

# Using computer based cognitive training to provide a personalised therapeutic intervention for people with Huntingdons disease

<https://neurodegenerationresearch.eu/survey/using-computer-based-cognitive-training-to-provide-a-personalised-therapeutic-intervention-for-people-with-huntingdons-disease/>

## **Name of Fellow**

Dr Emma Yhnell

## **Institution**

## **Funder**

Health and Care Research Wales

## **Contact information of fellow**

## **Country**

United Kingdom

## **Title of project/programme**

Using computer based cognitive training to provide a personalised therapeutic intervention for people with Huntingdons disease

## **Source of funding information**

Health and Care Research Wales

## **Total sum awarded (Euro)**

€ 295,466

## **Start date of award**

01/10/16

## **Total duration of award in years**

3.0

## **The project/programme is most relevant to:**

Huntington's disease

## **Keywords**

## Neurological

### Research Abstract

**Aim(s) of the research:** Problems with thinking are common in Huntington's disease (HD), but the range and severity of thinking problems can differ among people with HD. Computer games can be personalised to each person with HD to "train the brain" and improve their thinking skills, but using computer games to train the brain has not yet been done in people with HD. Therefore, before a large study can be conducted, we want to see if people with HD can play the computer games and complete the brain training as expected and see if any of their symptoms are improved as a result.

**Background:** HD is a brain condition that is inherited and affects movement and thinking. People with HD have problems with thinking from early on in the disease, which can leave them isolated, lonely and in need of extra care. Brain training, using computer games, has been used in other brain diseases to improve thinking and movement problems. If people with HD practice playing computer games that train their brain, then their thinking and motor skills may get better. Brain training is particularly good for patients as it can be personalised to them, is cheap, easy to do, can be done at home and has the potential to be combined with other therapies to maximise patient benefit.

**Design and methods:** This study has been designed taking into account the views of the HD community. As this is the first time brain training will be used in HD, the study will focus on finding out if people with HD can complete brain training. As part of the study, tests that assess participants thinking and motor skills will be refined. A brain training programme will be designed for each participant and they will be asked to practice playing brain training games on a computer. Participants will be tested on their thinking and motor skills before and after they have completed their brain training, to see if their skills have improved. At the end of the study participants, carers and family members will be interviewed and asked about their experiences of using the brain training games to see if they found the games easy to use, to help improve this type of training in the future.

**Public involvement:** The views and feedback of people with HD, their families and carers have been used in designing this study. Public engagement and outreach opportunities will be used to present this research to a wide audience, including the applicant's current roles as a STEM ambassador and member of Speakezee. The applicant will also give talks, workshops and attend meetings, where she will give members of the public a chance to think about, discuss and try brain training for themselves.

**Dissemination:** the HD community will be made aware of this project. But there is also a broader dissemination plan to make the general public and the medical and scientific communities aware of this work. The applicant will attend local events which link with Cardiff University, including; 'The Brain Games', which last year attracted over 3200 visitors to Cardiff Museum, the 'Life and Learn Event' which involves over 200 pupils from 4-5 local schools and the annual HD open morning held at the Cardiff HD Centre. The results of this study will be shared and promoted with Health and Care Research Wales and the research will be further disseminated via, actively contributing to websites and newsletters, via social media and through presenting this work at research conferences.

### Types:

Fellowships

**Member States:**

United Kingdom

**Diseases:**

Huntington's disease

**Years:**

2016

**Database Categories:**

N/A

**Database Tags:**

N/A