Your questions on diet and nutrition answered by Andrew Hamilton BSc Hons MRSC ACSM

Q Dear Andrew
Over the years, I've suffered from bouts of mild depression so I'm considering buying some St John's Wort herbal capsules. Can you tell me how effective this supplement is and also what 'standardised' means, which appears on the labels of some products?
Many thanks,
Tania Bradbury, Redcar, Teeside

A Dear Tania
Many herbal supplements on the market fail to deliver the benefits they claim, but St John's Wort is not one of them. Although a few studies have failed to find any benefits of taking St John's Wort to relieve depression, the balance of evidence suggests that in mild to moderate depression, it can be as effective as some anti-depressant medication and without the side-effects.

The major active anti-depressive constituents in St John's Wort are thought to be two compounds known as hyperforin and hypericin; standardisation is a process whereby the herb capsules you take are formulated so that they contain a guaranteed amount of these active ingredients (the bits that work!). An un-standardised product may or may not contain significant levels of the active ingredients, so as a rule of thumb, it's always best to pay a little extra and buy a standardised supplement because you know what you're getting. However, a word of caution; St John's Wort should not be taken in conjunction with any other anti-depressant medication and in some people, it can produce 'photosensitivity', where the skin becomes sensitive to sunlight exposure. If in any doubt, speak to your GP first.

Q Dear Andrew
I'm a fitness instructor and need to assess my clients' body fat % on a regular basis. Which is more accurate for monitoring body fat – a bioimpedance machine or a pair of skinfold callipers?
Appreciate your advice,
Rob Collins, Birmingham

A Dear Rob
Bioimpedance technology has come on in leaps and bounds in recent years, especially the equations that are used to derive body fat % from electrical impedance measurements. However, this technology still needs to be used with care; to obtain accurate and repeatable results, your subjects should be well hydrated whenever you take measurements. You also need to be aware that for extreme body types (eg very lean and muscular or very obese), this technology can struggle to give accurate results.

Skinfold callipers on the other hand don't suffer from these potential drawbacks, but to get accurate results requires very precise measuring techniques on behalf of the technician (that's you!). If you haven't had specific training in this respect, it's definitely something I'd recommend. One advantage of measuring skinfold thicknesses using callipers is that you are measuring subcutaneous fat directly. This makes it very handy for measuring changes in fat levels. For example, if after exercise and dietary advice, you find that your client's triceps skinfold measurement has dropped from 19mm to 17mm, you can be pretty sure that he or she has definitely lost fat, even though the change is small. The same cannot be said of bioimpedance technology as small changes in calculated body fat could just be down to subtle changes in hydration status. This explains why skinfold callipers remain popular with coaches monitoring fat levels in their athletes.

write in write now

If you have a question on diet or nutrition whether it's just simply what's the best formula for hydration or a more complex question on the best diet to follow to reduce cholesterol, we would love to hear from you.

Please write to: Ultra-Fit Q&A, Ultra-Fit Magazine, Champions House, 5 Princes Street, Penzance, Cornwall TR18 2NL or email editor@ultra-fitmagazine.com

Q Dear Andrew
I was reading a nutrition article where the term 'nutrient density' was used repeatedly. Could you explain exactly what this means in plain English and also why it seems to be so important?
Thanks in anticipation,
Rosy Tate, Bolton, Lancashire

A Dear Rosy
The term 'nutrient density' refers to the amount of nutrients present in a food relative to its calorific value. For example food such as fresh fruits and vegetables, fresh fish and lean cuts of meat etc. contain high levels of vitamins and minerals yet relatively few calories per gram consumed, so are considered nutrient dense. However, sugary, refined and processed foods, or foods that contain high levels of added fat provide lots of calories yet not much in the way of nutrients, so are classed as nutrient poor.

Nutrient density is a very important concept because regardless of how many calories we consume, our bodies require a certain daily minimum level of nutrient intake for optimum function. Eat a nutrient dense diet and you're much more likely to get that level of nutrient intake. Eat a nutrient poor diet, and unless you eat huge amounts of calories (in which case weight gain inevitably follows!), you won't get that minimum level of nutrition required. In fact, using the government's own figures, you can show that once your calorie intake falls to around 1,700 per day, it's very hard to get optimum intakes of nutrients such as calcium, zinc, iron and magnesium unless your diet is very nutrient dense. Those on a calorie-restricted diet therefore should ensure that their diet is as nutrient dense as possible and avoid consuming processed and refined foods!

Andrew Hamilton BSc Hons MRSC ACSM is a member of the Royal Society of Chemistry, the American College of Sports Medicine, a consultant to the fitness industry, and a writer specialising in sport and performance nutrition.