

Cold-Stun Transport Protocol

The majority of our cold-stun activity in South Carolina comes from assisting North Carolina. South Carolina has had very few cold-stun strandings to date. Cold-stuns will start occurring when the water temperature drops below 51.8°F (11°C). For the turtle, body temperature at or below 55°F is the cutoff for normal systematic function. The core body temperature of the turtle should never increase or decrease by more than 3°F, and it is vital to never drop the temperature of a cold-stunned animal. The standard re-heat rate at the rehab facility is 5°F/day.

- If you are transporting live sea turtles, you should be able to measure the turtle’s core body temperature. You can take the temperature of the turtle using a temperature gun. To use the temperature gun, dry off the surface of the neck and place the gun on the skin in the neck region. **55°F is the cutoff temperature for normal systematic function in reptiles.**
- Keep the vehicle at ambient temperature. If you are picking up a turtle on the beach, do not turn on the heat in the vehicle. If you are picking up a cold-stunned turtle from another vehicle or rehabilitation facility, try to keep the temperature of the vehicle as close as possible (within 3° F) to the turtle’s current core body temperature. Make sure to constantly monitor the temperature throughout the duration of the transport. **Do not increase/decrease the temperature by more than 3°F. Never drop the temperature of a cold-stunned animal. The standard re-heat rate at the rehab facility is 5°F/day.**
- To avoid drying out in conditions <75°F, apply a thin layer of non-petroleum jelly to the surface of the carapace and all soft tissue except for eyes and open wounds on juvenile turtles (less than 30cm CCL). Place dry towels on all turtles if <75°F. **Do not use water or wet towels in conditions <75°F, in air conditioning, or if the turtle is exposed to a draft or wind.** Be sure to keep open wounds moist with clean freshwater during the duration of transport.
- If transport travel time is more than 45 minutes, apply ophthalmic eye gel to the lower edge of the closed eye. The turtle will blink the gel onto the surface of the eye. Do not put anything into the eye unless it is specifically labeled as ophthalmic.
- When transporting a turtle in/out of the vehicle, be aware of the air temperature. All transfers of a turtle from one vehicle to another or from a vehicle to a rehab facility should be done as quickly as possible. Plan out the turtle transfer before it occurs. Back up one vehicle to the other vehicle or into the rehab facility to avoid any temperature change. At the South Carolina Aquarium, the vehicle should be backed into the facility before the turtle is removed. **Do not allow the turtle’s temperature to rapidly fluctuate by more than 3°F due to outdoor air contact.**
- Make sure that all transport containers are padded, clear of any materials that may be accidentally ingested and secure before transportation begins. **Do not allow the containers to slide around or tip over during travel.**

Ambient Air Temperature Around Turtle	Duration of Transport (hours)	Barnacles or Other Epibiota Present on Carapace	Turtle Class Size	Recommended Treatment
75°F (or warmer)	Any	--	Any size	Wet towel or water mist
74°F (or cooler)	>2 hours	--	Any size	Dry towel
74°F (or cooler)	>2 hours	Carapace clear	Juvenile	Non-petroleum jelly
74°F (or cooler)	>2 hours	Carapace clear	Adult	Dry towel
74°F (or cooler)	>2 hours	Heavy epibiota	Any size	Dry towel