



**Fatty Acids Reduce Atrial Fibrillation Risk**

**R**egular consumption of fish containing Omega-3 fatty acids—but not fried fish—reduces the risk of atrial fibrillation, according to the results of a Harvard study.\*

Atrial fibrillation, the most common arrhythmia in clinical practice, affects more than 2 million Americans. Risk factors, including valvular or coronary heart disease and higher systolic blood pressure, all increase with age. Adding fish to the diet has long been associated with lower blood pressure, less systemic inflammation, and improved left ventricular function.

The Harvard researchers assessed the dietary intake in 1989-90 of 4,815 adults aged 65 and older. During 12 years of follow up, the incidence of atrial fibrillation was determined using hospital discharge records and annual electrocardiograms.

In all, 980 cases of atrial fibrillation were reported. Case analyses revealed that the incidence of atrial fibrillation was 28% lower in those who ate tuna or other broiled or baked fish one to four times weekly, and 31% lower in those who ate such fish or more times per week.

While fish high in omega-3 fatty acids may be cardioprotective, the process of frying fish can alter its nutrient content, increasing omega-6 fatty acids, trans fatty acids, and oxidation products, especially if oils are reused for frying.

The researchers concluded: "Among elderly adults, consumption of tuna or other broiled or baked fish, but not fried fish or fish sandwiches, is associated with lower incidence of [atrial fibrillation]. Fish intake may influence risk of this common cardiac arrhythmia."

—Stephen Laifer

**Reference**

\* Mozaffarian D, Psaty BM, Rimm EB, et al. Fish intake and risk of incident atrial fibrillation. *Circulation*. 2004 Jul 27;110(4):368-73.

# Green Tea Slows Brain Aging in Mice

**J**apanese scientists recently announced that antioxidants in green tea significantly slowed brain aging in laboratory mice.<sup>1</sup>

Green tea catechins slowed or halted symptoms of cognitive decline and senescence in mice specially bred for accelerated brain aging. The mice served as a model of age-associated senescence in humans. Catechins are a class of natural compounds (including epigallocatechin gallate, or EGCG) that neutralize free radicals, preventing oxidative damage.

Previous research has indicated that age-related cognitive dysfunction is associated with damage to brain tissues caused by oxidation.<sup>2</sup> The brain requires significantly more oxygen than other tissues and produces proportionally more free radicals, rendering it particularly susceptible to oxidative damage. Previous experiments have shown that antioxidant compounds such as garlic extract and vitamin E can improve oxidation-induced brain decline in laboratory animals.<sup>3-5</sup>

In the Japanese study, scientists gave green tea catechins daily to one group of mice and withheld catechins from a second group. At the end of 12 months, they tested both groups' ability to learn certain tasks. The animals' brains were subsequently examined for physical differences. Mice that received catechins performed significantly better on memory and learning tasks than mice that did not

receive the antioxidants. The mice given green tea also had significantly healthier brain tissue upon post-mortem examination.

The scientists concluded that green tea catechins prevent age-associated cognitive decline.

—Dale Kiefer

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