

# FIRST AID IN ARACHNIDS

A SUMMARY

v1.2

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# ACCIDENTS

## MOLTING ISSUES

<p>Keep track of the spider's behavior. Predict an upcoming molt.          Never remove the spider from her original spot during ecdysis, unless her life is in danger.          Never spray water directly on the spider, esp. not during ecdysis.</p>		
<h3>OLD EXOSKELETON GOT STUCK ON NEW SKIN</h3>		
<p>PREVENTION</p>	<ul style="list-style-type: none"> <li>• Provide optimal environmental conditions.</li> <li>• Provide enough fresh water.</li> <li>• Remove all living prey before ecdysis starts.</li> <li>• Don't disturb the spider.</li> </ul>	<p>CURE</p> <ul style="list-style-type: none"> <li>• Wait until the spider got on its feed to help.</li> <li>• Remove parts of old carapace with tweezers.</li> <li>• Difficult parts: Perform anaesthesia.</li> </ul>
<h3>DEFORMED LEGS</h3>		
<p>PREVENTION</p>	<ul style="list-style-type: none"> <li>• Provide optimal environmental conditions.</li> <li>• Provide enough fresh water.</li> <li>• Remove all living prey before ecdysis starts.</li> <li>• Don't disturb the spider.</li> </ul>	<p>CURE</p> <ul style="list-style-type: none"> <li>• Perform autotomy 2 weeks post-ecdysis.</li> </ul>
<h3>DISEASES OF THE CUTICULA</h3>		
<p>PREVENTION</p>	<ul style="list-style-type: none"> <li>• Provide optimal environmental conditions.</li> <li>• Provide enough fresh water.</li> <li>• Remove all living prey before ecdysis starts.</li> <li>• Don't disturb the spider.</li> </ul>	<p>CURE</p> <ul style="list-style-type: none"> <li>• Provide optimal environmental conditions.</li> </ul>
<h3>LOSS OF FANGS</h3>		
<p>PREVENTION</p>	<ul style="list-style-type: none"> <li>• Provide optimal environmental conditions.</li> <li>• Provide enough fresh water.</li> <li>• Remove all living prey before ecdysis starts.</li> <li>• Don't disturb the spider.</li> </ul>	<p>CURE</p> <ul style="list-style-type: none"> <li>• Step 1: Perform anaesthesia.</li> <li>• Step 2: Cut the fangs from old exoskeleton.</li> <li>• Step 3: Glue old fang in place.  <i>Do nothing if the spider eats and lives well.            Contact a veterinarian, specializing in exotics.</i></li> </ul>
<h3>WET MOLT</h3>		
<p>PREVENTION</p>	<ul style="list-style-type: none"> <li>• Provide optimal environmental conditions.</li> <li>• Provide enough fresh water.</li> <li>• Remove all living prey before ecdysis starts.</li> <li>• Don't disturb the spider.</li> </ul>	<p>CURE</p> <ul style="list-style-type: none"> <li>• Death is not inevitable.</li> </ul>



## OPEN WOUNDS

Mainly caused by use of bad terraria, sharp objects, collapsing structures and impulsive fear responses.

### GENERAL TREATMENT

PREVENTION	<ul style="list-style-type: none"> <li>• Use quality terraria.</li> <li>• Avoid jagged objects (with sharp ends).</li> <li>• Reduce heights for terrestrials &amp; burrowers.</li> <li>• Respect the spider's lifestyle.</li> <li>• Don't handle your spiders.</li> </ul>	CURE	<ul style="list-style-type: none"> <li>• Use flour, superglue or bee's wax. <i>Cigarette paper is a good last choice.</i></li> </ul>
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## DEHYDRATION

Often caused by irresponsible keeping. In lesser extent due to anatomical dysfunction.

- Intermediate dehydration often shows a wrinkled abdomen and growing inactivity.
- Severe dehydration often results in a death curl.

### GENERAL TREATMENT

PREVENTION	<ul style="list-style-type: none"> <li>• Provide optimal environmental conditions.</li> <li>• Provide enough fresh water.</li> <li>• Learn to understand a spider's behavior.</li> <li>• Don't disturb the spider.</li> </ul>	CURE	<ul style="list-style-type: none"> <li>• Put the spider's mouth parts in a water bowl. <i>Shallow water bowl.</i> <i>Book lungs need to be free.</i></li> <li>• Don't perform ICU in any case of dehydration.</li> </ul>
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\* ICU: Intensive Care Unit. More info on our website.

## AUTOTOMY

Autotomy is no amputation.

- Firmly grab the femur of the targeted leg with tweezers.
- The spider will release her leg. Leg muscles will close the wound.
- The leg will regenerate with the first molt, but will need a few molts to reach ideal condition.

## ANAESTHESIA

Make sure the spider makes no contact with the bubbling baking soda.

- Step 1: Pour baking soda at the bottom of the transparent tube (smaller spp. 1, bigger spp. 2 flat teaspoons).
- Step 2: Block the tube with a sponge in the middle.
- Step 3: Place the spider on top of the sponge.
- Step 4: Firmly close the airtight and screwable lid.
- Step 5: Prick through the lid/sponge and add around 10 waterdrops to the baking soda.
- Step 6: Close the hole of the syringe in the lid with strong tape.
- Step 7: Wait 15-20 minutes. Bigger specimens need more time.



# DISEASES & OTHER HEALTH ISSUES

## DEFECATION PROBLEMS

Mainly Asian arboreals (including <i>Poecilotheria</i> species) were reported victim.	
<b>GENERAL TREATMENT</b>	
<b>PREVENTION</b>	<ul style="list-style-type: none"> <li>• Avoid obesity.</li> <li>• Alternate your prey.</li> </ul>
<b>CURE</b>	<ul style="list-style-type: none"> <li>• Unknown.</li> </ul> <p><i>Death is inevitable.</i>  <i>Contact a veterinarian, specializing in exotics.</i></p>

## DYSKINETIC SYNDROME

A syndrome is not a disease. The exact cause of the symptoms remains to be investigated.	
<ul style="list-style-type: none"> <li>• Symptoms vary: Trembling, shaking, uncontrolled spastic movements, weird overall behavior.</li> </ul>	
<b>GENERAL TREATMENT</b>	
<b>PREVENTION</b>	<ul style="list-style-type: none"> <li>• Avoid chemicals near the terraria. <i>Clean with natural products.</i></li> <li>• Avoid mycotoxines and smoke.</li> <li>• Create bioactive terraria.</li> <li>• Provide a clean environment.</li> <li>• Provide optimal environmental conditions.</li> <li>• Respect the spider's lifestyle.</li> </ul>
<b>CURE</b>	<ul style="list-style-type: none"> <li>• Perform first option of cure dehydration.</li> <li>• Unknown.</li> </ul> <p><i>Death is inevitable.</i>  <i>Contact a veterinarian, specializing in exotics.</i></p> <ul style="list-style-type: none"> <li>• Possible treatments on our website. <i>Not confirmed by science.</i></li> </ul>

## EGG BINDING

The issue of the eggs not passing the ovulatory system at a normal rate. Common in reptiles and birds.	
Probably caused by poor condition of the mother, sudden disturbances during oviposition, lack of a good hide, anatomical defects, malformed eggs. Birds with egg binding are given higher temperatures and humidity.	
<b>GENERAL TREATMENT</b>	
<b>PREVENTION</b>	<ul style="list-style-type: none"> <li>• Care as good as possible. <i>Decent hide.</i> <i>Optimal environmental conditions.</i> <i>Clean terrarium.</i> <i>Alternate prey.</i></li> <li>• Respect the spider's lifestyle.</li> <li>• Don't disturb the spider, esp. when mated.</li> </ul>
<b>CURE</b>	<ul style="list-style-type: none"> <li>• Unknown.</li> </ul> <p><i>Death is inevitable.</i>  <i>Contact a veterinarian, specializing in exotics.</i></p> <ul style="list-style-type: none"> <li>• Raise temperature and humidity. <i>Not confirmed by science.</i></li> </ul>



# INFECTIOUS DISEASES & PARASITES

## FUNGAL INFECTION & PARASITIC FUNGUS

<p>Entomopathogenic fungi, such as Ophiocordycipitaceae fungi, exploit and parasitize insects and arachnids.</p> <ul style="list-style-type: none"> <li>• Symptoms: Short period of anorexia.</li> </ul> <p>Saprophytic fungi grow on the spider's cuticula.</p> <ul style="list-style-type: none"> <li>• Symptoms are visible. Treat before it got through the cuticula.</li> </ul>			
<p><b>ENTOMOPATOGENIC FUNGUS</b></p>			
<p>PREVENTION</p>	<ul style="list-style-type: none"> <li>• Buy prey from reputable dealers.</li> <li>• Don't swap lids from your terraria.</li> </ul>	<p>CURE</p>	<ul style="list-style-type: none"> <li>• Unknown.</li> </ul> <p><i>Death is inevitable.</i></p> <p><i>Contact a veterinarian, specializing in exotics.</i></p>
<p><b>SAPROPHYTIC FUNGUS</b></p>			
<p>PREVENTION</p>	<ul style="list-style-type: none"> <li>• Provide optimal environmental conditions.</li> </ul> <p><i>Avoid puddles.</i></p> <p><i>Good ventilation.</i></p> <p><i>Clean terrarium. Remove leftovers.</i></p> <p><i>Keep water fresh.</i></p> <ul style="list-style-type: none"> <li>• Don't swap lids from your terraria.</li> </ul>	<p>CURE</p>	<ul style="list-style-type: none"> <li>• Treat fungus daily with povidone-iodine.</li> </ul> <p><i>Iso-betadine.</i></p> <ul style="list-style-type: none"> <li>• Incubate fertilized eggs.</li> </ul> <p><i>Not always. Read our caresheets.</i></p> <p><i>Remove fungus-infected eggs.</i></p>

\* Cuticula: The hardened surface layer of the exoskeleton in arthropods.

## MITES

<p>Mites create hotbeds in warm and humid area. Spiders in mite-infested terraria may show weakness.</p> <ul style="list-style-type: none"> <li>• Check for parasitic mites on the legs.</li> <li>• Check for saprophytic and phoretic mites around the book lungs and the mouth parts.</li> </ul>			
<p><b>PARASITIC MITES</b></p>			
<p>PREVENTION</p>	<ul style="list-style-type: none"> <li>• Create bioactive terraria.</li> <li>• Care as good as possible.</li> </ul> <p><i>Optimal environmental conditions.</i></p> <p><i>Clean terrarium.</i></p> <p><i>Remove leftovers and carcasses.</i></p> <ul style="list-style-type: none"> <li>• Buy prey from reputable dealers.</li> </ul>	<p>CURE</p>	<ul style="list-style-type: none"> <li>• Parasitic mites will leave eventually.</li> <li>• Use predatory mites.</li> </ul> <p><i>Don't add cleaning crew in the next 3 months.</i></p> <ul style="list-style-type: none"> <li>• Trap mites.</li> </ul> <p><i>More info on the website.</i></p>
<p><b>SAPROPHYTIC &amp; PHORETIC MITES</b></p>			
<p>PREVENTION</p>	<ul style="list-style-type: none"> <li>• Create bioactive terraria.</li> <li>• Care as good as possible.</li> </ul> <p><i>Optimal environmental conditions.</i></p> <p><i>Clean terrarium.</i></p> <p><i>Remove leftovers and carcasses.</i></p> <ul style="list-style-type: none"> <li>• Buy prey from reputable dealers.</li> </ul>	<p>CURE</p>	<ul style="list-style-type: none"> <li>• Use predatory mites.</li> </ul> <p><i>Don't add cleaning crew in the next 3 months.</i></p> <ul style="list-style-type: none"> <li>• Possible treatments on our website.</li> </ul> <p><i>Not as effective as predatory mites.</i></p> <ul style="list-style-type: none"> <li>• Trap mites.</li> </ul> <p><i>More info on the website.</i></p>



# BACTERIAL INFECTION

Scientific research has proven *Bacillus* species are effective pathogens in spiders.

## GENERAL TREATMENT

PREVENTION	<ul style="list-style-type: none"> <li>Care as good as possible.</li> <li><i>Decent hide.</i></li> <li><i>Optimal environmental conditions.</i></li> <li><i>Clean terrarium.</i></li> <li><i>Alternate prey.</i></li> </ul>	CURE	<ul style="list-style-type: none"> <li>Unknown.</li> <li><i>Contact a veterinarian, specializing in exotics.</i></li> </ul>
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# FLIES

Phorid flies are similar to fruit flies, except for their black eyes. Fruit flies are harmless.

Infection of Acrocerid flies' larvae mainly occurs in wild-caught specimens.

## PHORID FLIES

PREVENTION	<ul style="list-style-type: none"> <li>Care as good as possible.</li> <li><i>Clean terraria.</i></li> <li><i>Remove leftovers and carcasses.</i></li> <li>Add fly traps and/or carnivorous plants.</li> <li>Create bioactive terraria.</li> </ul>	CURE	<ul style="list-style-type: none"> <li>Remove infested area.</li> <li><i>Rehouse the spider if necessary.</i></li> <li>Add fly traps and/or carnivorous plants.</li> <li>Keep the terraria clean.</li> <li>Make ventilation holes Phorid-proof.</li> </ul>
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## ACROCERID FLIES

PREVENTION	<ul style="list-style-type: none"> <li>Prevent them from entering your terraria.</li> <li><i>Acrocerid flies are quite big.</i></li> </ul>	CURE	<ul style="list-style-type: none"> <li>Unknown.</li> <li><i>Death is inevitable.</i></li> <li><i>Contact a veterinarian, specializing in exotics.</i></li> <li>Destroy the pupa before the fly emerges.</li> </ul>
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## FLIES' LARVAE (MAGGOTS)

PREVENTION	<ul style="list-style-type: none"> <li>Care as good as possible.</li> <li><i>Clean your terraria frequently.</i></li> <li><i>Provide healthy conditions for your prey.</i></li> <li>Buy prey from reputable dealers.</li> </ul>	CURE	<ul style="list-style-type: none"> <li>Remove infested area.</li> <li><i>Rehouse the spider if necessary.</i></li> <li>Add fly traps and/or carnivorous plants.</li> <li>Keep the terraria clean.</li> </ul>
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# NEMATODES & NEMATOMORPHAE

Infected species will initially show symptoms of anorexia and lethargy.

- Panagrolaimid nematodes restrict themselves to up and around the mouth parts.
- Symptoms Panagrolaimidae: Early - Milky white spots chelicerae. Later - Severe thick infestation.
- Diagnose Panagrolaimidae: Magnifying glass or anaesthesia > flush mouth parts > add saline > microscope.
- Mermithid nematodes and nematomorphae are mainly found in wild-caught specimens.
- Symptoms Mermithidae: Enlarged and/or deformed opisthosoma/pedipalps, short legs, always near water.

## PANAGROLAIMID NEMATODES

PREVENTION	<ul style="list-style-type: none"> <li>• Care as good as possible. <i>Clean terraria.</i> <i>Remove leftovers and carcasses.</i></li> <li>• Add fly traps and/or carnivorous plants.</li> <li>• Don't replace surviving prey to other cages.</li> <li>• Buy prey from reputable dealers.</li> <li>• Don't buy extremely low priced adult species.</li> </ul>	CURE	<ul style="list-style-type: none"> <li>• Possible treatments on our website. <i>Not confirmed by science.</i></li> <li>• Make ventilation holes Phorid-proof.</li> <li>• Secure your own health at all time.</li> </ul>
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## MERMITHID NEMATODES

PREVENTION	<ul style="list-style-type: none"> <li>• Buy prey from reputable dealers. <i>Don't feed wild-caught prey.</i></li> <li>• Don't buy extremely low priced adult species.</li> </ul>	CURE	<ul style="list-style-type: none"> <li>• Unknown at hobby level. <i>Death is inevitable.</i> <i>Contact a veterinarian, specializing in exotics.</i></li> </ul>
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## NEMATOMORPHAE

PREVENTION	<ul style="list-style-type: none"> <li>• Buy prey from reputable dealers. <i>Don't feed wild-caught prey.</i></li> <li>• Don't buy extremely low priced adult species.</li> </ul>	CURE	<ul style="list-style-type: none"> <li>• Unknown at hobby level. <i>Contact a veterinarian, specializing in exotics.</i></li> <li>• Treatment on our website.</li> </ul>
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