

# Metabolic response to playing video games

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| <b>Submission date</b><br>20/02/2012   | <b>Recruitment status</b><br>No longer recruiting | <input type="checkbox"/> Prospectively registered<br><input type="checkbox"/> Protocol            |
| <b>Registration date</b><br>21/03/2012 | <b>Overall study status</b><br>Completed          | <input type="checkbox"/> Statistical analysis plan<br><input checked="" type="checkbox"/> Results |
| <b>Last Edited</b><br>30/01/2020       | <b>Condition category</b><br>Circulatory System   | <input type="checkbox"/> Individual participant data  |

## Plain English summary of protocol

### Background and study aims

Videogames are an extremely popular pastime, in particular amongst young people. Research has suggested that passive activities such as watching television and computer gaming increase the risk of excess weight gain and obesity. However, computer games are very variable, and not all involve passive participation. For example, many computer games involve exposure to violent images during simulated violent encounters. Such games involve the participant responding at high speed to simulated experiences which, in real life, would be highly stressful. In real life, stress generates many metabolic effects, including those associated with cardiovascular risk. Chronic exposure to stress, for example in the work place, has been associated with central obesity (excessive fat around the stomach). It is unknown whether simulations of violence in computer games generate the same kinds of stress response. The aim of the study is to understand if playing computer games has different effects from watching television, and if playing violent computer games generates different effects to playing non-violent games.

### Who can participate?

Our study is open to healthy young men aged between 18 and 30 years.

### What does the study involve?

The study involves a single visit to UCL Institute of Child Health, London. Participants will be randomly allocated to one of three activities: (a) watching television, (b) playing a non-violent computer game, or (c) playing a computer game involving high levels of simulated violence. Measurements of weight, height, heart rate, blood pressure and a saliva sample will be taken.

### What are the possible benefits and risks of participating?

All participants will learn their current weight, height and BMI, and they will also be given their blood pressure results. There are no known risks to participants.

### Where is the study run from?

UCL Institute of Child Health in the Childhood Nutrition Research Centre (UK)

### When is the study starting and how long is expected to be run for?

January 2010 to April 2011

Who is funding the study?  
The Childhood Nutrition Research Centre at UCL Institute of Child Health

Who is the main contact?  
Prof. Jonathan Wells  
Jonathan.Wells@ucl.ac.uk

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Prof Jonathan Wells

**Contact details**  
University College London  
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London  
United Kingdom  
WC1N 1EH

## Additional identifiers

**Protocol serial number**  
N/A

## Study information

**Scientific Title**  
Metabolic response to playing video games: a randomised trial

**Study objectives**  
Indices of metabolism and cardiovascular risk differ between those watching television, those playing a sport computer game, and those playing a violent video game.

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**  
University College London (UCL) Graduate School Ethics Committee, 19/05/2009, ref: 0326/004

**Study design**  
Randomised trial

**Primary study design**  
Interventional

**Study type(s)**

Other

**Health condition(s) or problem(s) studied**

Cardiovascular disease and obesity

**Interventions**

Randomisation to one of three groups:

1. Watching television
2. Playing sports video games
3. Violent video games

The study involved a single 1-hour measurement session for each participant, when they were requested to participate in their randomly-specified activity (watching television, playing a sports computer game, or playing a violent video game). The study was completed at the end of this session and no further follow up was conducted.

**Intervention Type**

Other

**Phase**

Not Applicable

**Primary outcome(s)**

Blood pressure

**Key secondary outcome(s)**

1. Anthropometry (weight, height)
2. Saliva samples for assessment of salivary cortisol
3. Visual-scale ratings of appetite
4. Heart rate

**Completion date**

01/04/2011

**Eligibility****Key inclusion criteria**

1. Healthy young men
2. Aged 18-30 years

**Participant type(s)**

Healthy volunteer

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Upper age limit**

30 years

**Sex**

Male

**Total final enrolment**

48

**Key exclusion criteria**

1. Smokers
2. Body mass index (BMI) <18 or >25 kg/m<sup>2</sup>
3. Weight-unstable (i.e. a change of more than 3kg in the previous 3 months)
4. Diabetic or hypertensive individuals
5. Those with chronic or acute medical conditions or medications that might affect the primary outcomes of the study
6. Those with psychiatric disorders
7. Consuming less than 21 units of alcohol per week

**Date of first enrolment**

01/06/2009

**Date of final enrolment**

01/04/2011

**Locations****Countries of recruitment**

United Kingdom

England

**Study participating centre**

**University College London**

London

United Kingdom

WC1N 1EH

**Sponsor information****Organisation**

University College London (UK)

ROR

<https://ror.org/02jx3x895>

## Funder(s)

**Funder type**

University/education

**Funder Name**

University College London Institute of Child Health - Childhood Nutrition Research Centre (UK)

## Results and Publications

**Individual participant data (IPD) sharing plan**

**IPD sharing plan summary**

Not provided at time of registration

**Study outputs**

| Output type                     | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---------------------------------|---------|--------------|------------|----------------|-----------------|
| <a href="#">Results article</a> | results | 01/12/2013   | 30/01/2020 | Yes            | No              |