

# The truth about tilapia

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This popular fish is cheap and tasty ... but is it good for you?*iStock*

Tilapia has risen to the top as a seafood staple on American dinner tables.

According to the National Fisheries Institute, the mild fish has climbed to become the fourth most eaten seafood in the U.S.,

behind only shrimp, salmon and canned tuna.

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- Dr. Floyd Chilton, professor of physiology and pharmacology at Wake Forest

Mike Picchietti, president of Americas Tilapia Alliance, believes the fish’s popularity comes from the fact that it’s easy to farm, so it’s inexpensive and it goes down easy.

“This fish gives you a lot of leeway to farm. It’s a very hearty variety that is adaptable to different types of feed. It tastes pretty good too,” he told FoxNews.com.

It’s cheap, easy to find, and it’s fish – so it’s good for you, right?

Maybe not. There are some disturbing allegations about the fish, and one is particularly surprising: Some nutritionists have been touting a study that they implies that eating tilapia is worse than eating bacon.

Yes, *bacon*.

In 2008, researchers at the Wake Forest University School of Medicine released a study comparing fatty acid levels among popular fish. It found that tilapia contained far less omega-3 fatty acid than other American favorites, such as salmon and mackerel. According to the paper, salmon also has a “more favorable” omega-3 to omega-6 ratio. While both fatty acids are important, omega-3 has anti-inflammatory properties that play a critical role in brain development and cognitive function and may prevent diseases like diabetes and Alzheimer’s.

The report said that the “inflammatory potential of hamburger (80 percent lean) and pork bacon is lower than the average serving of farmed tilapia (100 g).”

That set off alarm bells among nutritionists.

The report caused further concern when it stated that farmed tilapia contains high levels of arachidonic acid, an omega-6 fatty acid that, while necessary to help repair damaged body tissues, has been linked to brain disorders like Alzheimer's disease and may exacerbate inflammation.

Dr. Floyd Chilton, the professor of physiology and pharmacology who directed the Wake Forest study, says the comparison of tilapia to pork bacon was taken out of context.

"We never intended to paint tilapia as the cause of anything bad. Our goal was to provide consumers with more information about their fish," Chilton said. "If your doctor or cardiologist is telling you to eat more fish, then you should look for varieties that have higher levels of omega-3 and avoid those with high inflammatory potential."

The truth is, tilapia has as much omega-3 as other popular seafood, including lobster, mahi-mahi and yellowfin tuna. Tilapia is also very low in fat. A 4-ounce serving of tilapia has about 1 gram of saturated fat, 29 grams of protein and around 200 mg of omega-3. By comparison, a 1-ounce serving of bacon (about 4 strips) contains 4 grams of saturated fat, 10 grams of protein and 52 mg of omega-3.

So people may not want to eat tilapia every day, but that doesn't mean it has to be avoided altogether, nutritionists say.

"I tell my clients not to just eat one type of fish, no matter what, to reduce your risk of contamination," says registered dietitian Melainie Rogers, founder of Balance Nutrition, a treatment center specializing in eating disorders in New York City. "Not all fish have the same fatty acid profile, but tilapia in moderation is fine. It has lower cholesterol than red meat – plus it's easy to cook."

So eating tilapia isn't the same as eating bacon, but there's another rumor going around the Internet: that farm-raised tilapia from China are fed animal feces.

A 2009 study conducted by the Economic Research Service of the U.S. Department of Agriculture cited some alarming facts about Chinese farm-raised seafood. Researchers noted that "many of China's farms and food processors are situated in heavily industrialized regions where water, air and soil are contaminated by industrial effluents and vehicle exhaust." The report also stated that it "is common practice to let livestock and poultry roam freely in fields and to spread livestock and poultry waste on fields or use it as fish feed."

The USDA report was based on documents obtained from the Food and Drug Administration, which oversees seafood inspections.

After the study was released, news organizations, including [Bloomberg](#) and [MSN.com](#), reported the rampant use of animal feces as food in Chinese aquaculture – specifically calling out the practice on tilapia farms.

But the original USDA report did not specifically cite tilapia. Asked for comment, neither the FDA nor the USDA could confirm that it is common practice in China to feed animal feces to farm-raised tilapia.

FDA spokeswoman Theresa Eisenman said the agency was "not aware of evidence to support the claim that this practice is occurring."

But if it is, the next question is: How much farm-raised tilapia are we eating from China? The answer is: A lot.

According to Monterey Bay Aquarium Seafood Watch, over 95 percent of tilapia consumed in the U.S. in 2013 came from overseas, and 73 percent of those imports came from China. One reason is that the fish thrives in a subtropical climate, making it a difficult fish to farm in most of the U.S.

In 2006, Seafood Watch listed farmed Chinese tilapia as “Avoid.” Senior science manager Wendy Norden and science analyst Brian Albaum at Seafood Watch told [FoxNews.com](#) that the recommendation was due to poor food quality enforcement and high levels of chemicals, antibacterial drugs (nitrofurans) and malachite green (used to dye silk, leather and paper) in fish samples.

They said that the “Avoid” rating at that time was not due to what the fish were fed, although they did note that “in aquaculture, usually wastes from one animal are unfit to be fed to other animals.”

Today, Seafood Watch gives farmed tilapia from China a “Good Alternative” rating, due to improved enforcement of food legislation. But it cautions that the fish currently tests in the “red zone” for the presence of banned or illegal chemicals such as antibiotics, malachite green and methyl testosterone hormones used in Chinese tilapia production.

The group says tilapia raised in Ecuador, the U.S. or Canada is the best choice.

Americas Tilapia Alliance’s Picchietti told [FoxNews.com](#) that he is not aware of the practice of feeding animal feces to tilapia in the U.S., and he said he has not witnessed the practice in China. But he pointed to a 2004 paper, “Domestic Wastewater Treatment in Developing Countries,” that cites the practice of using properly treated wastewater as a sustainable, and ultimately profitable, farming technique.

So what do you do if you’re looking to avoid tilapia, or tilapia that comes from certain countries? It’s not always easy with current labeling standards.

Since 2005, country of origin labeling (COOL), which is overseen by the USDA, requires seafood and shellfish retailers to label product origins. But labeling exceptions and a lack of enforcement make it hard to know exactly what’s on your plate.

Processed seafood such as fish sticks or other prepared food sold at supermarkets and seafood retailers is exempt from labeling. Whole fish sold at grocery stores is required to have a country-of-origin label and to indicate whether the fish has been farm-raised or caught wild, but not everyone does it. The USDA conducts supplier inspections, and stores in violation have a mandated timeframe to correct the problem.

Another thing to keep in mind, especially if you’re looking for farm-raised fish fed with non-GMO feed: The USDA does not currently have guidelines for classifying seafood as organic.

Even though the [FDA has consumer guidelines](#) for buying fresh fish, the lack of basic information has some scratching their heads.

The best way to know for sure is to ask a fishmonger directly.