

Metabolic response to playing video games

Submission date 20/02/2012	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 21/03/2012	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 30/01/2020	Condition category 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
Institute of Child Health
Childhood Nutrition Research Centre
30 Guilford Street
London
United Kingdom
WC1N 1EH

Additional identifiers

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/m²
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?
Results article	results	01/12/2013	30/01/2020	Yes	No