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Anisakiasis risk varies depending on origin of fish

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The Anisakis parasite can still be found in one of the most emblematic Mediterranean dishes - anchovies in vinegar. Spanish researchers have shown the parasites are present at higher levels in anchovies from the south east Atlantic coast and the north eastern Mediterranean, and urge consumers to freeze or cook the fish before eating it.

Although the European Union and Spanish regulations require restaurants to freeze fish that is eaten raw, 'people still run the risk of anisakiasis infection from homemade anchovies in vinegar if they have not got into the habit of freezing the fish for at least 24 hours at -20 C,' according to a team of scientists from the University of Granada (UGR), which has found the larvae of Anisakis spp and another similar parasite, Hysterothylacium aduncum, in anchovies from the west of the Mediterranean Sea and the east of the Atlantic Ocean.

'The risk of developing anisakiasis from eating anchovies (Engraulis encrasicolus) could be affected by the geographical area in which the fish were caught, because there is a great variation in parasitation (average prevalence and intensity) among anchovies from different areas,' Adela Valero, lead author of the study and a researcher at the UGR's Department of Parasitology, explains to SINC.

The study, which has been published recently in the International Journal of Food Microbiology, involved the analysis of 792 anchovies obtained between October 1998 and September 1999 at the fish market in Granada. Half of the fish originated from the eastern Atlantic Ocean (Gulf of Cadiz and Straits of Gibraltar) while the other 396 came from the western Mediterranean (Alboran Sea, Catalan Sea, Gulf of Leon and the Ligurian Sea).

The researchers say the Hysterothylacium aduncum parasite was more frequently observed among anchovies from the north western Mediterranean, specifically from the Gulf of Leon and the Ligurian Sea. Anisakis was more common in anchovies captured in the Atlantic part of the Gibraltar Straits (Gulf of Cadiz and the Straits themselves) than in those from the Mediterranean part (Alboran Sea), 'apparently due to the presence of cetaceans,' points out Valero.

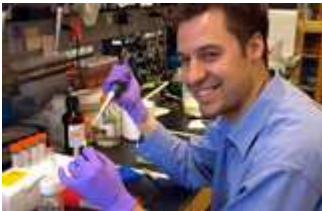
'This relationship is particularly clear in anchovies from the Ligurian Sea, where both Anisakis and cetaceans are present at higher levels than in the rest of the areas studied,' stresses Francisco Javier Adroher, another of the authors and a researcher at the UGR. This results in a greater risk for consumers if they do not freeze the fish.

Another factor that increases the likelihood of infection with the parasite is the movement of larvae to the muscles of the fish. According to the scientists, 'the higher parasite levels in muscle tissue leads to increased risk of contracting anisakiasis by eating anchovies in vinegar.' The Granada-based scientists have also shown that the parasite is found in greater numbers in longer fish. 'As anchovies in vinegar are prepared using the largest individuals, this also raises the risk,' adds Adroher.

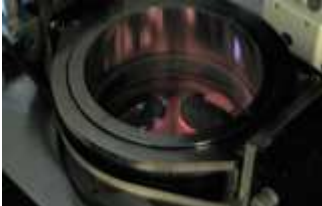
Valero and her team point out that more studies are needed in order to identify those marine areas with the greatest presence of parasites that could affect human health. This will make it possible to find out whether the parasites vary in quantity in certain areas over time, 'enabling us to design and apply measures to limit human exposure to the parasites.'



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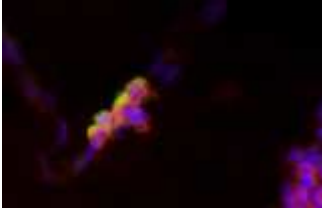
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