



NOV 23, 2023

OPEN ACCESS



**DOI:**  
[dx.doi.org/10.17504/protocol  
s.io.261gedjjwv47/v1](https://dx.doi.org/10.17504/protocols.io.261gedjjwv47/v1)

**Protocol Citation:** Marina Lorente Picón, Núria Peñuelas, Ariadna Laguna, Miquel Vila 2023. Grip strength test. **protocols.io** [https://dx.doi.org/10.17504/p  
rotocols.io.261gedjjwv47/v1](https://dx.doi.org/10.17504/protocols.io.261gedjjwv47/v1)

**License:** This is an open access protocol distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

**Protocol status:** Working  
We use this protocol and it's working

**Created:** Nov 23, 2023

## Grip strength test

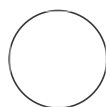
Marina Lorente  
Picón<sup>1</sup>,  
Miquel Vila<sup>1</sup>

Núria  
Peñuelas<sup>1</sup>,

Ariadna Laguna<sup>1</sup>,

<sup>1</sup>Vall d'Hebron Research Institute

Vilalab Public



Miquel Vila

### ABSTRACT

Grip strength test for mice

- 1 Hold the animal by the middle/base of the tail and allow it to grasp a tangled fine gauge stainless steel wire attached to steel chain (**13.2g**). Then, lift them carrying the corresponding weight with their forepaws for a total of 5 seconds. If the animal does not succeed assign **0 seconds** to that animal. If the animal succeeds holding the weight, move on to the next weight.
- 2 Hold the animal by the middle/base of the tail and allow it to grasp a tangled fine gauge stainless steel wire attached to steel chain (**32.1g**). Then lift them carrying the corresponding weight with their forepaws for a total of 5 seconds. If the animal does not succeed assign **the max n° of seconds** he held the weight to that animal. If the animal succeeds holding the weight, move on to the next weight.
- 3 Hold the animal by the middle/base of the tail and allow it to grasp a tangled fine gauge stainless steel wire attached to steel chain (**19.7g**). Then lift them carrying the corresponding weight with their forepaws. If the animal does not succeed assign **the max n° of seconds** to that animal. If the animal succeeds holding the weight, move on to the next weight.
- 4 Hold the animal by the middle/base of the tail and allow it to grasp a tangled fine gauge stainless steel wire attached to steel chain (**25.9g**). Then lift them carrying the corresponding weight with their forepaws. If the animal does not succeed assign **the max n° of seconds** to that animal. If the animal succeeds holding the weight, move on to the next weight.
- 5 Hold the animal by the middle/base of the tail and allow it to grasp a tangled fine gauge stainless steel wire attached to steel chain (**38.4g**). Then lift them carrying the corresponding weight with their forepaws. If the animal does not succeed, assign **the max n° of seconds** to that animal. If they succeed holding the weight, move on to the next weight.
- 6 Hold the animal by the middle/base of the tail and allow it to grasp a tangled fine gauge stainless steel wire attached to steel chain (**44.6g**). Then lift them carrying the corresponding weight with their forepaws. If the animal does not succeed, assign **the max n° of seconds** to that animal. If the animal succeeds holding the weight, assign **30 seconds** to that animal.
- 7 Calculate Grip latency (s) as a sum of the time holding the increasing weights (0-30 seconds).

