

Body Conditioning Scoring of Rats
IACUC Standard Procedure
Effective Date: February 2022

Description of procedure:

Scoring the body condition of rodents is a non-invasive method for assessing health/well-being and establishing endpoints for adults where body weight is not a viable monitoring tool, such as with tumor models, ascites production and pregnancy, or young growing animals. Body condition scores (BCS) range from 1 (emaciation) to 5 (obesity). An anticipated BCS of 2 (underconditioned) or lower requires justification in the protocol. Scores are determined by frequent visual and hands-on examination of each animal. For the hands-on evaluation, allow the rat to rest on the cage's wire top. Assess the vertebrae by palpation of the lumbar spine and the pelvic bones by palpation of the hips. Match the findings to the descriptions and diagrams provided to determine a score.

Reference used:

Hickman, D.L., M. Swan. 2010. [Use of a body condition score technique to assess health status in a rat model of polycystic kidney disease](#). J Am Assoc Lab Animal Science. 49(2):155-9.



- BC 1**
Rat is emaciated
- Segmentation of vertebral column prominent if not visible.
 - Little or no flesh cover over dorsal pelvis. Pins prominent if not visible.
 - Segmentation of caudal vertebrae prominent.



- BC 2**
Rat is under conditioned
- Segmentation of vertebral column prominent.
 - Thin flesh cover over dorsal pelvis, little subcutaneous fat. Pins easily palpable.
 - Thin flesh cover over caudal vertebrae, segmentation palpable with slight pressure.



- BC 3**
Rat is well-conditioned
- Segmentation of vertebral column easily palpable.
 - Moderate subcutaneous fat store over pelvis. Pins easily palpable with slight pressure.
 - Moderate fat store around tail base, caudal vertebrae may be palpable but not segmented.



- BC 4**
Rat is overconditioned
- Segmentation of vertebral column palpable with slight pressure.
 - Thick subcutaneous fat store over dorsal pelvis. Pins of pelvis palpable with firm pressure.
 - Thick fat store over tail base, caudal vertebrae not palpable.



- BC 5**
Rat is obese
- Segmentation of vertebral column palpable with firm pressure; may be a continuous column.
 - Thick subcutaneous fat store over dorsal pelvis. Pins of pelvis not palpable with firm pressure.
 - Thick fat store over tail base, caudal vertebrae not palpable.