Hargreaves Test UCD_HRG_001

Purpose

To assess thermal hyperalgesia in the mouse paw.

Experimental Design

Minimum number of mutant animals: 7 males + 7 females

Age at test: 16-17 weeks

Sexual dimorphism:

Procedure

1. Baseline measurement
   1. Transfer mouse to the testing arena and allow to acclimate to the test environment.
   2. Ensure that the intensity and cut-off timer of the radiant heat source are set correctly.
   3. Position the light source below the platform and directed at the correct part of the paw.
   4. Turn the light source on and record the latency to paw withdrawal. The stimulus is terminated once a response is registered, or if the maximum exposure time is reached before the animal responds.
   5. Repeat the test so that each mouse is tested three times with the same paw.

3. Challenge
   1. The challenge is administered after the baseline measurement has been completed.
   2. Anaesthetise the mouse and administer the challenge injection.

5. Test 1
   1. After the specified length of time since the challenge injection, the mouse is re-tested using the same procedure as described for the baseline measurement.

7. Test 2
   1. After the specified length of time since the challenge injection, the mouse is re-tested again using the same procedure as described for the baseline measurement.

Notes

This procedure is a pilot study from the Pain Phenotyping Pilot

Parameters and Metadata
Radiant heat light source manufacturer  UCD_HRG_032_001 | v1.0

Procedure Metadata


Options: IITC,

Site of challenge injection  UCD_HRG_013_001 | v1.0

Procedure Metadata


Options: Plantar surface of right hind paw,

Testing chamber dimensions  UCD_HRG_029_001 | v1.0

Procedure Metadata


Unit Measured: cm

Options: 12.7 cm H x 10.16 cm W x 10.16 cm L, 12.5 cm H x 10 cm W x 10 cm L,

Disinfectant  UCD_HRG_035_001 | v1.0

Procedure Metadata
Options: Coverage Plus Working Solution, Clidox and 70% Ethanol, 1% Virkon,

Test 2: average latency to withdrawal

Unit Measured: s

Derivation: meanOfIncrements('UCD_HRG_005_001',1)

Time between challenge and test 2

Unit Measured: Hours

Options: 144, 48,
Test 1: average latency to withdrawal  

**simpleParameter**

- **Unit Measured:** s
- **Derivation:** meanOfIncrements('UCD_HRG_003_001',1)

Anaesthetic for challenge injection  

**procedureMetadata**

- **Options:** Isoflurane,

Lid colour/opacity  

**procedureMetadata**

- **Options:** Clear,
Glass base heated during acclimatisation

**Options:** Yes,

Baseline: average latency to withdrawal

**Unit Measured:** s

**Derivation:** meanOfIncrements('UCD_HRG_001_001',1)

Length of acclimatisation period

**Options:** 60, 30, 30 - 60,
Test intensity  UCD_HRG_021_001  | v1.0

**procedureMetadata**

- **Req. Analysis:** false  
- **Req. Upload:** true  
- **Is Annotated:** false  

**Unit Measured:** %

**Options:** 100, 25, 30, 15,

---

Glass base manufacturer  UCD_HRG_030_001  | v1.0

**procedureMetadata**

- **Req. Analysis:** false  
- **Req. Upload:** true  
- **Is Annotated:** false  

**Options:** IITC,

---

Idle intensity  UCD_HRG_020_001  | v1.0

**procedureMetadata**

- **Req. Analysis:** false  
- **Req. Upload:** true  
- **Is Annotated:** false  

**Unit Measured:** %

**Options:** 2, 3, 10,
**Tetrad colour/opacity**  
**UCD_HRG_024_001 | v1.0**  

*procedureMetadata*

**Req. Analysis:** false  
**Req. Upload:** true  
**Is Annotated:** false

**Options:** Clear,

---

**Tetrad manufacturer**  
**UCD_HRG_022_001 | v1.0**  

*procedureMetadata*

**Req. Analysis:** false  
**Req. Upload:** true  
**Is Annotated:** false

**Options:** IITC,

---

**Time between challenge and test 1**  
**UCD_HRG_016_001 | v1.0**  

*procedureMetadata*

**Req. Analysis:** false  
**Req. Upload:** true  
**Is Annotated:** false

**Unit Measured:** Hours

**Options:** 24,
Minimum time between stimulus presentation UCD_HRG_011_001 | v1.0

Unit Measured: min
Options: 2,

Tetrad material UCD_HRG_023_001 | v1.0

Options: Acrylic,

Baseline: latency to withdrawal UCD_HRG_001_001 | v1.0

Unit Measured: s
Increments: 1, 2, 3,
**Glass base temperature: settings** UCD_HRG_018_001 | v1.0

**Unit Measured:** C

**Options:** 34, 30, 32,

---

**Inset colour/opacity** UCD_HRG_026_001 | v1.0

**Options:** White opaque, Clear,

---

**Radiant heat light source model** UCD_HRG_033_001 | v1.0

**Options:** 390 Plantar test head (Item #300TH),

---

**Time between baseline measurement and challenge injection** UCD_HRG_015_001 | v1.0
**Challenge**  
**UCD_HRG_012_001 | v1.0**

**Options:** CFA,

---

**Test 2: latency to withdrawal**  
**UCD_HRG_005_001 | v1.0**

**Unit Measured:** s  
**Increments:** 1, 2, 3,

---

**Inset material**  
**UCD_HRG_025_001 | v1.0**
Lid material  UCD_HRG_027_001 | v1.0

Test 1: latency to withdrawal  UCD_HRG_003_001 | v1.0

Glass base model  UCD_HRG_031_001 | v1.0
Options: Model 400 Heated Base (Item #400G),

Number of repeats per paw  

Required Analysis: false  
Required Upload: true  
Is Annotated: false

Options: Right hind paw tested 3 times,

Maximum exposure time  

Required Analysis: false  
Required Upload: true  
Is Annotated: false

Unit Measured: s

Options: 30, 20,

Glass base temperature: measured  

Required Analysis: false  
Required Upload: false  
Is Annotated: false

Unit Measured: C
Options: 29-32,