

## Fugu: a culinary brush with death

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On an ill-fated evening in 1975, Bandō Mitsugorō VIII returned to his hotel room, where he developed progressive muscle paralysis, and died from respiratory failure. Over the previous forty years, Bandō had become one of Japan's most honored Kabuki actors. In 1973, he was designated "a living national treasure" by the Japanese government for his work in the performing arts. On the night of his death, Bandō ordered a meal of fugu kimo, pufferfish liver, despite local laws outlawing the poisonous fish's most dangerous organ. Bandō, it is said, claimed to be immune to the Japanese delicacy's lethal tetrodotoxin.

Bandō is not alone in his desire to partake in this culinary equivalent of Russian roulette. Diners pursue fugu, or pufferfish, for the taste, danger, or just for the mild sensation of tingling on their lips. However, consuming fugu can have deadly consequences. According to Japanese government figures, there were thirty to fifty tetrodotoxin reported poisoning incidents related to fugu consumption each year in the late 1990s and early 2000s. Many of these cases required hospitalization and a minority resulted in death. Still, this has not deterred connoisseurs around the globe from consuming the deadly fish. Even in the face of potential danger, there is some evidence that fugu has been consumed in Japan for thousands of years.

Given its lethal potential, governments have taken steps to avoid adverse effects. In Japan, the preparation and sale of fugu has been strictly regulated. The liver, rumored to have killed Bandō, is outlawed. Chefs hoping to prepare fugu must be licensed, a process that requires years of apprenticeship, as well as written and practical examinations. Authorized individuals must demonstrate expertise in fish identification, preservation, and preparation with the fugu hiki knife, as most incidents of fugu poisoning appear to stem from amateur preparation of the fish. The high cost of fugu consumption is a direct result of the significant regulations involved in serving the fish safely. Outside of Japan, fugu is even more scarce. In the US, much of the fugu is shipped from Japan after being prepared and cleaned with cautious precision. Even so, the number of restaurants that serve fugu in the US is small—as of the early 2000s, only seventeen restaurants, mostly in New York City, were willing to provide this dangerous dish to their customers. In Europe, sale of fugu is outlawed

Despite stringent regulations regarding fugu consumption, tetrodotoxin poisoning still occurs, and it is important for emergency department physicians to promptly identify and appropriately manage such exposures. Symptoms such as paresthesias of the face or limbs, weakness, nausea, headache, lethargy, or neurologic deficits in the setting of recent dietary exposure should alert the physician to the potential for severe poisoning. Airway management and other life support measures may be necessary.

**For more information on tetrodotoxin and other marine toxins poisoning please check our Best Practice topic Marine toxins.**

## About the authors

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