

Could carrots be the secret to a long-life and sex appeal?

May 10 2007

Researchers at the Universities of Glasgow and Exeter have found that eating certain plant substances can slow down the rate of ageing - and that females prefer mates that will be long-lived.

Carotenoids are naturally-occurring yellow and red pigments found in plants. Animals that eat those plants can then use the pigments to make themselves colourful in order to attract mates. But carotenoids are also antioxidants, which improve an animal's ability to combat oxidative stress and strengthen its immune system.

This latest research has found for the first time that males eating more carotenoids were better able to protect their cells from damage and so lived longer - and that females found these long-lived males particularly attractive.

The work was carried out on sticklebacks, and compared the fate of fish that all received the same basic diet but had different amounts of carotenoid supplement. Male sticklebacks need carotenoids to produce the red throat patch that they develop in the breeding season and display to females.

Dr Thomas Pike, researcher in Environmental and Evolutionary Biology at Glasgow University said: 'Males provided with fewer carotenoids still tried to produce a bright red throat patch, but could only do so by diverting carotenoids away from their role as antioxidants; so by trying to look as good as possible, these males aged faster.'

In sticklebacks, the female lays her eggs in a male's nest and then leaves, and it is the male alone who cares for the eggs and young.

'It seems that females can tell if males haven't eaten many carotenoids, even if they do look quite red, and probably found these males less attractive because they were more likely to die before they had finished looking after the young,' said Dr Pike. 'The positive effects of a carotenoid-rich diet are likely to apply to many other animal species as well – but whether eating carrots makes humans longer-lived and more handsome remains to be seen!'

'The most brightly coloured males often get the girl, but why females prefer such show-offs hasn't been clear,' said Dr Jon Blount, Research Fellow at the University of Exeter. 'Our study shows that redder males are more likely to be good fathers, because they can survive the demands of parenting.'

The study was carried out by the Fish Biology Research Group at the University of Glasgow, in collaboration with researchers at the Akvaforsk Institute for Aquaculture Research in Norway and the University of Exeter, and will be published in the prestigious scientific journal *Proceedings of the Royal Society*.

Source: Natural Environment Research Council

Citation: Could carrots be the secret to a long-life and sex appeal? (2007, May 10) retrieved 20 April 2024 from <https://phys.org/news/2007-05-carrots-secret-long-life-sex-appeal.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.