

## **Fish and Shellfish Allergies**

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Fish and shellfish are considered one of the commonest food allergens, much more so in the past 50 years as the supply of seafood nearly doubled, outpacing population growth. As seafood consumption continues to increase, the adverse allergic reactions to seafood intake have become an eminent global health issue. This specifically concerns Asia, as China accounts for two-thirds of the world aquaculture production of fish, crustaceans and molluscs. In addition, fish is often introduced early as weaning food and that shellfish is easily encountered in this part of the world.

Parvalbumin and tropomyosin have long been identified as the major fish and shellfish allergen respectively, and extensive efforts have been directed to characterize the allergenic properties of these two allergens in different species. A number of novel seafood allergens have also been discovered in recent decade. Here we will discuss the current understanding of the molecular characteristics of seafood allergens, such as the molecular identity, cross-reactivity, and the methods of detection of seafood allergens. It is generally believed that management of seafood allergies relies on strict intake avoidance with no preventive or curative treatment available, but recently allergen-specific immunotherapies are being developed and are potentially disease-modifying.