

## Bottom Line on Salt Use in Ponds by Carolyn Weise



**Salt** is used as a parasite prevention and treatment, primarily spring and fall, or if symptoms are noticed during the summer months. Symptoms include flashing, jumping, gasping for air, reddened fins, lesions, erratic swimming, fungal-looking infections, malnutrition, excessive slime coat, and fish deaths.

The recommended therapeutic dosage for salt is 0.3%. At this solution most emerging parasites will be killed. However, many plants in the pond will also suffer and die at this salt level so it is advisable to remove all plants, wherever possible, before adding salt to the pond. In ponds where it is not possible to remove the plants or to lower the water below the level of the plants for the duration of treatment, it is recommended the salt level not to exceed 0.1%. (At 0.3% this would be 2.5 lbs. of non-iodized salt per hundred gallons of water.) It should be administered in small, dissolved increments until reaching the 0.3% level, over a 3 day period. A salinometer is a very handy instrument when using salt.

For free-swimming and external parasites, 2-3 days would be sufficient to kill the populations. For parasites such as ICH, which is a ciliated protozoan that encysts under the epidermis of the fish and cannot be eliminated until free-swimming, the time frame for salt use must be extended to allow the life-cycle to process over 5+ week period, depending upon the water temperature. (It is roughly 2-5 days in warmer temperatures but can be up to and beyond 5 weeks in cold temperatures.)

**Salt is one of the safest treatments for the hobbyist to use and least harmful to bacteria in the filter.**

Salt is also used as a dip before adding a new fish to the pond. Dips are stronger solutions, up to 0.6%. When doing a dip, mix salt and water thoroughly until all salt is dissolved. Then add the fish, watching until the fish starts to turn over on its side. Quickly remove the fish from the salt dip and place into fresh clean water. It should be parasite free at that salt level by the end of the dip. **Caution:** Never leave fish when in a dip solution. Fish left unattended in a dip will die.

**NOTE:** Salt is a chemical and overdose is possible if not used with care. These are fresh water fish, not salt water or brackish-water fish, so salt should be used in

moderation. To use salt all year may serve to promote salt resistant parasites. If salt is being used to kill parasites, do a scraping to identify parasites before adding ANY chemical to your pond.

**NOTE:** Salt should not be added to a pond when zeolite is in use! Salt should not be added to any water with AmmoLock or other ammonia binding agent! Salt will release the ammonia back into the water and can result in damaged gills or fish kill.

**NOTE:** Salt does not evaporate. When using salt in the pond, it is important to have a way of removing the salt from the pond. It can't be discharged onto the garden, so a purge line directly to the sewer or other appropriate receptacle should be planned beforehand.

**NOTE:** Salt should not be used in conjunction with Malachite Green. Certain medications contain Malachite Green and Formalin. Salt and Malachite Green form a toxic combination. If salt is not enough and the decision to treat with Malachite Green is made, do three 50% water changes to remove salt prior to start of treatment with Malachite Green.

Salt is used to increase the slime coat at times of stress.

Salt will regulate osmotic balance and reduce stress.

**USE NON-IODIZED SALT.** Always use Non-Iodized table salt, kosher salt or sea salt in the pond to protect beneficial bacteria.

Certain types of water softener salt contain yellow prussic acid (YPS), an anti-caking agent, which is toxic to fish. Always read the label first.

Warning: salt left in the pond all winter can raise the freezing point in your pond, thereby allowing lower temperatures (not good for fish!) without freezing.

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