Like father, like son: Attractiveness is hereditary

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Sexy dads produce sexy sons, in the insect world at least. While scientists already knew that specific attractive traits, from cricket choruses to peacocks' tails, are passed on to their offspring, the heritability of attractiveness as a whole is more contentious. Now, new research by the University of Exeter, published today (20 November) in *Current Biology*, shows that attractiveness is hereditary.

The research team, based on the University of Exeter's Cornwall Campus, focused on the fruitfly Drosophila simulans. They paired up males and females at random and found the length of time it took for them to mate ranged from just two minutes to two hours. Female fruitflies need to make themselves accessible to males for mating to take place, so males cannot force copulation. Therefore, the speed at which mating occurs can be taken as an indication of the attractiveness of the male to his female partner.

After males had mated with around three females each, their sons who were full and half brothers, were paired with single females. Again, the time for copulation to occur was recorded. This allowed the researchers to look at the genetic component of attractiveness. They found that attractiveness is hereditary, passed on from father to son. Previous research has shown that females that mate with attractive males do not produce more offspring than those mating with less desirable males. This study indicates that one benefit females may enjoy by mating with attractive males is that they will produce 'sexy' sons, which are more likely to be successful in mating.

Dr David Hosken of the University of Exeter said: “Attractiveness probably can’t be defined by individual characteristics, so there is no single physical attribute that female fruitflies are looking for in a mate. However, there is clearly a benefit to females in having sexy sons that are more likely to attract a mate and produce offspring.”

Having now shown that attractiveness can be passed on from father to son, the research team believes that the findings could apply to other species. Although not tested, Dr Hosken believes his findings could be applied to humans: “It’s possible that attractiveness is hereditable across the animal kingdom. It could even be the case in humans that the sexiest dads also have the most desirable sons, which would probably be bad news for my boy.”

Source: University of Exeter