

# Reduce Sedentary Behaviour in Desk Based Office Work by Means of a Novel Ergonomic Office Chair

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## Conclusion

The novel chair reduces sedentary behavior during working hours by increasing the active sitting time, and office workers perceived the increased physical activity level very well.

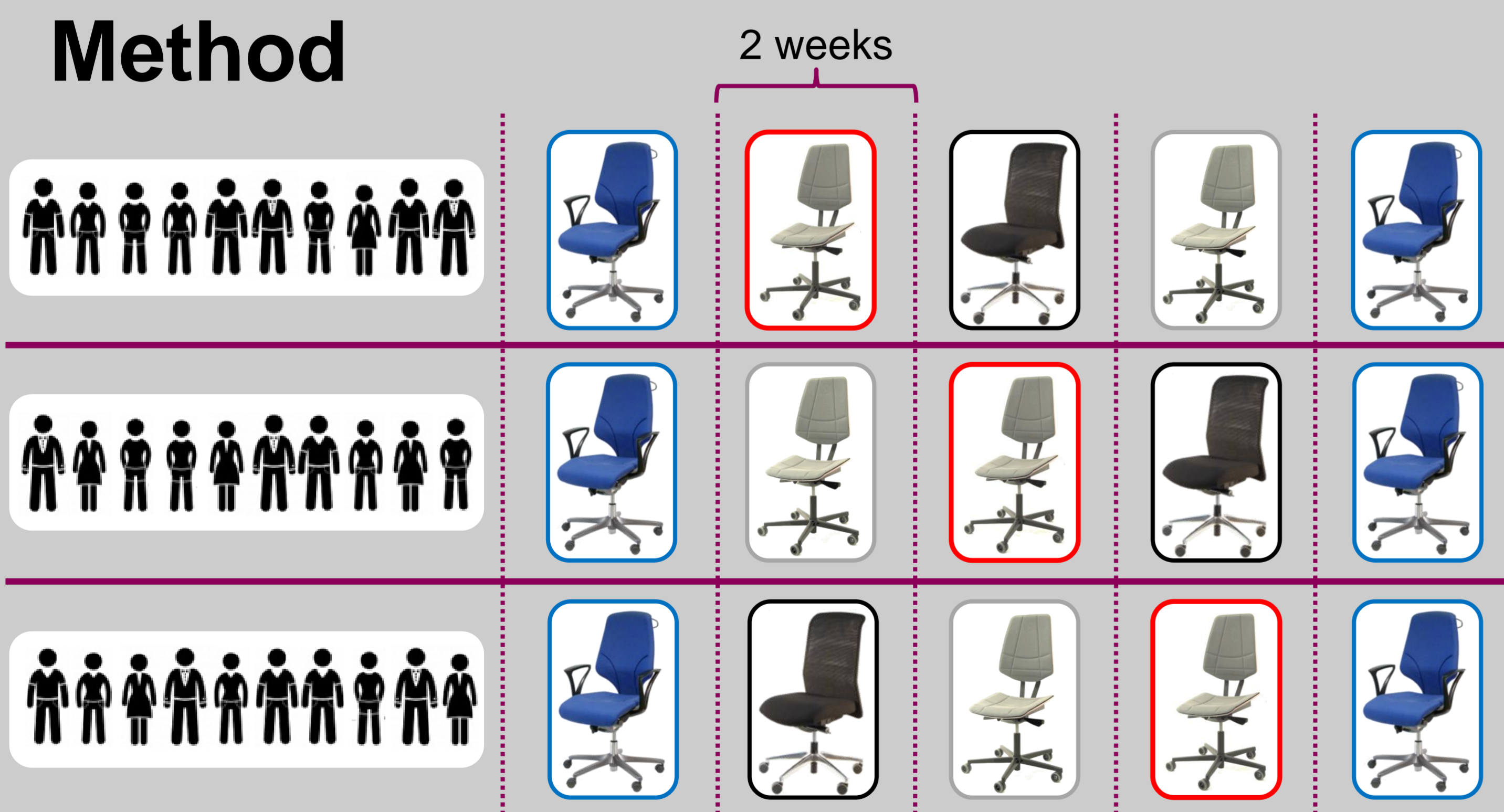
Although the chair doubles the active sitting time, we recommend to use it in combination with other interventions aimed to reduce sedentary behavior.

## Background & Aim

Office workers spend most of their working day sitting, primarily static (Chau et al. 2013). Although preferable from an ergonomic perspective, current ergonomic chairs are not known to promote active sitting (Ellegast et al. 2012).

We therefore developed a novel ergonomic office chair having a moveable seat around an anterior-posterior axis located at the 11<sup>th</sup> thoracic vertebra. The new chair is already known to change subjects' trunk muscle activity. However, it was still unknown whether the chair actually decreases sedentary behaviour during desk based office work.

## Method



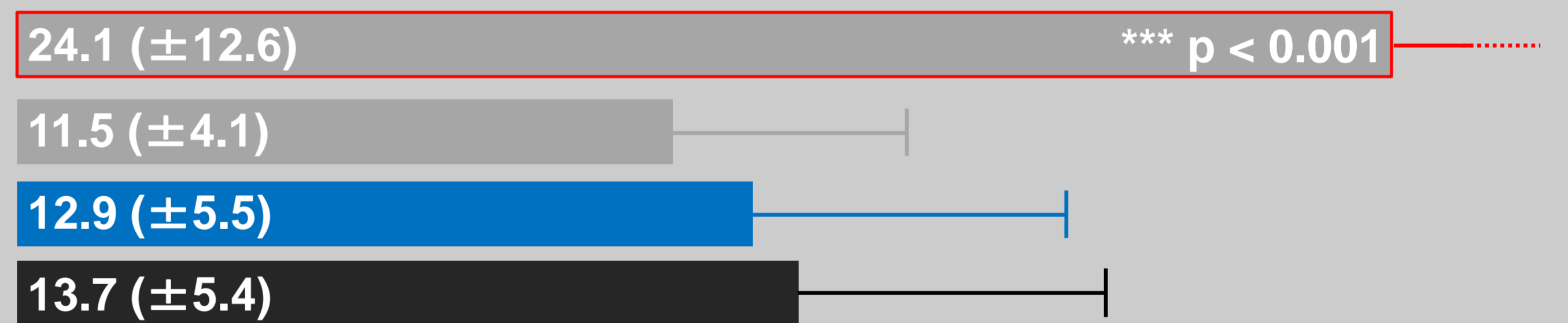
## Conflict of Interest Statement

LG and DB own stocks of rotavis AG, the company holding the right to sell chairs covered by patent no. EP2381816 (owned by ETH Zurich).

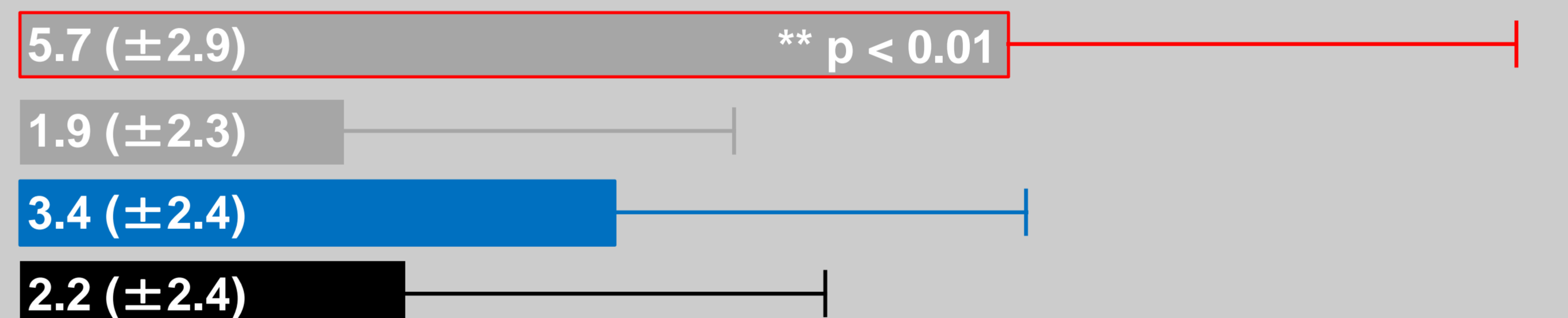
## Results



### Daily Activity Time in Minutes (Accelerometer Data)



### Daily Activity Time, rated on VAS (from 1 to 9)



## Outlook

This study demonstrates the limitations of current protocols used to measure sedentary behavior in office occasions. We therefore started a project to **develop an evidence-based protocol for assessing physical (in)-activity and sedentary behavior in desk based office work**, and ask you to share your experience with us.



Watch a short video about the scientific chair development:  
<https://vimeo.com/146391854>

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