**Parameters to be monitored and examples of each** (adapted from [www.ccac.ca](http://www.ccac.ca) [Companion notes](http://www.ccac.ca/Documents/Education/Modules/Vivaria/Endpoints/Companion-notes.pdf))

Appearance:

* + - Normal
    - Poor grooming
    - Piloerection, fresh ocular and nasal discharge
    - Piloerection, hunched
    - Eyes half closed

Natural Behavior:

* + - Normal
    - Minor change
    - Less mobile and isolated, but alert
    - Restless or very still and not alert

Hydration:

* Water is free flowing
* No piling/crowding around waterer
* Rapid weight loss
* Tacky mucous membranes

Clinical signs:

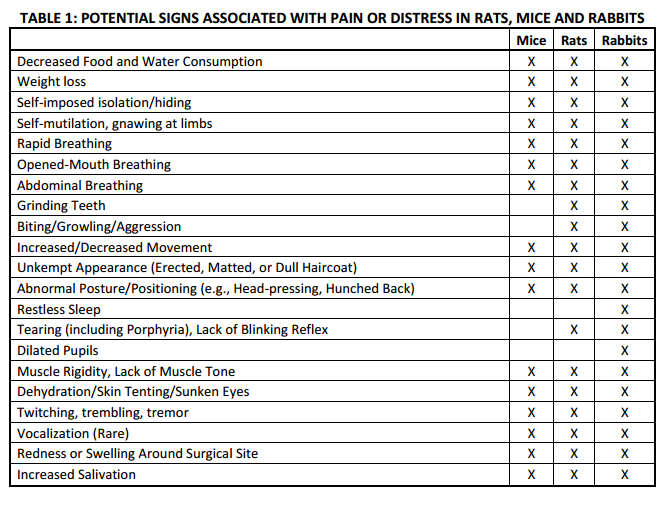
* + - Normal respiration
    - Increased respiration
    - Abdominal breathing
    - Decreased respiration
    - Marked abdominal breathing and cyanosis

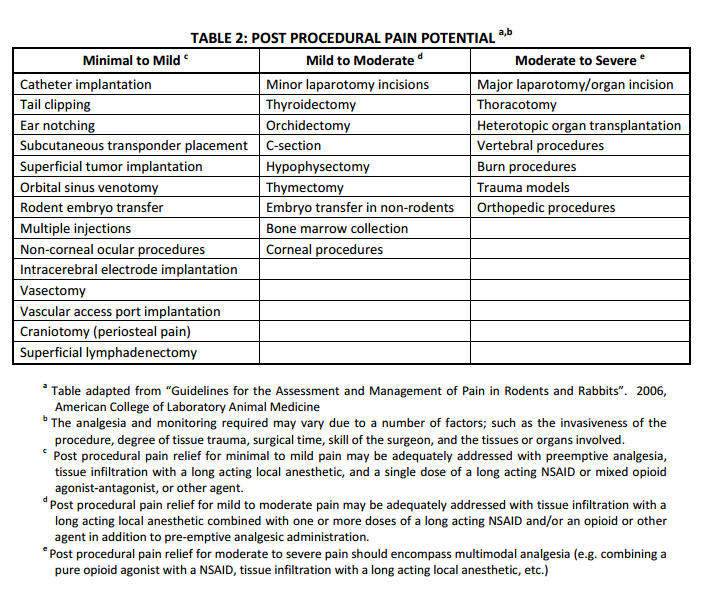
Provoked Behavior:

* + - Normal
    - Minor depression or exaggerated response
    - Moderate change in expected behavior
    - Very weak
    - Precomatose

Resources:

1. <http://www.ccac.ca/Documents/Education/Modules/Vivaria/Endpoints/Companion-notes.pdf>
2. Lloyd and Wolfensohn (1998) Humane Endpoints in Animal Experiments for Biomedical Research. In: Humane Endpoints in Animal Experiments for Biomedical Research, Proceedings of the International Conference, 22-25 November 1998, Zeist, The Netherlands. (Hendricksen C.F.M. and Morton D.S. eds). London UK: Royal Society of Medicine Press, pp.48-53.
3. Guidelines for Pain and Distress in Laboratory Animals: Responsibilities, Recognition and Alleviation. From the NIH ARAC: [http://oacu.od.nih.gov/ARAC/documents/Pain\_and\_Distress.pd](http://oacu.od.nih.gov/ARAC/documents/Pain_and_Distress.pdf)





Protocol: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PI: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Date** | **ID** | **Appearance** | **Natural Behavior** | **Hydration** | **Clinical Signs** | **Provoked Behavior** | **Initials** |
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Contact: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_