

# Can stroke survivors use e-bikes as a form of outdoor physical activity?

This research is adapted from **Exploring the factors influencing the use of electrically assisted bikes (e-bikes) by stroke survivors: a mixed methods multiple case study** published by Taylor & Francis in Disability and Rehabilitation. Scan the QR code at the bottom of this poster to read the full article.

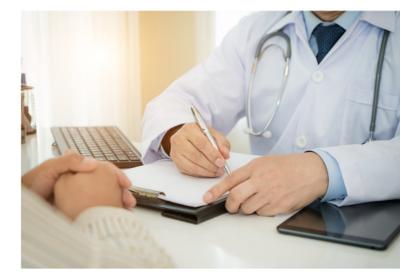
**AUTHORS:**  
Paul Boland, Louise Connell, Clare Thetford & Jessie Janssen

## AIM OF THE STUDY

The aim of this study was to explore the factors that affect e-bike usage by stroke survivors.

## WHAT WE DID

1. Participants were first interviewed to find out what they thought about e-bikes.
2. Participants could loan an e-bike or an e-trike for up to 3 months.
3. Participants had to get permission from their doctor to be able to loan an e-bike/e-trike.
4. After loaning the e-bike or e-trike participants were interviewed again to find out about their experiences.



## INTRODUCTION

Stroke survivors can face a number of restrictions to outdoor physical activities as a result of impairments and disability. Electrically assisted bikes (e-bikes) have grown in popularity over the past decade and have the potential to help stroke survivors overcome some of these barriers.

## WHAT IS AN E-BIKE?

Using a battery and a motor, e-bikes provide electrical assistance when the person is pedalling, making it easier to travel longer distances with minimal effort. In this study participants could use either an e-bike (A) or an e-trike (B)



To help the participants to cycle some of the e-trikes were fitted with adaptations to the brakes (1) and pedals (2 & 3).



## WHAT WERE THE RESULTS?

Six participants were recruited but only three were able to loan e-bike/e-trike.



Reasons for withdrawal were:

- Unable to store an e-trike in their home.
- Unable to get permission from their doctor.
- Did not feel safe cycling.

Two of the three participants loaned an e-trike due to their level of impairment and issues around balance.



Analysis of interviews identified a number of factors that affected the participants use of the e-bike/e-trike. These included:

- Level of impairment effected the choice of e-bike, the adaptations required and for one of the participants; their ability to cycle.
- It was an enjoyable form of physical activity that could increase independence.
- Support from family gave encouragement for participants to cycle, provided a companion to cycle with and to aid those with severe impairments to get on and off the e-trike.
- One participant had a fear of bumping into things and finding safe places to cycle was a concern.
- Most participants felt that the electrical assistance gave them the confidence to cycle further for longer, although one participant preferred to cycle without the assistance as it was deemed too fast for them.
- The additional weight and battery life could be a barrier for some stroke survivors.

## CONCLUSION

Stroke survivors can use e-bikes although barriers do exist. Due to the small number of participants who were able to loan an e-bike, further research is required to determine whether e-bikes are a feasible and effective intervention for increasing physical activity levels in stroke survivors.



**Stroke survivors can use e-bikes although level of impairment and support from family members were important factors that affected their use.**



SCAN FOR FULL ARTICLE

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