

## Different Types of Shellfish and their Importance

Tobias Foster\*

Department of Mariculture, University of Dubrovnik, Croatia.

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### Introduction

Shellfish refers to exoskeleton-bearing aquatic invertebrates such as mollusks, crabs, and echinoderms that are consumed as food. Although the majority of shellfish are gathered in saltwater, some are found in freshwater. Bivalve mollusks, such as oysters, mussels, scallops, and clams, are among the world's most commercially valuable shellfish. Most shellfish are low on the food chain and eat phytoplankton and zooplankton as their main sources of nutrition. All shellfish are invertebrates, regardless of their shells. In an informal sense, non-mammalian animals that spend their whole lives in water are called "fish"; but, in modern language, the term "finfish" is occasionally used to distinguish fish, which are defined by possessing vertebrae, from shellfish.

Shellfish are high in omega-3 fatty acids and vitamin B12, both of which may help with heart health. Eating omega-3 fatty acids from fish and shellfish has been associated to a lower risk of heart disease in several studies. This is most likely due to omega-3 fatty acids' anti-inflammatory properties. Inadequate blood levels of vitamin B12 and omega-3 have been linked to problems with brain development in children and healthy brain function in adults in various studies.

Shellfish are known for filtering water and eliminating suspended particles and impurities, improving both the quality and purity of the water. These advantages trickle down to other organisms that benefit humans, such as sea grasses. Shellfish are known for filtering water and eliminating suspended particles and impurities, improving both the quality and purity of the water. These advantages trickle down to other species that are beneficial to humans, such as sea grasses. Shellfish allergy affects about 1% of the population, and it is more common in adolescence and adulthood than in childhood.

All shellfish are highly perishable once harvested. To protect the consumer from the consequences of rotting, several varieties are cooked live. When shipping shellfish away from coastal locations or on board fishing vessels that are hours or days away from land, icing or freezing

is often used. Most shellfish benefit from quick and mild cooking; high heat can cause them to disintegrate or become rubbery, and the flavour can become overpowering. Shellfish is typically served with sauces that are rich or strongly seasoned.

Due to their high rates of water and particle processing, shellfish can collect large levels of metal contamination. This is an issue because shellfish are consumed by humans and are used to monitor coastal contamination. Shellfish depuration is a commercial processing method that involves placing shellfish in tanks with clean saltwater and allowing them to expel pollutants for several days. Although shellfish depuration removes bacterial pathogens and indicator microorganisms quickly, the scientific community agrees that commercial shellfish depuration processes are insufficient for HNoVs, as many HNoV outbreaks have occurred from depurated oysters containing around 103 genome copies per gram of oyster tissue. This is proved to be more beneficial than the manual monitoring.

### \*Correspondence to

Tobias Foster,  
Department of Mariculture,  
University of Dubrovnik,  
Croatia  
Email [fostertobia58@yahoo.com](mailto:fostertobia58@yahoo.com)