



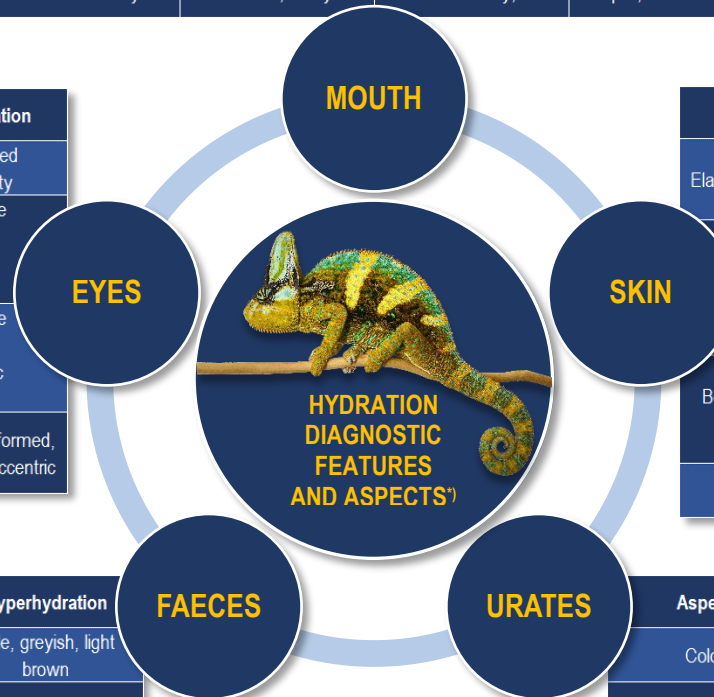
DEHYDRATION AND OVERHYDRATION IN CHAMELEONS

GOLDEN RULE

Ensure Good Hydration for the chameleons; observe, measure, analyze and adjust: in case of dehydration, slowly add water in the regime and in case of overhydration, provide less, in utilizing the most natural ways of hydration possible.

Aspect	Dehydration	Good Hydration	Hyperhydration
Mucous membranes	Dry	Naturally moist	Wet, with foam
Saliva viscosity	Viscous, sticky	Somewhat sticky, moist	Liquid, less viscous

Aspect	Dehydration	Good Hydration	Hyperhydration
Eye activity	Slow, limited moveability	Rapid, active full moveability	Slow, limited moveability
Eye position	Sunken, deep in the orbit	Naturally protruding from the orbit	Bulged out of the orbit, especially when sleeping head down
Eye lids	With deep fissure ring around turrets, thin circular wrinkles	Naturally stretched on the eyes with no or slight wrinkles in the direction of sight	Bulged out of the orbit, with thick circular edematic wrinkles
Lid opening	Human-eye-shape, subelliptic and pointed in corners	Circular, central position above pupil	Subcircular, deformed, pear-shaped, eccentric



Aspect	Dehydration	Good Hydration	Hyperhydration
Elasticity (skinfold test)	Not elastic (skin fold stays)	Elastic (skinfold disappears)	Elastic, swollen, edematic (skinfold disappears)
Texture	Dry, Pergamene-like, wrinkly	Naturally stretched, no wrinkles	Swollen, edematic, bulging
Colors	Unusual, often darker or more vivid, shift to yellow tones	Usual, natural, changing normally	Pale, light, unnatural
Bones and muscles contours	Clearly unnaturally visible especially on vertebrae, pelvis, ribs, extremities	Naturally hidden, covered, visible only when in action	Hidden, unidentifiable, covered
Gular region	Sunken, bony	Natural, elastic	Swollen, often with gular oedema

Aspect	Dehydration	Good Hydration	Hyperhydration
Color	Black	Black, dark brown	Pale, greyish, light brown
Water content	Dry	Dry to moist	Wet, watery
Sluggish component	Absent	Absent or present in not fogged animals	Heavy, covering the faeces
Smell	Weak, sometimes rotten-like	Weak, natural	Heavy, often rotten-like or reminding on chemicals or medicaments

*) In their typical expression - subject of variability.

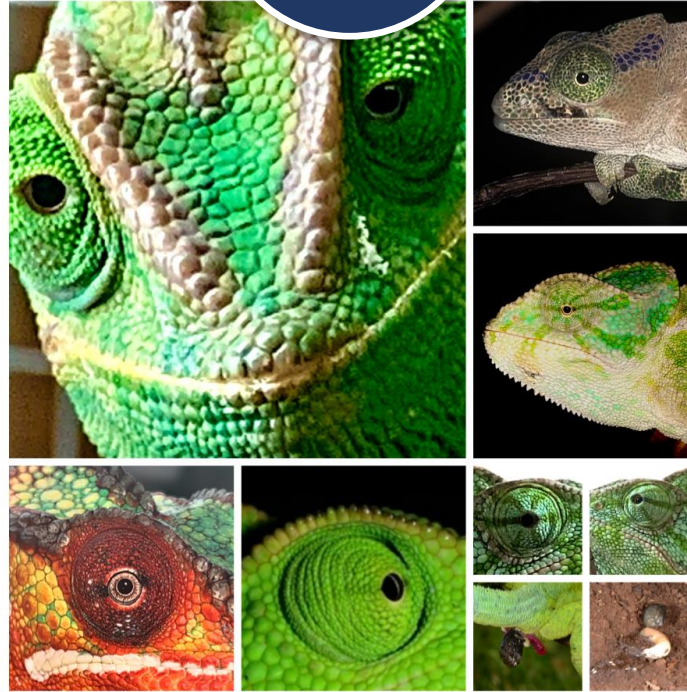
Aspect	Dehydration	Good Hydration	Hyperhydration
Color	More than 50% orange	15-50% orange	Less than 15% orange, often completely white
Consistency	Dry, hard, compressed	Dry, hard, cylindrical	Moist to wet, toothpaste-like, amorphous
Water content	Almost none, very dry	Dry, chalk-like	Moist to wet, watery, sluggish

EXAMPLES OF CORRECT AND INCORRECT STATE OF HYDRATION IN CHAMELEONS

DEHYDRATION



GOOD HYDRATION



HYPER-HYDRATION



The proper hydration of chameleons is key to their survival in the wild and to their welfare in captivity. Both dehydration as well as hyperhydration are dangerous states, as their consequence is a breakdown of the homeostasis due to wrong concentrations of the important body liquids (from blood, lymph to digestion enzymes, tissue liquids and cytoplasm) and organ failures. To define the proper hydration is important, the more important, especially for captive management, is to understand properly the signs of dehydration and hyperhydration.

