

ANIMAL CARE AND WELFARE

This document is intended to provide background information on the current state of animal welfare science and its application at the Oregon Zoo:

1. What is animal welfare, and how has our understanding of it changed?
2. How does the Oregon Zoo monitor the welfare of its animals?

What is animal welfare, and how has our understanding of it changed?

Per the Association of Zoos and Aquariums (AZA), animal welfare refers to an animal's collective physical, mental, and emotional states over a period of time, and is measured on a continuum from good to poor:

An animal typically experiences good welfare when healthy, comfortable, well-nourished, safe, able to develop and express species-typical relationships, behaviors, and cognitive abilities, and is not suffering from unpleasant states such as pain, fear, or distress. Because physical, mental, and emotional states may be dependent on one another and can vary from day to day, it is important to consider these states in combination with one another over time to provide an assessment of an animal's overall welfare status.

The past few decades have seen a shift in societal views of animal welfare. Traditionally, zoo animal welfare assessments focused on appropriate husbandry practices and requirements associated with Accreditation (also regarded as welfare 'input' measures, or resource based assessments of welfare). In the past several years however, zoos have moved toward quantifying both 'input' measures (factors that contribute to an animal's welfare like housing, husbandry, early rearing experience, diet) as well as 'output' measures (behavioral, physical, and physiological objective and science based measures of an individual animal's well-being). For example, we use Quality of Life assessments that include appropriate management practices for a species, as well as consider the genetic makeup, life experiences, and temperament of individual animals.

How does the Oregon Zoo monitor the welfare of its animals?

The Oregon Zoo takes a holistic view of animal welfare, which includes mental, emotional, and social health. Staff focuses on three categories of welfare outputs/assessments: behavioral, physiological, and physical.

Behavior. Self-maintenance, curiosity, play, and high behavioral diversity are usually considered as positive signs, while some stereotypic behaviors, excessive or self-directed aggression, and self-injury are generally considered negative indicators. However, behavioral welfare indicators are also species specific and need to be identified gradually over time for each species as well as each individual animal. Behaviors are measured and tracked using ethograms (catalogs of specific behaviors), check sheets, apps, iPads, cameras, and video recordings.

Physiology. Hormone levels, particularly those associated with stress and reproduction, can help indicate animal wellbeing. Glucocorticoids, or stress hormones, can be tracked over time to help determine an animal's responses to its surroundings and activities. While many of the animals at the zoo have been trained to give blood voluntarily, the endocrine laboratory is also equipped to test hormone levels in feces, urine, and saliva.

Physical Appearance and Health. Caretakers regularly monitor and track an animal's weight, body condition, and fur, feather, and skin condition for signs of disease or stress.

However, while an assessment from any of these categories can give a caretaker an indication of an animal's health, it may not provide an accurate picture of the well-being of the animal. For example, while elevated levels of glucocorticoids may indicate stress, this can also be associated with positive challenges such as animal introductions and mating. The stress response itself is an adaptive and normal biological function that helps individuals (animals and humans alike) deal with sudden changes in the environment; however when stress becomes distress (excessive negative stress) or chronic (long-term sustained stress and distress) health and wellbeing are negatively affected. Also, individuals even of the same species may deal with stress differently depending on their respective previous experiences and temperament. Therefore supplementing behavioral, physiological, and/or physical assessments with knowledge of the individual animal's personality and life history is important.

In addition to monitoring of these three aspects of animal health and wellbeing as needed, the Oregon Zoo has established an internal Animal Welfare Committee and Animal Welfare Concern Review Process. The committee is charged with promoting the optimal care and welfare of Oregon Zoo animals, providing a forum for questions and concerns, addressing animal welfare concerns, and serving in an advisory capacity to promote staff awareness about animal welfare issues.