

Dr Stuttaford's Surgery (from The Oldie, Issue 255, April 2010, p.45)

Watercolour for beginners

The depth of colour of urine depends on its concentration. On a hot day someone who has been exercising hard without drinking much water will have urine the colour of Lucozade; in cooler weather, a person who has had plenty of fluids before a leisurely stroll to the office will have pale, straw-coloured urine resembling champagne. Both are normal: the difference merely reflects the circumstances. The aim should be to keep well-hydrated. There is no better way of judging this than by drinking enough to keep urine champagne-coloured. Thirst is also an excellent guide to hydration.

Before doctors had access to X-rays, scanners and pathology labs and every GP had dipsticks to detect sugar in the urine, careful examination of it was essential. Hippocrates taught that urine should be held to the light, smelled and tasted. Many forms of jaundice turn urine as dark a brown as a heavy beer and even the froth on the urine of a jaundiced person is brown. In diabetes urine tastes sweet and is almost as pale as water. Liver for dinner will turn urine bright yellow – but not as bright a yellow as vitamin B tablets. Laxatives containing methylene blue turn the urine a disturbing green. If a copious quantity of alcohol is consumed after taking this laxative the combination makes the urine so vividly green that all but the most phlegmatic rush to their doctor. Some other drugs may also give urine a greenish hue, including the well known antidepressant amitriptyline.

Many drugs turn urine brown, including laxatives containing cascara or senna, some treatments for high blood pressure and the antibiotic rifampicin, commonly given to treat TB and sometimes used to deal with chlamydial infections or gonorrhoea. Salicylates, a standby for GPs in the past when treating joint pains, and still used for other troubles, can turn urine a golden brown. None of these drug-induced colour changes matter. Nor does it matter if the urine is turned cloudy white by phosphates. However the green effect induced by amitriptyline needs to be distinguished by the green caused by the pseudomonas bacteria, just as white pus in urine needs to be differentiated from the benign phosphates.

Blood in the urine (haematuria) is important and must be investigated (even if the blood cells can only be seen under a microscope) however pale its shade. Beetroot also colours urine red, though the red is more a magenta colour, like cherry brandy. If urine is purple it is probably because it has collected overnight in the plastic bag of a catheterised patient and bacteria in the urine have reacted with the plastic. However purplish-brown urine may suggest porphyria.

Asparagus gives urine a distinctive smell, and so may some bacteria. Hereditary metabolic diseases affecting protein metabolism can give urine a variety of smells ranging from the odour of smelly feet to the sweet smell of maple syrup.