

Mating with showy males may reduce offspring's ability to fight off pathogens

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In many animals, males advertise to potential mates with showy traits, many of which are linked to testosterone levels. However, a new study suggests that, in fish, choosing a flashier mate may cause future generations to be more susceptible to pathogens.

In the January 2007 issue of *The American Naturalist*, a new study by Judith Mank (Uppsala University, Sweden) finds that mating with males who possess showy traits – such as bright colors or long tails and fins – results in higher testosterone levels in males over many generations. Because male and female testosterone levels are correlated, female choice also results in an increase in female testosterone levels.

Testosterone is an immune suppressor, and increases in testosterone can reduce an animal's ability to fight off diseases. Therefore, a female's choice of a male with exaggerated ornaments may make her daughters and granddaughters less able to resist pathogens, Mank argues.

However, there may be some benefits for the females. For example, females are larger than males in many fish species, perhaps because of the requisite energetic burdens of producing massive amounts of roe, and elevated testosterone increases body size.

Thus, as Mank writes: "The benefits of increased body size to roe production and mate selection may, at least in some cases, counter the immunosuppressive effects of elevated testosterone in females."

Source: University of Chicago Press Journals

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