Two articles hit the headlines recently, one claiming that cycling increased the risk of prostate cancer, the other that multiple female sexual partners reduced the risk of prostate cancer. Unsurprisingly, both caused some consternation among the general public, with a perceived conflict between advice given regarding general health and a genuine concern in the light of increasing awareness of the risks of prostate cancer. Indeed, charitable bodies and NHS advisory groups had to step in to offer explanations and reassurance and Prostate Cancer UK’s specialist nurse hotline was reportedly buzzing with activity.

Addressing one of these issues here, the link between cycling and prostate cancer, the question is: does the evidence stack up? Cycling is an increasingly popular sport, particularly since the 2012 London Olympics, with more than 2 million adults now riding a bike at least once a week, and four out of five of these are men. So, a lot of men cycle and prostate cancer affects men. The disease was diagnosed in 41 736 men in 2011 (the last UK count) and is thought to be present in as many as a quarter of men as young as 40 according to some historical autopsy studies. Actually,
diagnosis of prostate cancer is rare below 50 years of age, according to Cancer Research UK statistics, but climbs above an incidence of 500 new diagnoses per year per 100,000 men in their 60s or above.6 Given that cycling is a popular sport for men well beyond their 60s, a link between the two would certainly be noteworthy.

THE CYCLING AND PROSTATE CANCER STUDY
Authors from University College London conducted a large cross-sectional study providing a snapshot view of cycling habits and prostate cancer diagnoses from a sample of the population.7 The study was not focused on prostate cancer alone. The authors hypothesised an association between weekly cycling ‘volume’ and genitourinary problems including erectile dysfunction (ED), infertility and prostate cancer on the basis of repetitive trauma to the perineum leading to recurrent inflammation and compression of anatomical structures.

The authors should be congratulated on their large number of participants. More than 5000 cyclists completed an online survey, with their cycling frequency being binned into four categories (<3.75, 3.75–5.75, 5.76–8.5, >8.5 hours/week), and patient-reported health outcomes given for ED, infertility and prostate cancer. Contrary to previous literature,8 no association was found for ED and infertility, but men were found to have a two- to sixfold ‘greater risk’ of prostate cancer with increasing cycling hours per week.

Concerns with the study
There are a few concerns with this study, which mean the results should be interpreted with caution.

First, the results for prostate cancer were reported only for men over the age of 50 (about 40% of the study sample) and the results would not have been significant if the whole population had been included.

Second, the rate of prostate cancer reported even in the over-50 age group was very low. Only 36 men out of 2027 reported having prostate cancer. This is a much smaller number of men (only 1.7%) than would be expected in this population to have a previous diagnosis of prostate cancer, but more importantly it means that the study was comparing numbers of 3, 7, 9 and 17, respectively. These are small numbers and mean that the study was underpowered to provide evidence of a difference.

Third, there was no control group. The authors were therefore unable to compare to a group of men who did not cycle at all. Ironically, this may have actually obscured some power from the data, but it also means that the authors were unable to interrogate why there was a particularly low number reporting prostate cancer in this sample of 5000 men.

Finally, the statistics are perhaps questionable, with no justification given for the division of cycling hours into four arbitrary time groups (see above). As these time groups are the fundamental basis on which comparisons are made, it is an important and slightly confusing point.

The authors do try to address potential confounding factors in their study, for example assessing whether men who cycle more have increased health-seeking behaviour (they do not); they also highlight the self-reporting and cross-sectional nature of the study as a limitation. Nonetheless, they still include the finding regarding prostate cancer as a main conclusion of their study in the face of such confounding features. In my opinion, there is insufficient evidence presented for an association between cycling and prostate cancer.

So, as yet, there is still no link between cycling and prostate cancer. Keep cycling, it’s good for us.6 Although it’s always a good idea to get a comfortable saddle!

Declaration of interests: none declared.

REFERENCES
6. www.britishcycling.org.uk