



Fritz recommends treatments listed first with the check as the most effective

## Parasitic Diseases

### Ich & Velvet

#### Common Symptoms

Freshwater Ich - *Ichthyophthirius multifiliis*  
Marine Ich - *Cryptocaryon irritans*

White spots on body, heavy breathing, flashing/scratching, clamped fins, lethargy

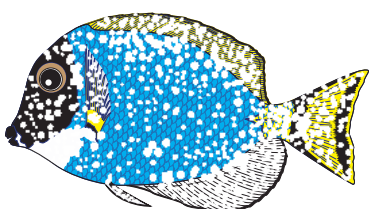
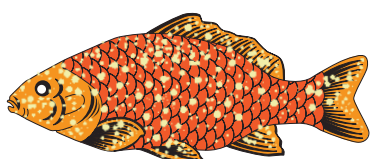
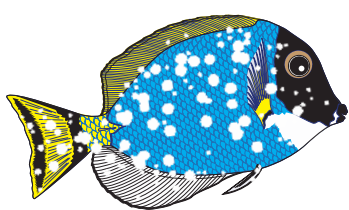
NOTE: Spots may not always appear on the body. Heavy infections may occur in the gills and show no evidence of disease on fins or scales.

Velvet - *Oodinium sp.*

Gold/yellow dust on body, heavy breathing, flashing/scratching, clamped fins, loss of color, lethargy

Marine Velvet - *Amyloodinium sp.*

White spots on body (smaller and more numerous than Ich), heavy breathing, flashing/scratching, clamped fins, lethargy



#### Fritz Preferred Treatments

- ✓ Fritz Coppersafe
- ✓ Fritz Fixlck
- Fritz MetroCleanse
- Fritz ParaCleanse
- Fritz Parashield

#### Best Practice:

A quarantine or hospital tank is always recommended for treatment. Follow any ectoparasite treatment with an antibiotic like **Maracyn**, **Maracyn Two**, and/or **Maracyn Oxy** to prevent secondary infection from open wounds.

### Flukes

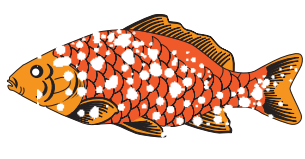
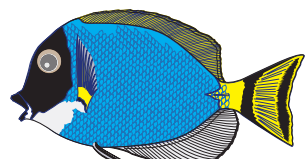
#### Common Symptoms

Gill Flukes - *Dactylogyrus sp.*  
Skin Flukes - *Gyrodactylus sp.*  
Rapid breathing, loss of appetite, discolored gills, and swollen gills, gasping at surface. Fine white or translucent spots or hairlike filaments on skin and fins.

NOTE: Parasites may not always appear on the body. Heavy infections may occur in the gills and show no evidence of disease on fins or scales.

#### Fritz Preferred Treatments

- ✓ Fritz ParaCleanse
- ✓ Fritz PraziCleanse
- Fritz Bactershield
- Fritz Parashield
- Fritz A+ Aquarium Salt



**Best Practice:**  
A quarantine or hospital tank is always recommended for treatment. Follow any ectoparasite treatment with an antibiotic like **Maracyn**, **Maracyn Two**, and/or **Maracyn Oxy** to prevent secondary infection from open wounds.

### Lice and Anchor Worm

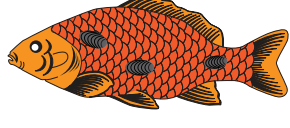
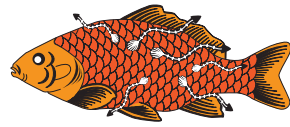
#### Common Symptoms

Fish Lice - *Argulus sp.*  
Anchor Worm - *Lernaea sp.*  
Visible parasites (green or brown dots) attached to the body or fins; lesions, rubbing, scratching, flashing, redness/irritation; lethargy, missing scales, fin erosion, excess mucous.

Manually remove these parasites before treatment, if possible.

#### Fritz Preferred Treatments

- ✓ Fritz Coppersafe
- ✓ Fritz ParaCleanse
- ✓ Fritz PraziCleanse



**Best Practice:**  
A quarantine or hospital tank is always recommended for treatment. Follow any ectoparasite treatment with an antibiotic like **Maracyn**, **Maracyn Two**, and/or **Maracyn Oxy** to prevent secondary infection from open wounds.

### Costia, Chilodinella, Trichodina

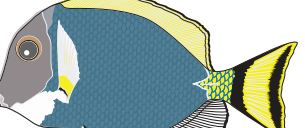
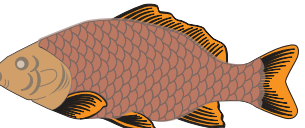
#### Common Symptoms

Costia - *Ichthyobodo necator*  
Rubbing, scratching, flashing, gasping, lethargy. A blue-grey film on the skin or gills may appear in severe or advanced infections.

Chilodinella sp / Trichodina sp.  
Rubbing, scratching, flashing, gasping, lethargy, loss of appetite, and excess slime coat/mucous production from irritation.

#### Fritz Preferred Treatments

- ✓ Fritz Coppersafe
- ✓ Fritz Fixlck
- Fritz A+ Aquarium Salt
- Fritz Parashield



**Best Practice:**  
A quarantine or hospital tank is always recommended for treatment. Follow any ectoparasite treatment with an antibiotic like **Maracyn**, **Maracyn Two**, and/or **Maracyn Oxy** to prevent secondary infection from open wounds.

### Hole-In-The-Head, HLLE

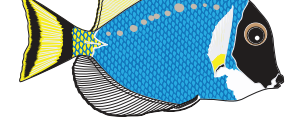
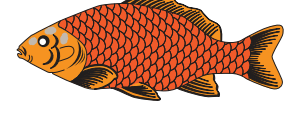
#### Common Symptoms

Hole-In-The-Head - *Hexamita sp.* (FW)  
HLLE - *Hexamita sp.* (SW)  
Fish will lose coloration, stop eating, display a sunken belly, white stringy feces, and increasing lethargy as infection progresses.

In advanced cases, bloat can occur and chronic nutrient deficiency can cause erosion and pitting in the head and along the lateral line.

#### Fritz Preferred Treatments

- ✓ Fritz MetroCleanse
- ✓ Fritz ParaCleanse
- Epsom Salt



**Best Practice:**  
Treat with medicated diet ASAP for best results.

### Epistylis

#### Common Symptoms

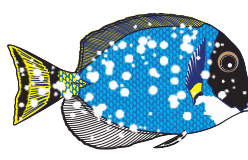
Epistylis - *Epistylis sp.*  
Branching, clustered white spots that extend away from the fishes body/scales into the water column.

Despite its similarities to Ich infections, Epistylis feeds off of bacteria rather than fish tissues.

#### Fritz Preferred Treatments

- ✓ Fritz Maracyn
- Fritz A+ Aquarium Salt
- ✓ Fritz Maracyn Two

**Best Practice:** A quarantine or hospital tank is always recommended for treatment. All antibiotic treatments can affect desirable bacteria and biofilters.



### Uronema

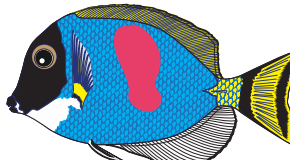
#### Common Symptoms

Uronema - *Uronema marinum*  
Large red lesions or ulcers. Common on chromis and damselfish, but can affect any fish species. Treatment should be targeted towards fish that have not developed symptoms. There is no time period for a Uronema infection.

#### Fritz Preferred Treatments

- ✓ Fritz Coppersafe
- Fritz MetroCleanse
- ✓ Fritz Fixlck

**Best Practice:** A quarantine or hospital tank is always recommended for treatment.



## Bacterial Diseases

### Popeye, Cloudy Eye

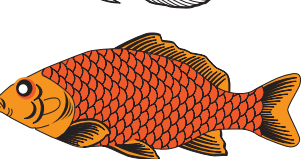
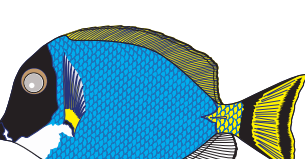
#### Common Symptoms

##### Various causes

Easily identified as one or both eyes will swell and bulge out away from the body. Affected eyes may also become cloudy. Severe cases can cause rupture of the eye. Secondary symptoms include hiding and lethargy, decreased appetite, body swelling, and clamped fins.

#### Fritz Preferred Treatments

- ✓ Fritz Maracyn
- ✓ Fritz Maracyn Two
- ✓ Fritz Maracyn Oxy
- Fritz Bactershield
- Fritz Parashield
- Fritz A+ Aquarium Salt



**Best Practice:**  
A quarantine or hospital tank is always recommended for treatment. All antibiotic treatments can affect desirable bacteria and biofilters.

### Dropsy, Bloat, Swim Bladder Disease

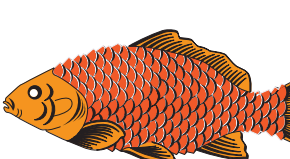
#### Common Symptoms

Dropsy - Various gram-negative bacteria  
Dropsy, also known as Bloat, refers more to a collection of symptoms, rather than a specific infection. This is due to a weakened immune system from stress and/or poor water quality.

Initial symptoms include loss of color/pale gills, feces pale and stringy, fins clamped against the body, ulcers, and loss of appetite.

In advanced cases, fluid retention causes swelling, resulting in bulging eyes and the scales to stand out and "pinecone." This stage of disease is hard to treat and often leads to fish loss.

Swim bladder disease  
Most easily identified as an inability to regulate buoyancy. Fish will have difficulty swimming upright, and may sink or float to the surface. Other symptoms include a change or loss of appetite, distended abdomen, and in severe cases, a distorted or curved spine.



#### Fritz Preferred Treatments

- ✓ Fritz Maracyn Two
- ✓ Fritz ParaCleanse
- Epsom Salt
- Fritz ParaCleanse
- Fritz PraziCleanse

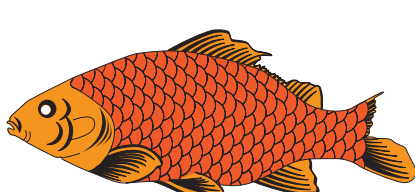
**Best Practice:**  
A quarantine or hospital tank is always recommended for treatment. All antibiotic treatments can affect desirable bacteria and biofilters.

### Fin Rot

#### Common Symptoms

Characterized by fraying and erosion at the edges of fins and tail. May also show discoloration of fin tissue, red streaks along fin rays or fin bases. Fish will also show lethargy and loss of appetite in advanced cases.

Fin rot can have multiple root causes, bacterial, fungal, or injury. The bacteria species likeliest to cause fin rot are *Aeromonas*, *Pseudomonas*, or *Vibrio* bacteria.



**Fritz Pro Tip:**  
Combine two or three of the recommended treatments for the fastest recovery. Note: Tissue regrowth will not be immediately apparent after the treatment.

#### Fritz Preferred Treatments

- ✓ Fritz Maracyn
- ✓ Fritz Maracyn Two
- ✓ Fritz Maracyn Oxy
- Fritz A+ Aquarium Salt
- Fritz Bactershield
- Fritz Parashield

#### Best Practice:

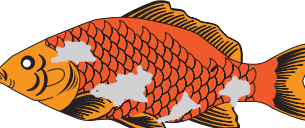
Poor water quality is usually a significant factor to developing fin rot. Address this as soon as possible to prevent reinfection. A quarantine or hospital tank is always recommended for treatment. All antibiotic treatments can affect desirable bacteria and biofilters.

### Columnaris, Body Fungus

#### Common Symptoms

Columnaris - *Flavobacterium columnare*  
Cotton-like growth in flat patches ranging in color from greyish-white to yellow or orange on the back, sides, fins or mouth. Advanced stages may cause loss of scales, lesions, and long filamentous growths on fins; rapid breathing, and lethargy.

Also known as Body Fungus, Saddleback Disease or Cotton Wool Disease



#### Fritz Preferred Treatments

- ✓ Fritz Maracyn
- Fritz A+ Aquarium Salt
- Maracyn Bactershield

**Best Practice:**  
Treat ASAP! A quarantine or hospital tank is always recommended for treatment. All antibiotic treatments can affect desirable bacteria and biofilters.

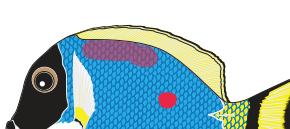
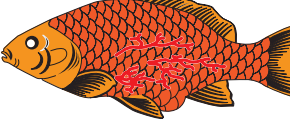
### Septicemia, Lesions, and Ulcers

#### Common Symptoms

Bacterial Septicemia - *Aeromonas sp.*  
May show bloody streaks or red patches underneath the skin and scales, along the base of fins or around the vent.

Note: Viral hemorrhagic septicemia, common in pond fish, will not be affected by antibiotics and has no treatment or cure.

Lesions and ulcers appear as open wounds anywhere on the body.



#### Fritz Preferred Treatments

- ✓ Fritz Maracyn Two
- ✓ Fritz Maracyn
- Fritz Maracyn Oxy
- Fritz Bactershield

**Best Practice:**  
A quarantine or hospital tank is always recommended for treatment. All antibiotic treatments can affect desirable bacteria and biofilters.

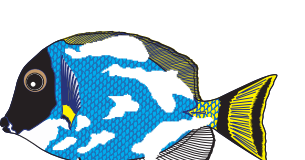
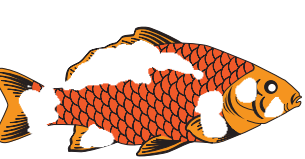
## True Fungal Diseases

### Saprolegnia, Egg Fungus

#### Common Symptoms

Saprolegnia - *Saprolegnia parasitica*  
Also known as "Cotton Wool Disease." Fuzzy white or gray patches that resemble cottony growths found on the gills or skin. Fungus can be distinguished from bacteria by its fuller, stringier appearance.

NOTE: Fungal infections are usually secondary infections following another disease or injury that leaves exposed wounds or open tissue.



#### Fritz Preferred Treatments

- ✓ Fritz Expel-F
- ✓ Fritz Maracyn Oxy
- Fritz Bactershield
- Fritz A+ Aquarium Salt

**Best Practice:**  
A quarantine or hospital tank is always recommended for treatment. Follow any treatment for open wounds with an antibiotic like **Maracyn**, and/or **Maracyn Two** to prevent secondary infection.



Fritz recommends treatments listed first with the check as the most effective

DISCLAIMER: THIS CHART DOES NOT PROVIDE VETERINARY ADVICE

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