

Assessing dehydration

Fluid deficit in the extravascular space (interstitial and intracellular) causes dehydration, causing: Tenting of the skin, dry mucous membranes, sunken eyes [and accompanying protrusion of the third eyelids in the cats], and dullness to the cornea.

4-5% dehydration

- Semi-dry oral mucous membranes
- Normal skin turgor
- Eyes maintaining normal moisture

6-7% dehydration

- Dry oral mucous membranes
- Mild loss of skin turgor
- Eyes still moist

8-10% dehydration

- Dry mucous membranes
- Considerable loss of skin turgor
- Eyes retracted [third eyelids protruded]
- Weak rapid pulses

12% dehydration

- Very dry oral mucous membranes
- Complete loss of skin turgor
- Severe retraction of the eyes [third eyelids protruded]
- Dull eyes
- Possible alteration of consciousness
- Thready weak pulses

EXCEPTIONS:

1. Chronically emaciated animal may have metabolized the fat from around its eyes and the collagen in the skin. These animals have poor skin turgor and sunken eyes but may be normally hydrated. In this situation, assessment of mucous membrane moisture, PCV, and total proteins is important.
2. The animal with rapid fluid loss (third body fluid space) will require a greater volume of fluid than would be estimated from physical signs.

[Above adapted from p.1245, Merck Veterinary Manual 8th edition.]

3. Also, excess subcutaneous fat will keep the skin elastic even in a dehydrated cat, making the skin less reliable as a hydration indicator in obese cats.