Tail Flick TCP_TFL_001

Purpose

The Tail Flick test is used to assess pain sensitivity (nociception). The time it takes for an animal to rapidly
remove the tail from an intense heat source is used as an index of peripheral pain response.

Experimental Design

- **Minimum number of animals :** 7M + 7F
- **Age at test:** Week 12
- **Sex:** We would expect the results of this test to show sexual dimorphism

Equipment

Columbus Instruments Tail-Flick Analgesia Meter
70% Alcohol
Clidox 1:5:1
Sterile Cloths
Washcloths

Procedure

1. Animals are transported to the anteroom and left undisturbed for 30 minutes before testing.
2. The apparatus is set to the auto-detect mode ensuring an automated tail flick detection when it occurs.
3. The mouse is then placed on the testing plate and covered with a sterile cloth while the tail remains exposed.
4. The tail is gently positioned into the groove. The green light beside the groove comes on indicating the correct placement of the tail.
5. The start button is then pressed initiating the timer. A high intensity beam of light is directed at mouse's tail through a small hole in the groove.
6. The tail flick is detected automatically and the timer is stopped.
7. Three different trials are run with inter-trial intervals lasting at least 60 seconds.
8. Three trials are averaged to improve the accuracy of the test.

Notes

The maximum trial duration is set to 18 seconds to prevent any potential tissue damage.

The equipment is cleaned with Clidox before introducing a mouse from a different cage. Ethanol is used to remove any olfactory cues between testing of males and females. Clidox is then used to wipe off any remaining ethanol before the actual testing.

Parameters and Metadata

Latency to tail flick TCP_TFL_001_001 | v1.3

seriesParameter

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

Unit Measured: s

Increments: 1, 2, 3,

Average latency to tail flick TCP_TFL_002_001 | v1.5

simpleParameter

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

Unit Measured: s

Derivation: meanOfIncrements('TCP_TFL_001_001', 3)

Experimenter ID TCP_TFL_003_001 | v1.0

procedureMetadata

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

Equipment ID TCP_TFL_004_001 | v1.0

procedureMetadata

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

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Equipment manufacturer TCP_TFL_005_001 | v1.0

procedureMetadata

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

Options: Columbus Instruments,

Equipment model TCP_TFL_006_001 | v1.0

procedureMetadata

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

Options: Tail-Flick Apparatus Meter,
