

Read all about it... It can be awkward when a patient asks you about a report in their favourite tabloid detailing an amazing research breakthrough or a 'cutting-edge' new treatment / test and you don't know what they are talking about! So this section fills you in on the facts.

Drinking too many fizzy drinks can do THIS to your penis

The Daily Express – 7 July 2016

The headline for this story suggests that it was accompanied by an image straight out of a urological pathology text book, fortunately this was not this case. The 'THIS' that the story refers to are the findings of some research that is actually around five years old. I am uncertain as to why the story is surfacing now, but it may be of interest to patient and urologist alike nonetheless. The first piece of research referenced was from a team at Copenhagen University Hospital. Published in the *American Journal of Epidemiology* in 2010, the study of 2554 young Danish men looked at the effects of

caffeinated beverages on semen quality. They found that men that drank more than fourteen 500ml bottles of cola per week had sperm counts 30% lower than men who did not drink cola. This difference did not occur with tea or coffee. The authors did note that men drinking a lot of cola also had poorer diets and lifestyles. The second publication referenced is from Nicolaus Copernicus University in Poland, published in 2011 in the *Central European Journal of Urology*. This was a review piece, examining the potential role of sugary drinks in the pathogenesis of erectile dysfunction

(ED). We know that diabetes contributes to ED and therefore the metabolic effects of excess sugar consumption would presumably contribute as well. The authors concluded that whilst there is no definite evidence of this in humans, there is data from animal studies which suggests this is, as would be assumed, the case. Whilst patients, understandably, are often looking for a simple and quick 'fix' (stop drinking this / eat more of that) what these publications actually highlighted is that an all-round healthy diet and lifestyle is what counts.

Could salmonella be the secret to beating cancer? 'Game-changing' research shows harmless strain of bacteria may shrink prostate tumours

The Mail Online – 5 July 2016

The *Daily Mail* reports on a press release from Swansea University about the work of Professor Paul Dyson and Dr Clare Morgan. They have completed an initial pilot study and are now moving their research forward with support from Cancer Research UK through the CRUK Pioneer Award Scheme. Prof Dyson and Dr Morgan's work revolves around RNA interference (RNAi). RNA is ribonucleic acid, which is effectively a single strand of DNA material. RNA interference is the use of RNA molecules / strands to elicit effects with living cells, usually by destroying or blocking (interfering) messenger RNA that works with the cell nucleus to turn the effects of certain genes on. In theory, if you have a cancer cell where a mutated gene is producing rapid cell growth and division – you could effectively turn this gene off as long as you have the correct RNAi to 'interfere' with the messenger RNA that triggers that growth and division gene. The Swansea team is using *Salmonella Typhimurium*. This particular bacterium has the ability to secrete small signalling molecules. It has been proven for a few years that they can be made to secrete RNAi's, but the direct use of these bacteria against a specific cancer (in this case prostate) has never been looked at before. I would stress that this research is still a long way from human trials, but is certainly one to watch.

The life-like robotic BOTTOM that could help doctors learn how to feel prostate cancer

Daily Express – 21 April 2016

This story details the exploits of Drs Granados and Bello at Imperial College London. They have produced a detailed and impressive silicone rectum based on MRI scans of real human rectums and prostates. Their rectum also has robotics to simulate tone and allow measurement of how hard the examiner is poking; so that people learning digital rectal examination (DRE) can be guided to perfect their technique. The technology also incorporates 3D glasses to be able to watch your examination in real-time on a video screen. The technology is extremely impressive, but the truth is that it is not particularly useful to a urologist at this stage. I understand though that as the technology for medical simulation and haptics (touch interfaces with computers) is progressing, you need to perfect something simple like a DRE before you can attempt a full haptic simulator for an open nephrectomy! Reading this though, I could not help but think of one of my previous urology consultants who was very keen that I understood that: "a DRE can only ever tell you two things for certain . . . 1. that you've got a finger; and 2. that the patient has a rectum."



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