YOU ARE WHAT YOU EAT ...
BUT CAREFUL WHO SAYS SO

AUTHOR'S BIO

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I eat, therefore I am… a nutritionist. If it were really that simple, we'd all be experts by now. It seems like every time we turn on the television or open a magazine, there's some self-proclaimed health guru telling us what we should and shouldn't eat; try this diet, take that supplement. But how can we know who to listen to?

SIFTING THROUGH THE SCIENCE

The sheer volume of available information is overwhelming, and it's no easy task sifting through the claims and determining which have merit and which are nothing more than hollow marketing promises. As health and fitness professionals, our clients look up to us as the real experts, so we need to base our recommendations on something more than conjecture and opinion. The following checklist (Table A) is a valuable tool for fitness professionals when evaluating the science behind nutritional research claims. Keep a copy of this list to hand and refer to it when considering new research findings.

TABLE A: Checklist for scrutinising scientific research

☐	Number of studies	Consider how many studies were performed. A single study might suggest efficacy, but numerous studies conducted by a variety of researchers from independent labs without vested interests would hold more weight.
☐	Number of subjects	The higher the number of subjects in the study, the better. More subjects give a greater degree of statistical power. That is, we can say with reasonable confidence that the results were due to the intervention and not to random chance.
☐	Dosage	Look for consistency in the dosages employed in the studies and what is found in commercially available diets/products. If large dosages were used in the studies, say 1000mg, then how does this compare to the comparatively small dosages (i.e. 10mg) used in commercial products? We need to compare 'apples with apples' and 'oranges with oranges'.
☐	Purity	In the case of dietary supplements, many nutrition products are cocktails comprised of a number of ingredients. If a study was conducted on just one ingredient, then it is difficult to confirm that a mixed commercial product would yield the same results. Cross-ingredient interactions might potentiate the effect and pose safety issues as was the case with combined herbal preparations of ma huang (ephedra) and guarana (caffeine).
☐	Population group	One size does not fit all. Look at the population group upon which the research was conducted and consider how it applies to real life situations. For example, it is difficult to apply results from a study on young, university-level female athletes to bed-ridden, morbidly obese, middle aged diabetic women since their metabolisms would be markedly different.
☐	Experimental conditions	Consider how 'life-like' the experimental conditions were. For example, a diet study conducted on elderly cardiac patients living in a metabolic ward for a month would reflect very different conditions to a young, free-living adult who is subject to a variety of real-life factors.
☐	Protocol	Appropriate methodological controls help to ensure that the results are due to the intervention and not to random chance. Ideally, a study should be randomised, controlled, and, when appropriate, double blind (neither the subjects nor investigators know who has received the experimental or control intervention).
☐	Peer-reviewed	Confirm that the studies were published in reputable peer-reviewed journals. While even this is not a 100 per cent guarantee, it at least confers a higher level of academic scrutiny to minimise bias and ensures the integrity of the research.

IF YOU CAN'T CONVINCE 'EM, CONFUSE 'EM

While claims based on science are always preferred, many diet book authors and product manufacturers are determined not to let the truth get in the way of a good marketing campaign. Clearly not everyone's a research scientist, but we all have a built-in boloney detector that can help keep us from getting taken for a ride. Photocopy the following quick reference checklist (Table B) and give it to your clients.

As health and fitness professionals, we are the 'gate keepers' between our clients and the multitude of new diets and nutrition products entering the market. We are bombarded by an incessant mélange of both fact and fiction, and it is our responsibility to view each through the lens of science in order to discern the difference. We should never maintain a dismissive attitude because science is always changing. What we believe to be false today may be proven true tomorrow, or vice-versa. Clearly we need to keep an open mind, but not so open that our brains fall out! N

TABLE B: Quick reference guide for evaluating popular health claims

☐	Too good to be true	The age-old adage 'if it sounds too good to be true, then it probably is' is true in most cases. Often the repeating of lofty, seemingly unrealistic claims will cause you to lower your guard just long enough to make you lift the phone and surrender your credit card details. Always do your homework and thoroughly investigate all health products.
☐	Testimonials	While a heart-wrenching testimonial makes for great late-night infomercial viewing, this is not a guarantee of efficacy. Testimonials do not separate cause and effect from coincidence. For example, if someone begins taking a 'fat-burning' supplement while exercising every day for 3 hours per day, then it's difficult to conclusively ascribe those results to the pill or the radical change in exercise levels.
☐	Terminology	The use of trendy buzz words is not an accident. Marketing research focus groups are explicitly conducted to determine which terms resonate with consumers and will likely translate to greater sales. For example, the term 'natural' has been associated with safe and effective in the eyes of most consumers, yet even natural remedies may carry potential health risks. After all, even arsenic and cobra venom are naturally occurring substances!
☐	No effort required	Humans are pleasure seekers and pain avoiders and will avoid logging the hard yards if at all possible. Beware of any diet, supplement, or health product that claims quick, easy results. It took us nearly a century to reach these epidemic levels of obesity and disease and it certainly won't go away overnight. Diet books have claimed to have the 'secret' to health for over 50 years – but if they worked in the first place we'd all be slim and svelte by now.
☐	Strictly business	Advertising is meant to do one thing: sell product. Altered, airbrushed images, changes in lighting, body positioning and body angle all give the appearance of a miracle transformation. Again, marketing materials are meant to sell, not inform.
☐	Confusing jargon	Sometimes advertising is littered with scientific-sounding jargon. Glossy images of confusing biochemical pathways mean nothing to most people, yet it seemingly confers a level of scientific scrutiny. For example, because a substance is part of a fat-burning metabolic pathway does not mean that taking it as a supplement will enhance the process.
☐	Out of context claims	Sometimes it's not what you're told, rather it's what you're not told. Be sure to evaluate the original research from which marketing claims are extracted before placing faith in any product. For example, 'statistically significant' fat loss in the context of a research article may, in fact, be scientifically valid, but in the real world might only translate to a half kilo difference – not quite the 50 kilos you were expecting to lose.
☐	Persecuted guru	Beware of self-proclaimed health gurus who trumpet the notion that the 'establishment' is trying to persecute them. If their theories are valid, then in time they will stand up to scientific scrutiny and eventually be vindicated. However, in the case of the vast majority, there is a reason why you've never heard of them and a reason why next year they'll be off the health radar.