# Article information:

A Novel, Open Access Method to Assess Sleep Duration Using a Wrist-Worn Accelerometer | PLOS ONE  
<https://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0142533>

# Article summary:

1. This article presents a novel, open access method to assess sleep duration using a wrist-worn accelerometer.

2. The algorithm defines nocturnal sleep as a period of sustained inactivity, detected as the absence of change in arm angle greater than 5 degrees for 5 minutes or more.

3. The algorithm was validated against data from a polysomnography study on 28 persons and found to have moderate agreement with questionnaire based measures for time in bed and total sleep duration.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “A Novel, Open Access Method to Assess Sleep Duration Using a Wrist-Worn Accelerometer” is an informative and well-written piece that provides an overview of the development of a novel method for assessing sleep duration using wrist-worn accelerometers. The authors provide evidence to support their claims by citing relevant studies and providing detailed descriptions of their methods and results.

The article is generally reliable and trustworthy, however there are some potential biases that should be noted. For example, the authors do not discuss any potential risks associated with using wrist-worn accelerometers for sleep assessment, such as skin irritation or discomfort due to prolonged wear. Additionally, the authors do not explore any counterarguments or alternative methods for assessing sleep duration which could provide additional insight into the accuracy of this method.

In terms of one-sided reporting, the authors present only positive findings from their study without exploring any potential limitations or drawbacks associated with their method. Furthermore, they do not provide any evidence to support some of their claims such as that raw accelerometry increases analytical freedom and is more amenable to methodological consistency between studies.

Finally, it should be noted that while the authors cite relevant studies throughout the article, they do not always provide full references for these studies which could make it difficult for readers to find further information about them if needed.

In conclusion, this article provides an informative overview of a novel method for assessing sleep duration using wrist-worn accelerometers but there are some potential biases that should be taken into consideration when evaluating its trustworthiness and reliability.

# Topics for further research:

* Potential risks of using wrist-worn accelerometers
* Alternative methods for assessing sleep duration
* Accuracy of wrist-worn accelerometers for sleep assessment
* Limitations of wrist-worn accelerometers for sleep assessment
* Benefits of raw accelerometry
* Full references for studies cited in the article

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