



National Centre  
for the Replacement  
Refinement & Reduction  
of Animals in Research

## Grimace Scale Posters: Terms of use

The NC3Rs has produced A3-sized posters of the mouse, rabbit and rat grimace scales for display in laboratory animal facility rooms and corridors to help raise awareness about the scales and familiarise staff with the specific facial action units.

For a full list of available posters and information on and how to implement grimace scales in your facility please see our resource page: <https://www.nc3rs.org.uk/3rs-resources/grimace-scales/>.

### Print specifications

The proper use of this poster requires each of the facial action units to be clear and easily discernible, therefore it must be printed by a professional print service at the full A3 size.

This poster in this pdf has been setup to professional print standards and has crops and bleed added. Please use the print specification outlined below and the printer will trim the poster to the finished size.

- Finished Size: 420mm x 297mm (A3 portrait)
- Print specification: Full colour
- Paper specification (ideally): 170gsm silk

If you have any issues, or need the file in another format, please contact [enquiries@nc3rs.org.uk](mailto:enquiries@nc3rs.org.uk).

### Circulation and reproduction

The poster in this PDF should not be circulated without this covering page attached to it.

Any requests to reproduce this poster, or to include it in any publications or training materials, should be directed to [enquiries@nc3rs.org.uk](mailto:enquiries@nc3rs.org.uk). You should include how, why and where the poster will be used so that we can consider your case for approval. It is helpful to include any associated text, so we can see the context in which the poster will be put.

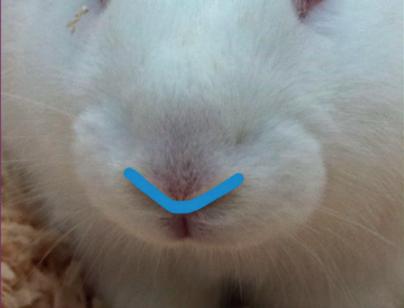
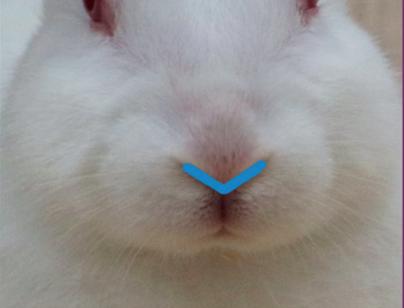
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# The Rabbit Grimace Scale

Research has demonstrated that changes in facial expression provide a means of assessing pain in rabbits.

The specific facial action units shown below comprise the Rabbit Grimace Scale. These action units increase in intensity in response to post-procedural pain and can form part of a clinical assessment alongside other validated indices of pain.

The action units should only be used in awake animals. Each animal should be observed for a short period of time to avoid scoring brief changes in facial expression that are unrelated to the animal's welfare.

	Action units		
	Not present "0"	Moderately present "1"	Obviously present "2"
<p><b>Orbital tightening</b></p> <ul style="list-style-type: none"> <li>Closing of the eyelid (narrowing of orbital area)</li> <li>A wrinkle may be visible around the eye</li> </ul>			
<p><b>Cheek flattening</b></p> <ul style="list-style-type: none"> <li>Flattening of the cheeks. When 'obviously present', cheeks have a sunken look.</li> <li>The face becomes more angular and less rounded</li> </ul>			
<p><b>Nostril shape</b></p> <ul style="list-style-type: none"> <li>Nostrils (nares) are drawn vertically forming a 'V' rather than 'U' shape</li> <li>Nose tip is moved down towards the chin</li> </ul>			
<p><b>Whisker shape and position</b></p> <ul style="list-style-type: none"> <li>Whiskers are pushed away from the face to 'stand on end'</li> <li>Whiskers stiffen and lose their natural, downward curve</li> <li>Whiskers increasingly point in the same direction. When 'obviously present', whiskers move downwards</li> </ul>			
<p><b>Ear shape and position</b></p> <ul style="list-style-type: none"> <li>Ears become more tightly folded / curled (more cylindrical) in shape</li> <li>Ears rotate from facing towards the source of sound to facing towards the hindquarters</li> <li>Ears may be held closer to the back or sides of the body</li> </ul>			

Read the original paper: Keating SCJ, Thomas AA, Flecknell PA, Leach MC (2012) Evaluation of EMLA cream for preventing pain during tattooing of rabbits: Changes in physiological, behavioural and facial expression responses. PLOS ONE 7(9): e44437. doi:10.1371/journal.pone.0044437

For guidance on using the Rabbit Grimace Scale, additional images of each action unit, research papers that underpin this technique, and for grimace scales in other species, visit: [www.nc3rs.org.uk/grimacescales](http://www.nc3rs.org.uk/grimacescales)

To request copies of this poster, please email: [enquiries@nc3rs.org.uk](mailto:enquiries@nc3rs.org.uk)  
The NC3Rs provides a range of 3Rs resources at [www.nc3rs.org.uk/resources](http://www.nc3rs.org.uk/resources)

Images kindly provided by Dr Matthew Leach, Newcastle University

The Rabbit Grimace Scale would not have been developed without the continuing work of the Pain and Animal Welfare Sciences Group (PAWS) at Newcastle University