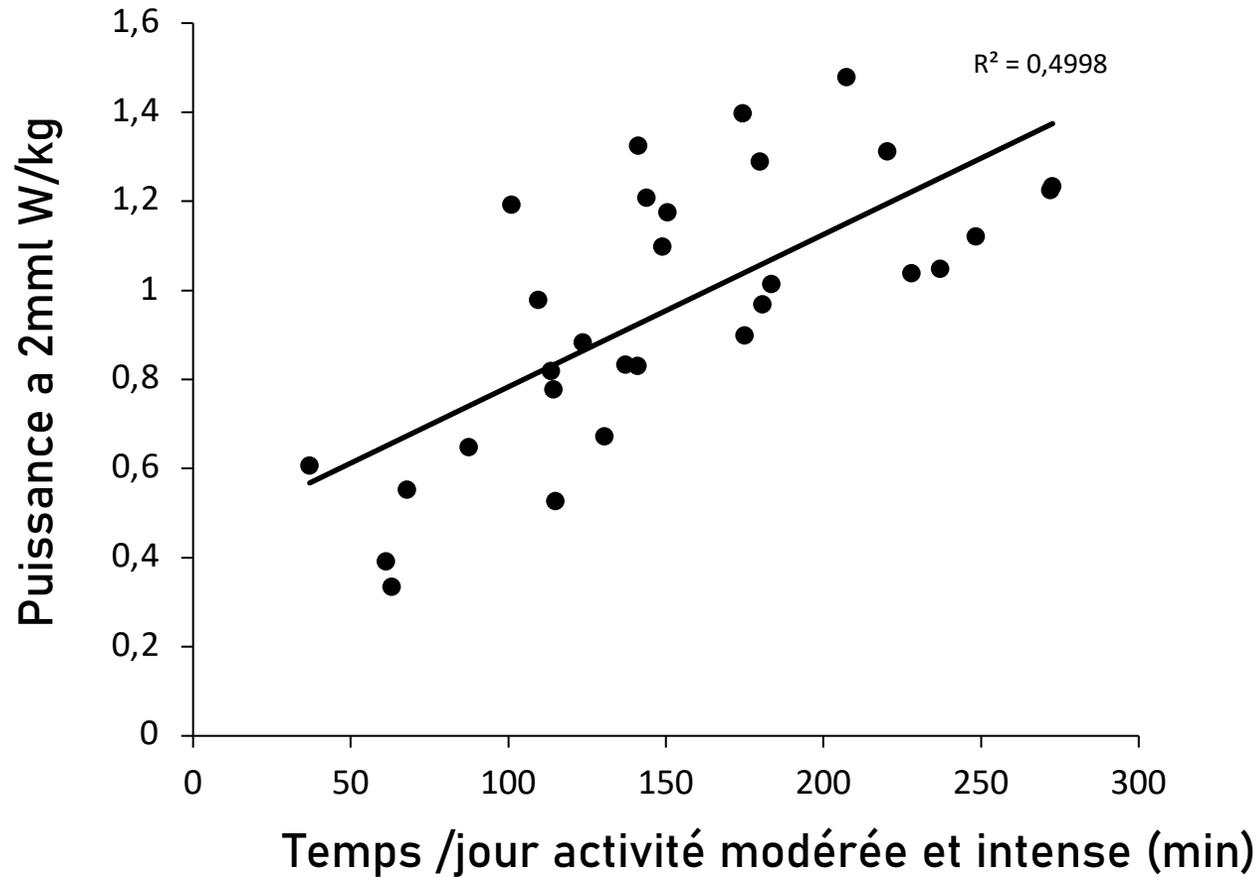


Nervous
system

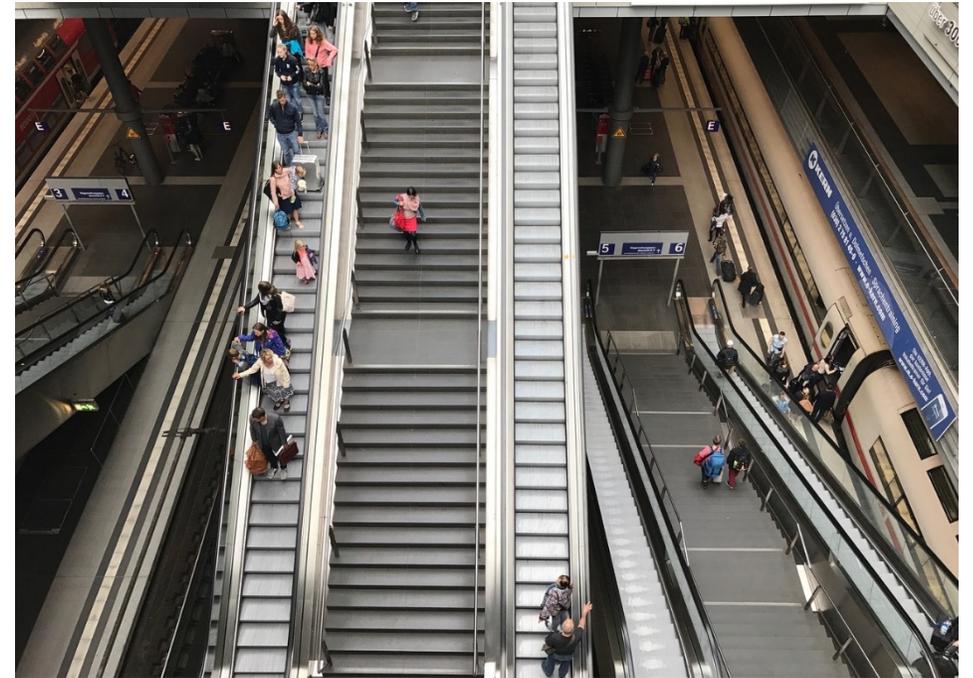
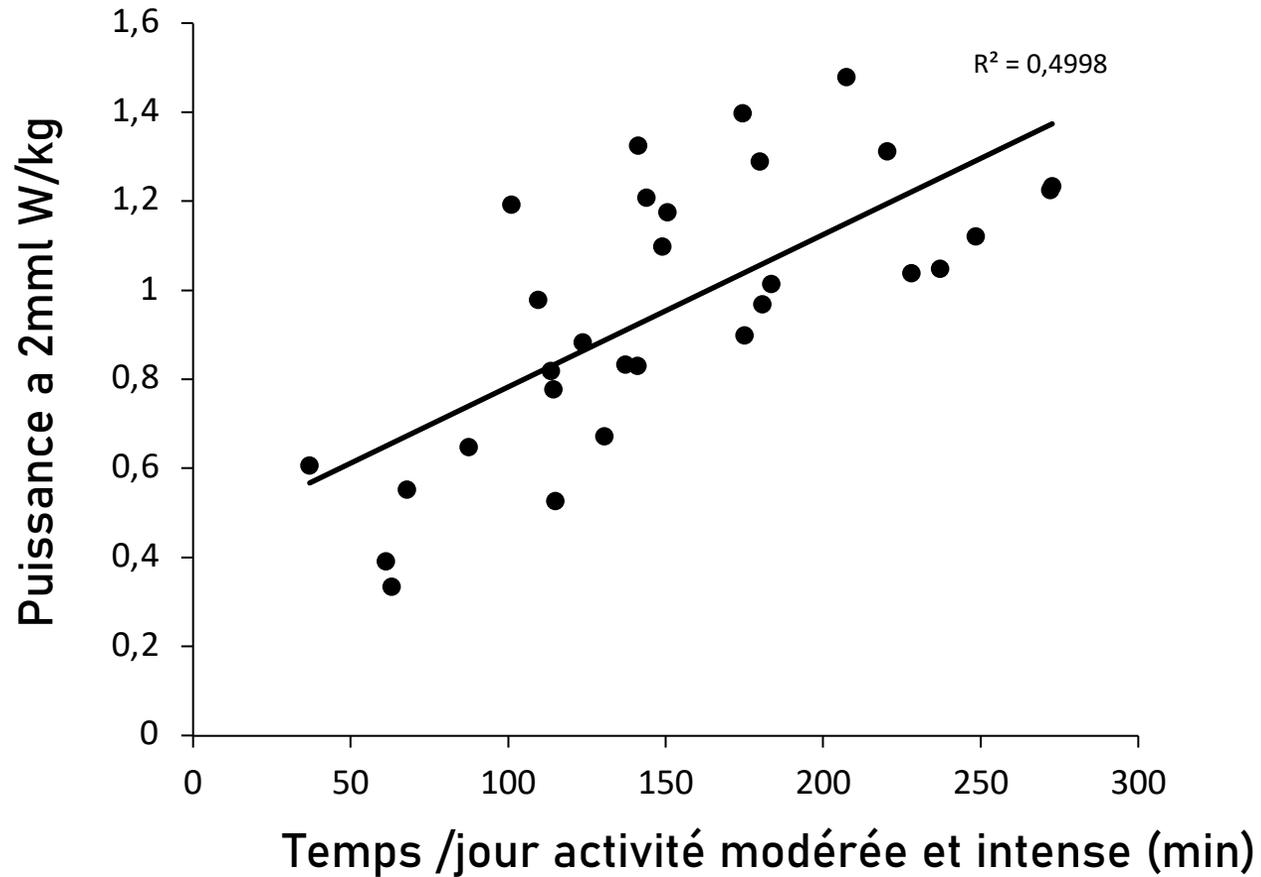


Locomotion
(function)

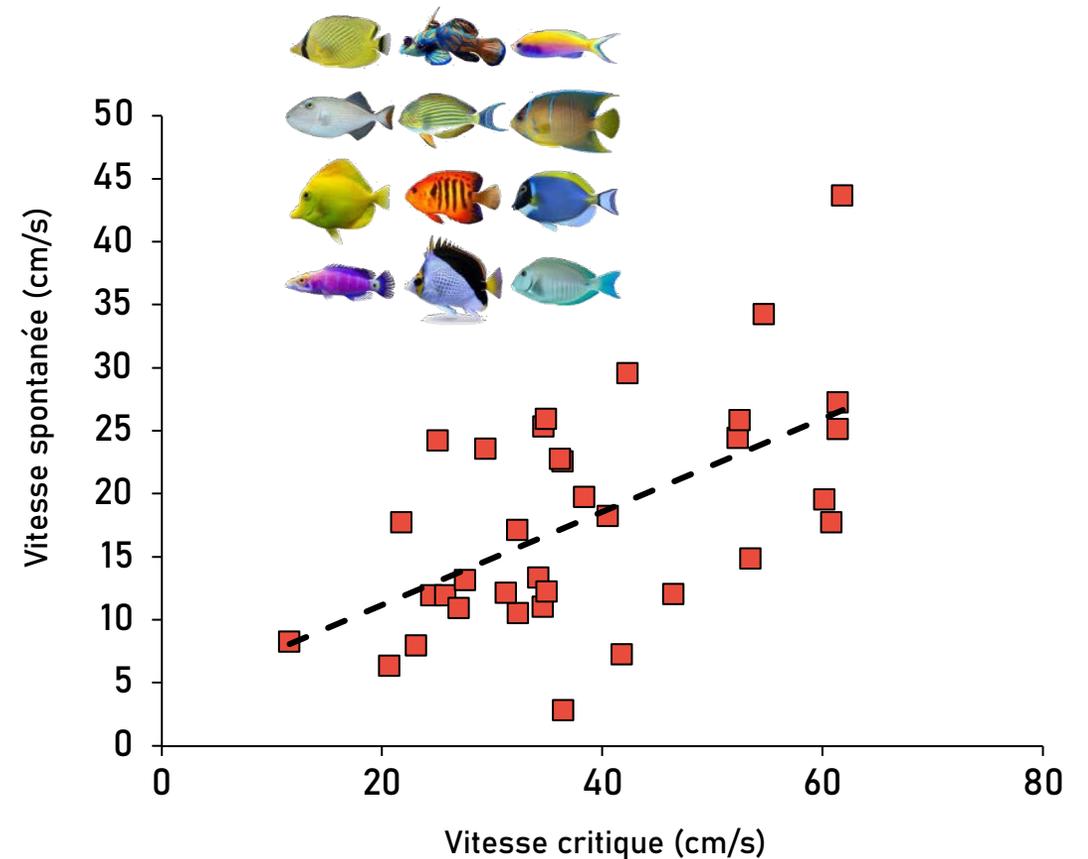
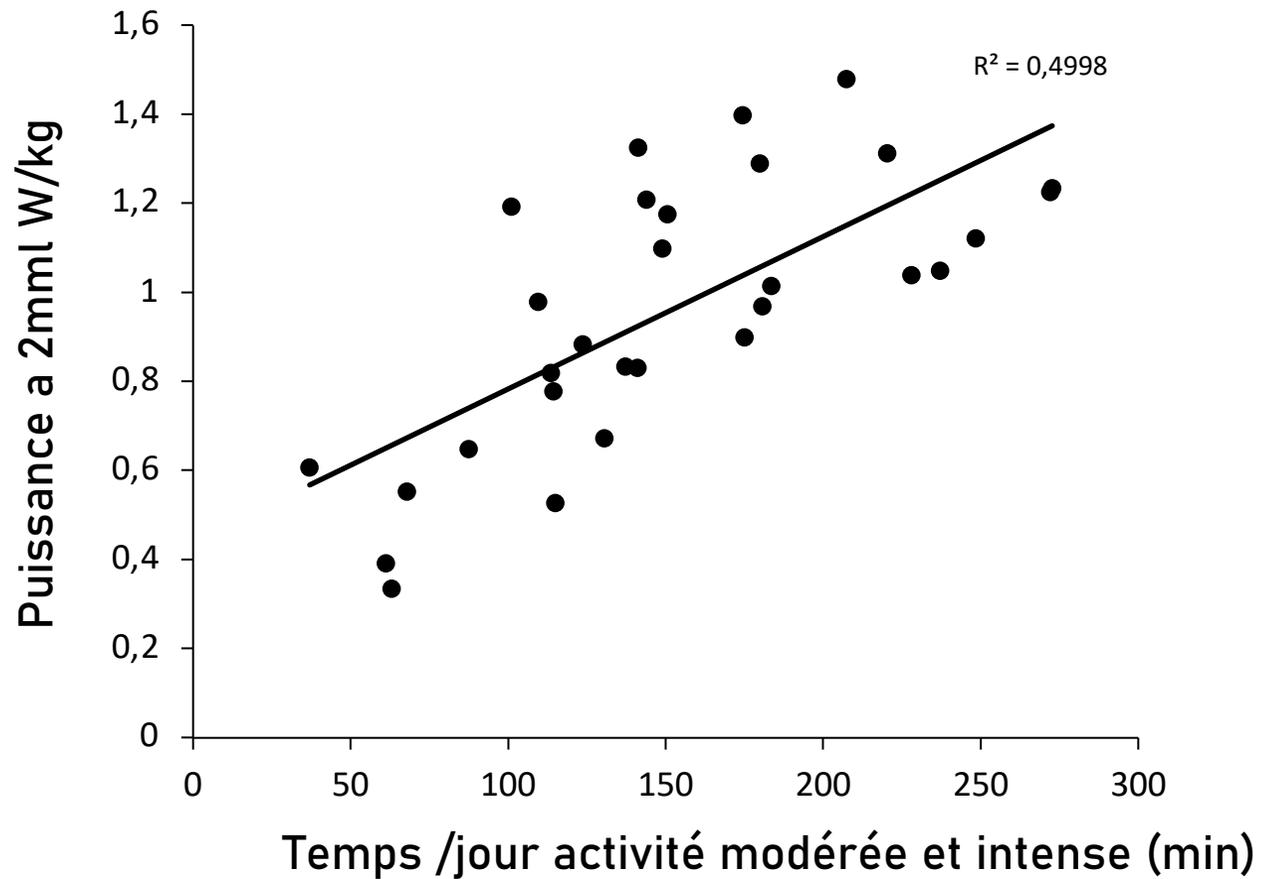
Activité physique spontanée



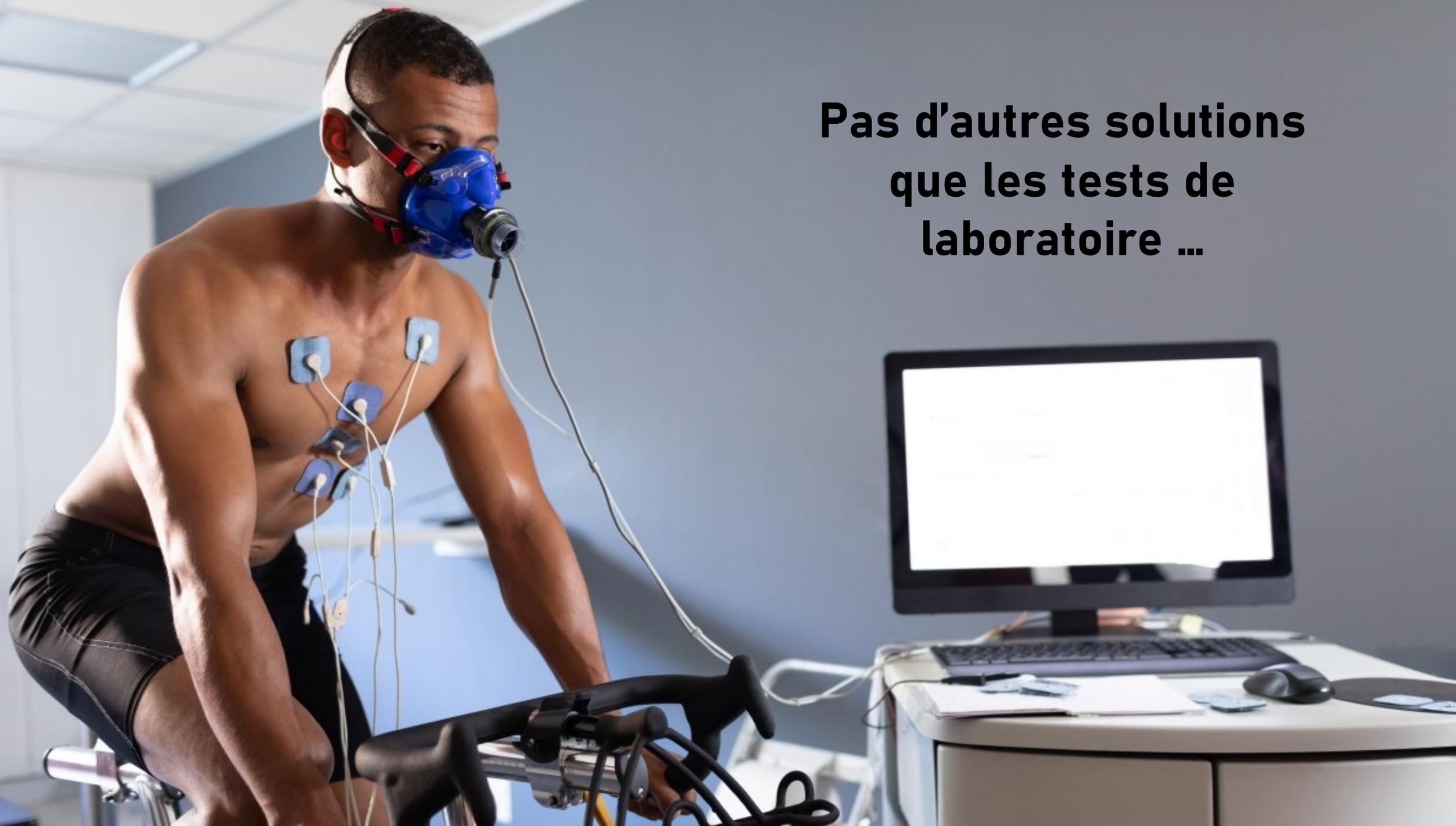
Activité physique spontanée

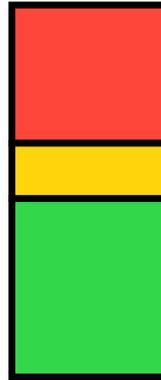
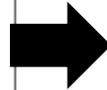
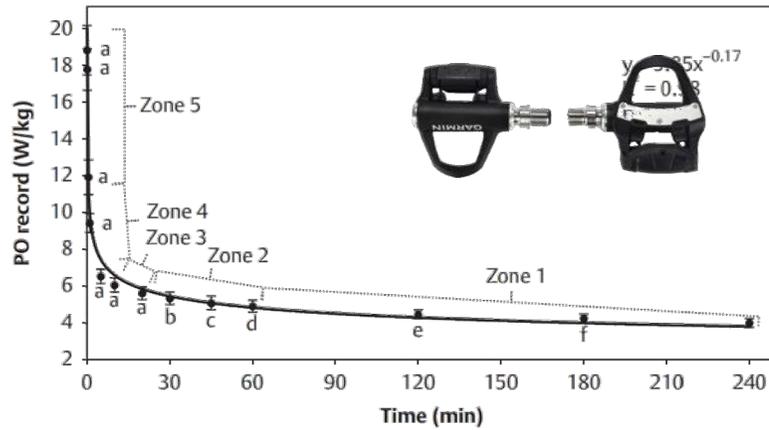


Activité physique spontanée



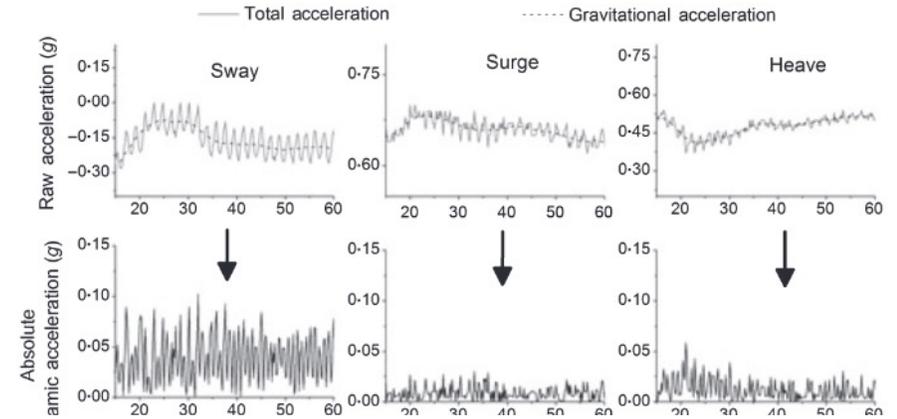
**Pas d'autres solutions
que les tests de
laboratoire ...**





Méthode:

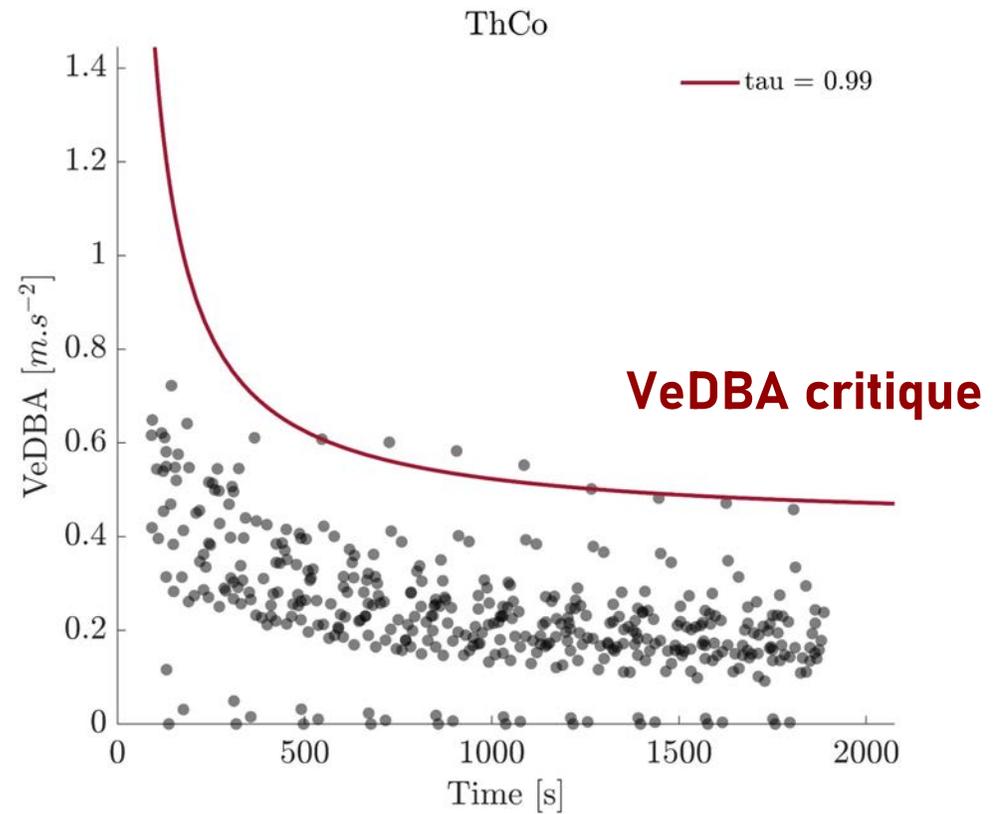
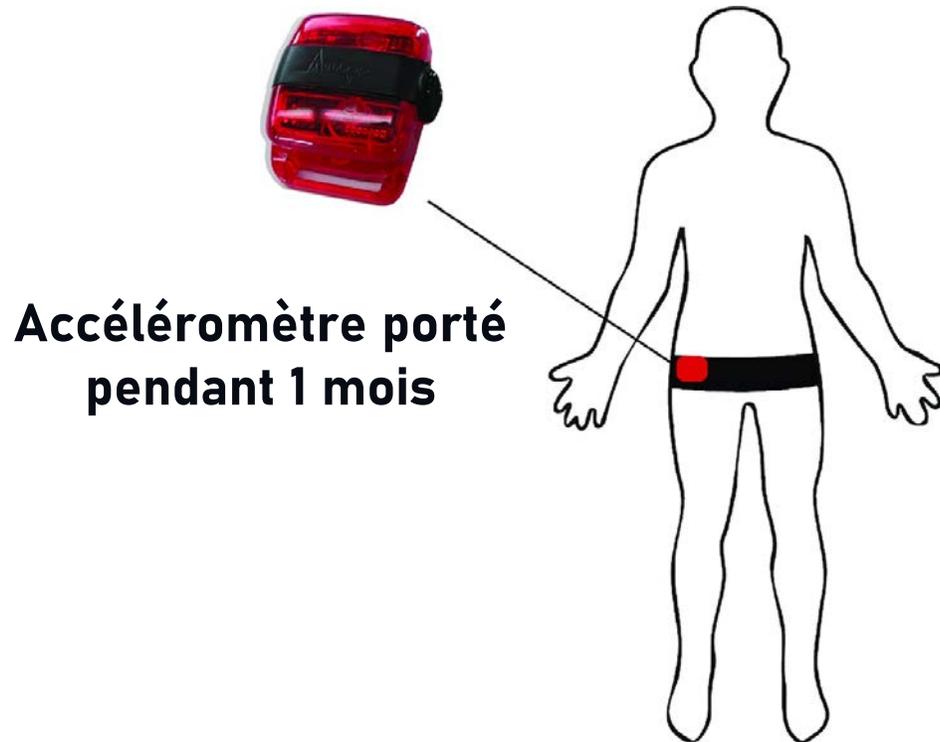
profil record pour déterminer les zones



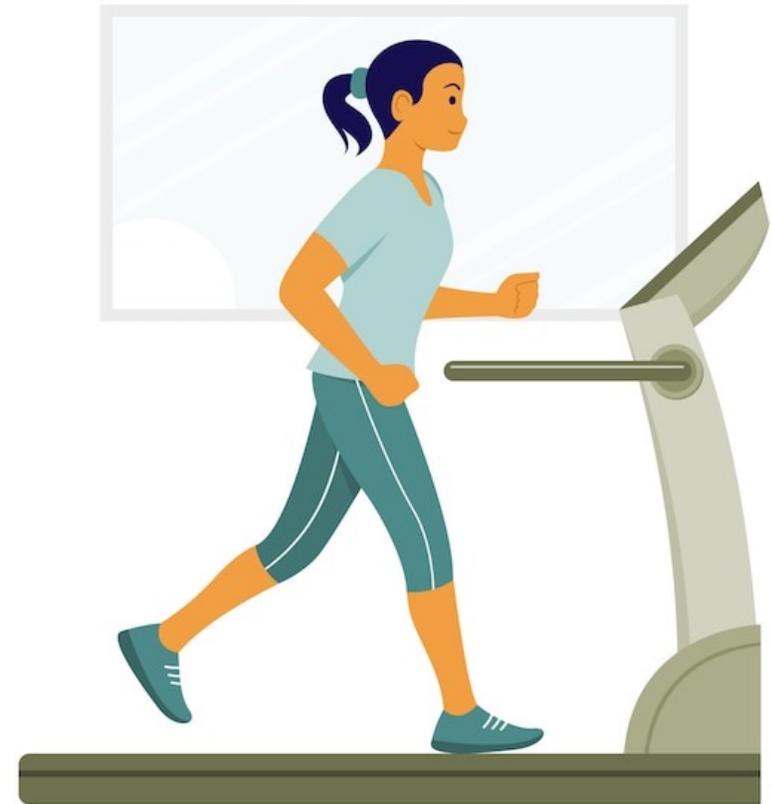
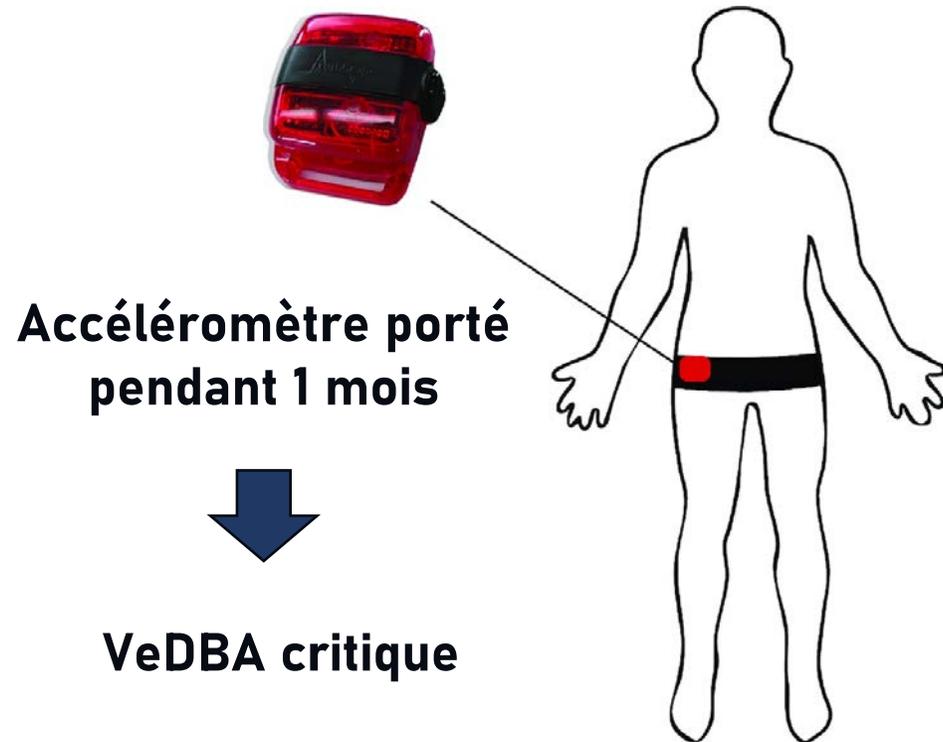
Outil:

Accéléromètres pour évaluer la puissance d'un animal en mouvement (DBA)

Evaluer sans tester

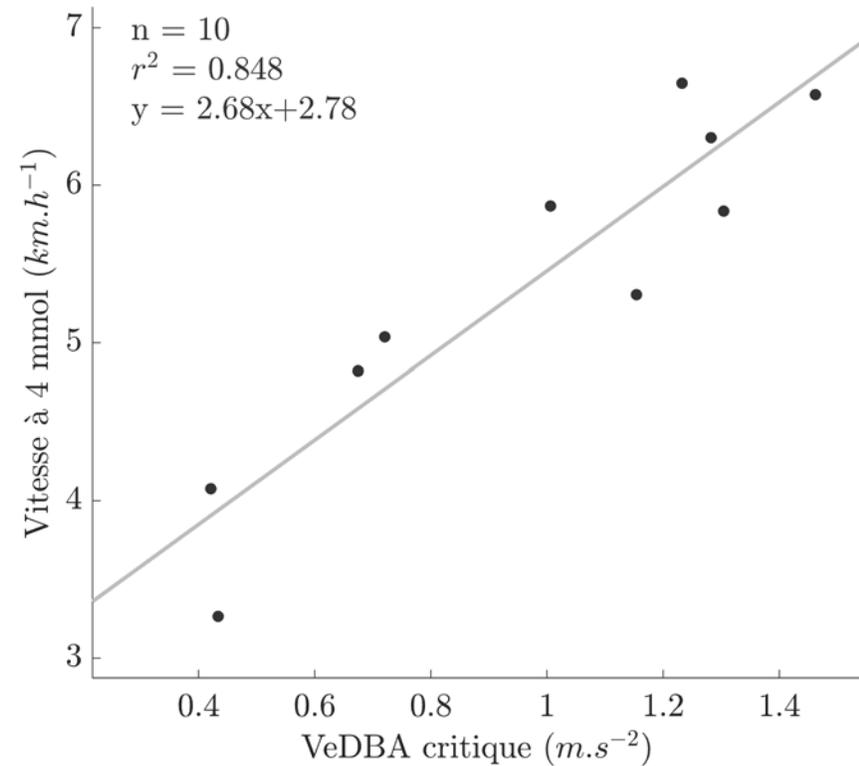
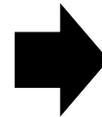
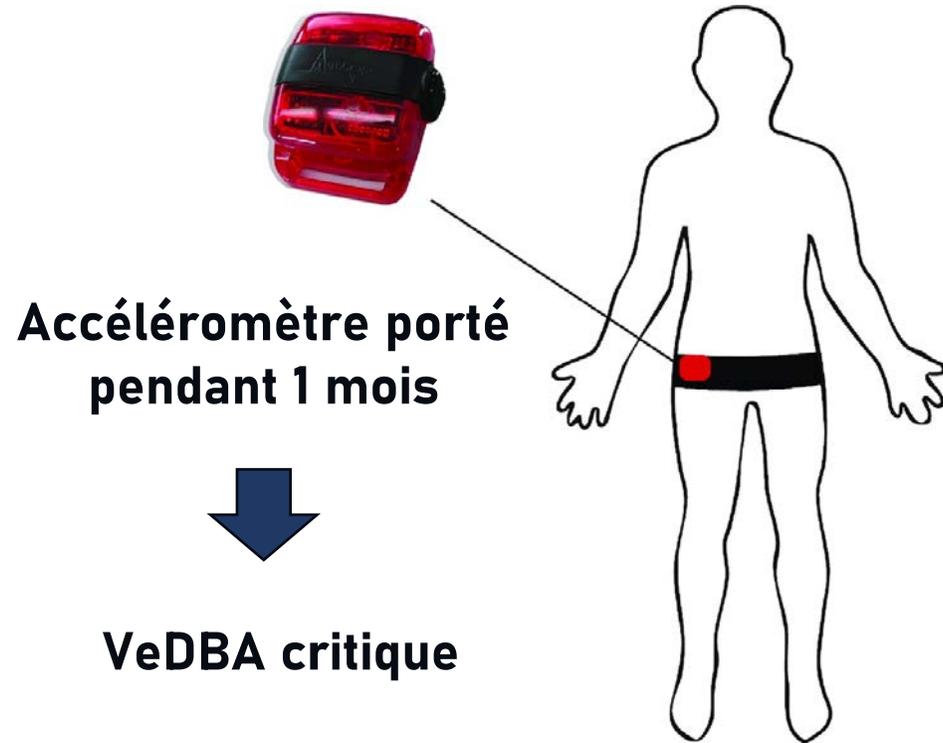


Evaluer sans tester

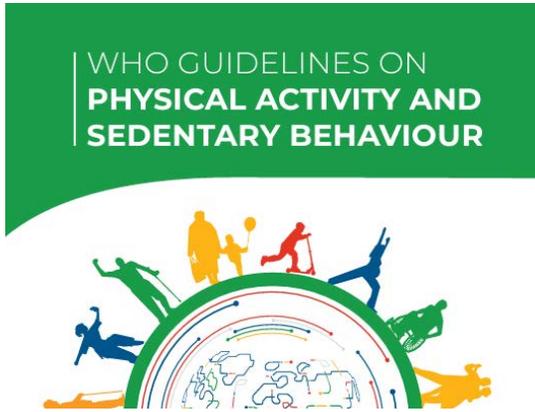


Vitesse au seuil 4mmol

Evaluer sans tester



Individualiser



« 150-300 min of moderate activity »

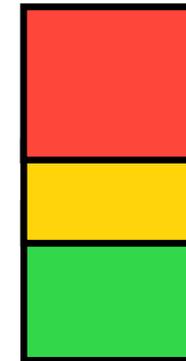
Ex. walking, gardening, dancing

« 75-150 min vigorous activity »

Ex. running, cycling, swimming, uphill walking



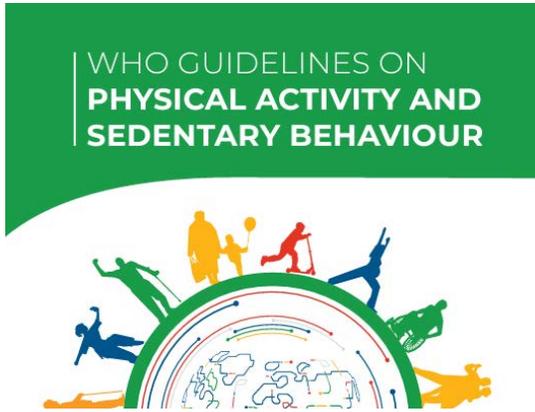
Daniel



Catherine



Individualiser

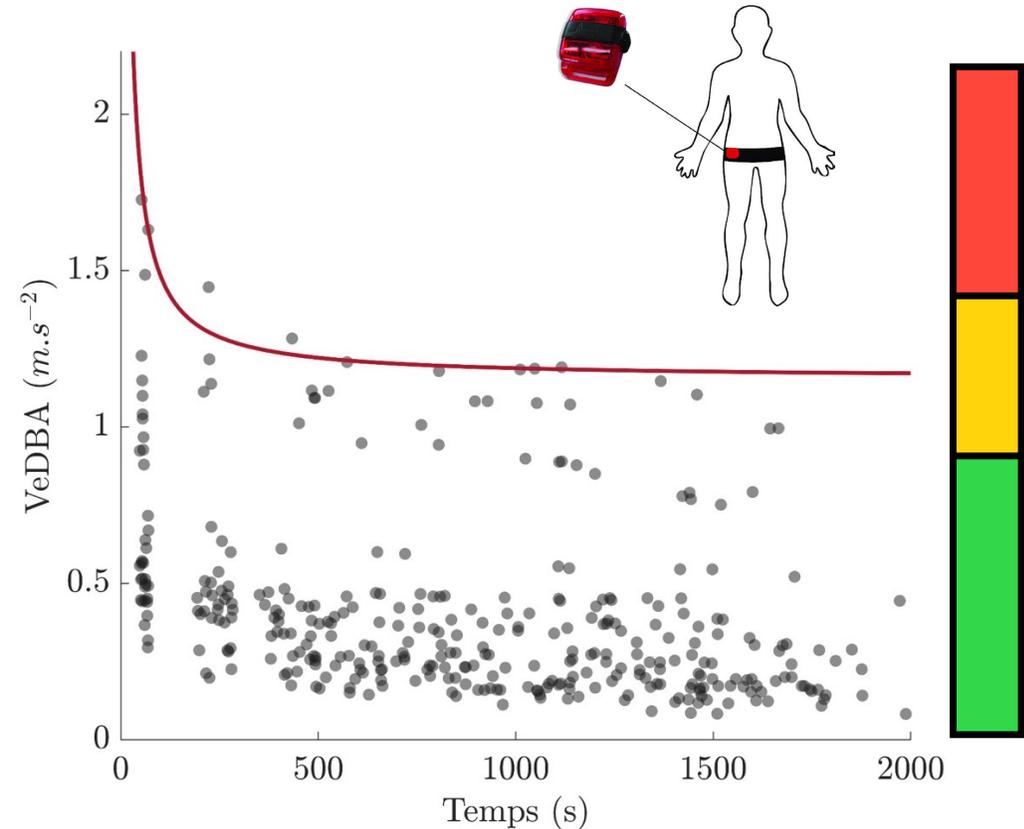


« 150-300 min of moderate activity »

Ex. walking, gardening, dancing

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