

**We are recruiting  
participants  
for a research study!**

# **JUMP STARTING THE SPINAL CORD WITH ACUTE INTERMITTENT HYPOXIA**



THE UNIVERSITY OF  
WESTERN  
AUSTRALIA



**NeuRA**

Discover. Conquer. Cure.

## **About the Project**

**Breathing low-oxygen air for brief periods may help people with incomplete spinal cord injury become stronger. This project will try to better understand the underlying mechanisms of this improvement and why some people respond better than others to this therapy.**

**You will be asked to** visit our laboratory facilities on 2 days. In each experimental session (~3.5-h long), we will evaluate your muscle strength before and after a 30-min protocol of breathing low-oxygen air on one day and normal-oxygen air on the other day. We will also collect a saliva sample to examine your DNA, and you will use two small devices to measure your oxygen levels and breathing patterns at home during sleep. We will see whether one particular gene (brain-derived neurotrophic factor gene) and breathing problems during sleep influence this therapy.

### **Benefits of participation:**

- ✓ You will be reimbursed with a \$120 Coles & Myer gift card. We will also provide taxi vouchers or parking permits for your visits
- ✓ You will be able to choose to know:
  - If the breathing protocol influenced your strength during the experimental sessions
  - If you have a genetic variation in the brain-derived neurotrophic factor gene
  - If we detect breathing problems during sleep

### **You may be eligible if you:**

- ✓ Are 18-65 years old
- ✓ Have a chronic incomplete spinal cord injury (injury happened more than 1 year ago)
- ✓ Have muscle weakness but not complete paralysis in at least one muscle group below the injury
- ✓ Have not been diagnosed with moderate/severe lung disorder, serious cardiovascular disease or other neurological or psychiatric illnesses



**For further info, please contact:**

Ricardo Mesquita  
r.mesquita@ecu.edu.au

**Location of experiments:**  
Edith Cowan University (Joondalup) or  
The University of Western Australia (Crawley)