



Fall Behavior

Changes in Behavior

- Fall has been a time of increased activity
 - Browsing – maybe eating different plants
 - Storing up food for the winter
 - Pacing
 - Digging
 - Wanting to come inside
- As Fall proceeds, your tortoise gets ready for brumation:
 - Basks more because the weather is cooler
 - Comes out less and less
 - Eats less

Why do tortoises brumate?

- It's their adaptation to the cold
- They need a body temperature of 85 degrees to fulfill tortoise functions like looking for food, using their food, or mating
- When it's cold, they need another strategy – brumation
- Sulcata and Leopard tortoises, from warmer climates, do not brumate

What is brumation?

- Definition: Brumation is winter dormancy in cold-blooded animals with backbones like reptiles and amphibians
- In late September and October, tortoises undergo physiological changes that are independent of body temperature
- Greatly reduced metabolism-Its heart rate and breathing slow dramatically
- The tortoise is programmed to sleep and to not eat

Preparing for brumation

Over the winter, your tortoise will lose water from breathing and calories from just being. It's important that its body be well stocked for this.

- **Feeding** – Let your tortoise decide how much Food may take as long as one month to digest—don't push food near brumation

Just as in early spring, allow your tortoise to browse

- **Soaking**

Place in a shallow pan of lukewarm water several times before brumation

Soaking

- Shallow pan of lukewarm water
- Tortoise tell you when it is done!



Preparing for brumation

- When?
- Where?
- How long?



When will my tortoise brumate?

Each tortoise has its own brumation schedule.

- Your tortoise will decide when its time
- It will come out less and less often
- It will eat less and less



Where should my tortoise brumate?

- In its outdoor, well-insulated burrow
- Temperature should be between 35 and 50 degrees F for optimum brumation
- A snug, well-insulated burrow allows the tortoise to:
 - Retain most of its moisture
 - Stay the right temperature so it does not use up its precious resources

What if my tortoise brumates in the closet or under the bed?

- It loses moisture and precious calories all winter due to the too-warm temperature
- A large tortoise can afford the losses more than a small one, that could easily die
- If a tortoise must brumate inside, put it in a box in the garage and monitor it occasionally
- (Details on the website)

How long will my tortoise brumate?

Only your tortoise knows it will go into and come out of brumation.

- Most tortoises emerge between early March and late April, and even into May.
- Note the date for future reference. Your tortoise will emerge at about the same date each year.

Winter Care - Wind

- Pick up litter near burrow opening
- Preserve warmth by reducing air circulation:
 - If we have a cold, windy January, place a ball of newspaper loosely in the burrow entrance.
 - Remove when the weather warms in early February



Winter Precautions - Rain

- Rain - Days of gentle rain may produce flooding
 - Check inside of burrow for flooding
 - Use a mirror during the day
 - Use a flashlight at night
 - If a tortoise is inside a flooded burrow, dig it up!

What if the burrow collapses?

- If the burrow collapses, dig it up!
- Put the tortoise in a box in the garage.
- Leave the burrow open to dry (takes a long time to dry)
- When dry, put the burrow back together—or build a new one
- Gently slide the tortoise into the burrow when it is dry



Rainy Winter Care

- Cover the burrow in a big rainstorm - remove the cover afterward



Medical considerations

- If a tortoise shows signs of URDS (drippy noise) in fall:
 - It may be too late in the season to treat it
 - Symptoms may disappear during brumation
- If your tortoise is coming out continually during winter, it is probably sick and needs a trip to the vet
- A very sick tortoise may need to be kept awake

Should I feed my tortoise if it comes out in January or February?

- No. The tortoise is still very cold and can't metabolize the food
- It may come out when it rains, too, even if it's quite cold. That's normal. Tortoises survive by getting rain when they can.
- Let the tortoise go back in the burrow on its own

Emergence



This Q-Tip barrier is useful in spring to know when your tortoise has emerged

Fall Farewell

- Soak tortoise
- Let your tortoise decide how much to eat.
May eat some or not much at all
- Mark day last seen



Spring Welcome

- Emergence: Mid March to April or even May
- Tortoise comes out to bask
- Soak tortoise in water after a few days
- May come out and stay out on patio or under a bush. Outside temp is warmer than in burrow
- Offer MegaDiet when browsing begins
- And enjoy!

