# Biological Media: Types & Benefits

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## cultivate beneficial bacteria

## Biological filtration is the lifeblood of your aquarium system. It is responsible for the breakdown of dangerous ammonia into less-toxic nitrite and eventually nitrate.

Biological media, or bio-media, have the important job of housing the beneficial bacteria that provide biological filtration. Beneficial bacteria that break down ammonia thrive in conditions where they receive a steady food source (ammonia or nitrite) and plenty of oxygen. Fish waste and decaying food and plants supply the ammonia and good water movement supplies oxygen. These beneficial bacteria also require water temperatures above 55°F.

Depending upon your aquarium size and filtration system, certain types of biological media are preferable over others. Familiarize yourself with the benefits of each type to select the right one for your particular aquarium system.

Be sure to use mechanical filter media with your bio media to minimize particle buildup that can clog your biological media. The mechanical pre-filter will allow nutrient and oxygen-rich water to reach the bio media to ensure efficient biological filtration. Check your biological filter regularly for clogging and if necessary, replace only a small portion of the bio media if you are unable to dislodge the clogs with aquarium water.

## Types of Biological Media

### Rock-Like

Porous rock-like media, such as zeolite or lava rock, are practical for filling the relatively small media areas inside canister filters. They are readily available, inexpensive, and have an extremely high surface area.

### Ball-Style

Plastic, ball-style biological media are excellent for larger wet/dry filters and canister filters. Their unique design creates turbulence that allows the maximum mix of air and water over the media surface, creating the ideal conditions for nitrifying bacteria. They have extensive surface area, are unlikely to clog, and should never need replacing.

### Cell-Pore

This highly-porous ceramic media is ideal for multiple applications. It is offered in small cubes for canister filters, slabs for wet/dry filters, and in individual cartridges that fit specific power filter models. It can be reused repeatedly, provides the most surface area of any bio media currently available, and the slab style can be cut to fit your unique setup.

### String-Style

String-style media can be placed very densely in the filter without compaction to deliver maximum water flow. Perfect for use in certain protein skimmers such as the Bak-Pak 2 or as a divider in a canister filter. Traps particles to help with mechanical filtration, too.

**WE RECOMMEND**



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- **Bio-Glass** has a highly-porous structure for bacterial colonization and its hollow center provides excellent water flow.
- **BioMate Carbon-Filled Media Balls** utilize carbon pellets in the center to provide both chemical and biological filtration.



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