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Finger Length Points to Prostate Cancer Risk

Men who have long index fingers are at lower risk of prostate cancer, a new study published in the British Journal of Cancer has found.

The study led by The University of Warwick and The Institute of Cancer Research (ICR) found men, whose index finger is longer than their ring finger were one third less likely to develop the disease than men with the opposite finger length pattern.

“Our results show that relative finger length could be used as a simple test for prostate cancer risk, particularly in men aged under 60,” says joint senior author Professor Ros Eeles from the ICR and The Royal Marsden NHS Foundation Trust. “This exciting finding means that finger pattern could potentially be used to select at-risk men for ongoing screening, perhaps in combination with other factors such as family history or genetic testing.”

Over a 15 year period from 1994 to 2009, the researchers quizzed more than 1,500 prostate cancer patients at The Royal Marsden NHS Foundation Trust in London and Surrey, Nottingham City Hospital and The Royal Hallamshire Hospitals in Sheffield, along with more than 3,000 healthy control cases. The men were shown a series of pictures of different finger length patterns and asked to identify the one most similar to their own right hand.

The most common finger length pattern, seen in more than half the men in the study, was a shorter index than ring finger. Men whose index and ring fingers were the same length (about 19 per cent) had a similar prostate cancer risk, but men whose index fingers were longer than their

ring finger were 33 per cent less likely to have prostate cancer. Risk reduction was even greater in men aged under 60 years- these men were 87 per cent less likely to be in the prostate cancer group.

The relative length of index and ring fingers is set before birth, and is thought to relate to the levels of sex hormones the baby is exposed to in the womb. Less testosterone equates to a longer index finger; the researchers now believe that being exposed to less testosterone before birth helps protect against prostate cancer later in life. The phenomenon is thought to occur because the genes HOXA and HOXD control both finger length and development of sex organs.

Previous studies have found a link between exposure to hormones while in the womb and the development of other diseases, including breast cancer (linked to higher prenatal oestrogen exposure) and osteoarthritis (linked to having an index finger shorter than ring finger).

Joint senior author, Professor Ken Muir from the University of Warwick, says: “Our study indicates it is the hormone levels that babies are exposed to in the womb which can have an effect decades later. As our research continues, we will be able to look at a further range of factors that may be involved in the make-up of the disease.”

The study was funded by Prostate Cancer Research Foundation and Cancer Research UK.