

Brief Note on Fish-Handler's Disease

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DESCRIPTION

Fish-handler's disease is a broad phrase used in medical and lay literature to describe a human sickness or condition that can emerge after handling fish or, in some cases, other aquatic species. There are a lot of additional words that similarly describe the same condition. They are as follows: fish handler's nodules, fish-handler's disease, swimming pool granuloma, fish tank granuloma, Piscine tuberculosis, fish tuberculosis, Mycobacteriosis, "erysipeloid" infection or lesions. Because so many distinct outbreaks have been linked to jobs (fishermen or lobstermen), hobbies (tropical fish tanks, pet store workers), or water activities, the illness has a variety of names (boating, swimming pool use). Researchers also revealed that the disease's principal causative infective agents were at least two separate species of bacteria like *Mycobacterium* and *Erysipelothrix*. Although some of the symptoms caused by the organisms (mostly lesions on the limbs) are identical, other symptoms, diagnoses, and treatments are considerably different.

CAUSES OF FISH-HANDLER'S DISEASE

Cuts or scratches in the skin become infected with the bacterium *Erysipelothrix rhusiopathiae* and other species, resulting in fish-handler's disease. This is an erysipeloid infection, it is caused by an infection that looks like erysipelas but is due to a different organism. Handling and cooking fish and shellfish can result in minor wounds and scrapes on the skin, which can allow germs to enter. The development of fish-handler's disease necessitates intentional interaction with fish, particularly lobster and other shellfish. Fish-handlers' disease can be found whenever fish and shellfish are handled. Fish-handler's disease can also arise when wounds or scrapes in the skin get infected with *Mycobacterium* species, primarily the species *marinum* and *mortuatum*. Handling tropical fish, coral, cleaning aquariums, swimming pools, fishing, lobster collecting, and many other similar activities can introduce these germs into cuts and scrapes. This illness is found all over the world and is related to a variety of organisms that live in saltwater, freshwater, or brackish water. One of the most recent outbreaks occurred in the Chesapeake Bay when 76 percent of striped bass were discovered to be

infected with *Mycobacterium*. Fish or other aquatic species with apparent surface sores should not be handled with bare hands (use gloves to avoid infection) and should not be cooked. Cooked aquatic species, on the other hand, have not been linked to fish handler's disease.

SYMPTOMS AND SIGNS OF FISH-HANDLER'S DISEASE

The following are the symptoms of fish handler's disease caused by *Erysipelothrix rhusiopathiae* and other species:

The condition usually appears two to seven days following a skin injury and subsequent bacterial infection. A highly defined red-purple circular region emerges and surrounds the hole; the center often disappears, and a vesicle (blister) may appear on occasion. The size of the injury grows by roughly 12 inches every day. The infection may be accompanied by joint stiffness, lymph node enlargement, and discomfort, as well as burning, itching, and swelling at the injection site. In rare cases, the condition might develop to cause sepsis (bloodstream infection) and endocarditis (infection of the heart valves).

The following are the symptoms of fish handler's disease caused by *Mycobacterium* species:

The sickness usually appears two to four weeks after exposure, while it has been noted that it might appear up to nine months later. Skin lesions are frequently numerous and linear, although they can also be solitary. Lesions can manifest as nodules, abscesses, or ulcers, as well as changes in skin tone, and they might progress slowly (months).

TREATMENT FOR FISH-HANDLER'S DISEASE

The following is the treatment for fish handler's disease caused by *Erysipelothrix rhusiopathiae* and other species:

All wounds must be washed right away with clean, running water. To remove any foreign material, gently clean the wound with soap and water. Skin infections are frequently treated with

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oral antibiotics mostly penicillin's. In case of any medication allergies, make sure to notify your doctor before taking an antibiotic. Continue antibiotics for the full duration of the doctor's recommendation, even if all indications of illness have vanished. Pain can be relieved by taking one to two acetaminophens; Tylenol tablets every four hours or one to two ibuprofens, Advil, Motrin tablets every six to eight hours. It is possible that joint discomfort, lymph node swelling, and tendonitis will occur. In rare cases, the condition might escalate to sepsis (infection of the bloodstream). Endocarditis is a frequent complication of sepsis; IV penicillins, cephalosporins, and clindamycin (Cleocin) are successful in treating these severe infections. *Erysipelothrix rhusiopathiae* and other species are resistant to vancomycin, a medicine commonly used to treat endocarditis. In rare cases, the condition might escalate to sepsis (infection of the bloodstream).

Antibiotics are required to treat fish handlers' disease caused by *Mycobacterium* species. Antibiotics like rifampin, streptomycin, sulfamethoxazole, trimethoprim, tetracyclines, and others are used to treat the disease. The therapy period can range from two weeks to 18 months, depending on the patient's response and

degree of infection. Corticosteroids should be avoided since they might delay therapy and recovery. Severe infections may necessitate intravenous antibiotics as well as surgical excision of affected tissues in tendons and joints.

CONCLUSION

The person who develops skin sores (painful or not) after touching fish or other aquatic creatures during swimming, boating, cleaning fish tanks or aquariums, should seek medical attention; those with a compromised immune system should call their doctor immediately. Consult a doctor about treatment options, such as antibiotics, to ensure that the proper antibiotic is used to treat the specific bacterial cause of the sickness. The etiology of a person's fish handler's disease is diagnosed by cultivating the bacteria from the lesions. The PCR testing is done to identify the genetic material of bacteria or other organisms specific to the bacterial type involved. Some individuals may require long-term antibiotics up to 18 months as well as surgical excision to stop infection. A patient with Fish-handler's disease may occasionally require IV antibiotics.