

Obesity: A Very Individual Conundrum

Lorraine Nicolle

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What's going on with obesity? We know the condition is dangerous: it increases the risk of heart disease, diabetes^{1,2} and certain cancers^{3,4} and, world-wide, causes an estimated 150,000 deaths every month⁵. The regular dissemination of such doom-laden statistics means that public awareness of the problem has never been higher. So why is it that obesity levels in England have trebled in the last 20 years⁶ and are predicted to rise to the staggering figure of one in four adults by the year 2010⁷?

One of the reasons may be that we have been focusing primarily on the condition itself, rather than on the individual sufferers. Fundamentally, obesity is the result of excess energy consumption (food and drink) over expenditure (metabolic and physical activity)⁸. But both of these are influenced by a person's body chemistry. Consequently, we cannot expect an obese person to become slim without first understanding the

unique combination of factors that got him/her there in the first place. This is exactly the approach that is deployed by the Nutritional Therapist (NT).

Getting to know the individual

The NT begins by taking a comprehensive case history, including any signs and symptoms of sub-optimal health. Dietary information is gathered from a food diary and an in-depth, non-judgemental interview. But, as obese people habitually eat significantly more than they claim^{9,10}, the NT will usually also use more objective measures of health, such as laboratory tests (fig. 1). These can also identify biochemical imbalances that lead to sugar and starch cravings. And these are well worth knowing about, considering that we can synthesise as much as 15-20g of fat per day, simply by eating more carbohydrates than we need¹¹!

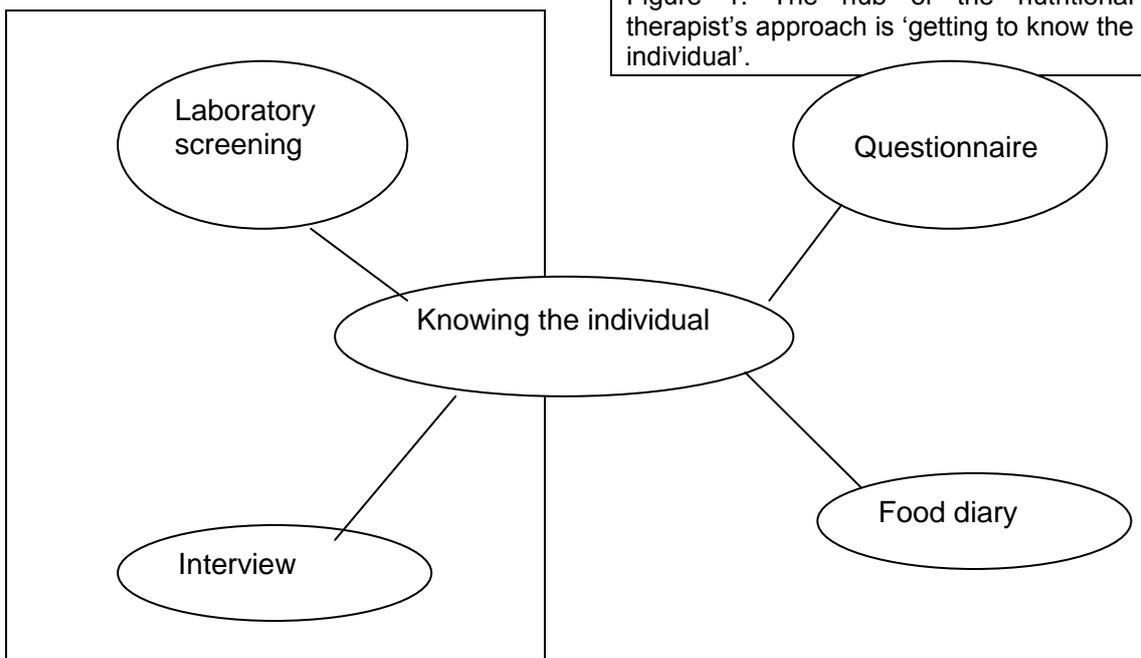


Figure 1: The hub of the nutritional therapist's approach is 'getting to know the individual'.

Biochemical imbalances

What sort of biochemical imbalances can hinder weight loss?

- **Blood sugar**

Abnormally low blood sugar levels (hypoglycaemia) leave the brain believing it is starving. We respond by eating sugars and starches. But this causes a surge in the hormone insulin, shunting too much sugar back into the cells and returning us to the hypoglycaemic state of craving yet more starch.

Moreover, if this situation goes on for long enough, the cellular uptake of blood sugar for energy production becomes blunted, leaving even more sugar available for deposition in fatty tissue. This is 'insulin resistance'. And if that wasn't bad enough, it now seems that the more fat we are carrying, the greater our risk of developing insulin resistance in the first place².

These problems can be diagnosed through blood tests of fasting insulin and glucose¹². A low glycaemic index (GI) diet (see box) can help to keep blood sugar levels steady^{13,14,15}. Increasing certain nutrients, such as the omega-3 fats found in oily fish, may improve insulin resistance^{16,17}.

- **Brain chemicals**

The brain's 'happy' chemical, serotonin, is typically low in obese individuals with a history of attempted weight loss, as its precursor, tryptophan, is one of the first nutrients to be depleted by dieting¹⁸. The carbohydrate bingeing that results may be an unconscious attempt to correct the deficiency, as carbohydrates are needed to carry serotonin's raw materials into the brain¹⁹.

A urine test for a substance called 5-Hydroxyindoleacetate can indicate serotonin levels²⁰. If serotonin is low, supplementing 5-hydroxytryptophan may reduce

appetite²¹, even without imposed dietary restrictions²².

- **Hormones**

The thyroid regulates calorie-burning and a well-established effect of an underfunctioning thyroid is significant weight gain. A blood test can establish the levels of thyroid hormones, which, if found to be sub-optimal, can often be improved with therapeutic doses of nutrients such as iodine²³, iron and selenium²⁴.

Meanwhile, the more abdominal fat you carry, the more sex and stress hormones you produce². These include oestrogen and cortisol. Oestrogen encourages fat storage, and, in excess, can antagonise thyroid hormone²⁵. Excess cortisol can lead to severe blood sugar disruption and the associated cravings.

Levels of these hormones can be determined from saliva tests^{26,27}. A low-GI diet can help to improve hormonal balance, especially with the manipulation of foods (like soy²⁸), that may affect oestrogen levels, and the supplementation of certain micronutrients, such as zinc and vitamin B6.

Other imbalances that can lead to overeating and obesity include:

- food allergies or sensitivities²⁹.
- addictions to foods that raise levels of endorphins, the body's natural pleasure providers^{30,31}.
- an overgrowth of yeasts or pathogenic bacteria in the digestive tract
- nutritional deficiencies. These include the 'healthy' fats. Consuming more fish oil, for example, can reduce comfort eating³². Blood tests can reveal the specific proportions of fatty acids in the individual's circulation and cell membranes. The NT can then manipulate the dietary fat intake to provide optimum ratios for weight loss, rather than a reduction in fats *per se*

Joined-up patient care

The NT does not expect her approach to work in isolation. Psychological support^{33,34} and behavioural intervention, such as stress management and regular exercise^{8,35}, are equally as important and the NT will refer the client to appropriate specialists in these areas.

The Bedrock of the Protocol: A Low Energy, Low Glycaemic, Wholefood Eating Plan

A low glycaemic index (GI) diet comprises foods that have minimal effects on blood sugar and insulin levels. This controls appetite, promotes weight loss^{36,37,38} and reduces the risk of diabetes and heart disease^{13,39}, to which obese people are prone. Even greater weight loss may occur if the diet is adapted to consist almost entirely of low energy, nutrient-dense foods⁴⁰.

Such a diet would include fresh fruit and vegetables, fish, eggs, poultry, pulses, beans, seeds and small amounts of whole grains and unprocessed olive and seed oils. Sugar, refined and processed foods, saturated, hydrogenated and trans-fats, tea, coffee, alcohol and carbohydrate-only meals are kept to the absolute minimum. Meals are small, but regular. Separate studies have also found dietary fibre⁴¹, a high protein-to-carbohydrate ratio⁴² and high protein breakfasts⁴³ (all elements of a low-GI diet), to be helpful.

The nutritional protocol

The bedrock of the NT's plan is likely to be a low-energy, low-GI, wholefood diet (see box). This is then tailored to the individual by adding specific nutrient interventions to address any pre-identified biochemical imbalances (like those outlined above). Crucially, the plan will be constructed by negotiation, rather than prescription: Statistics show that most people seem to regain the weight they have lost through dieting^{44,45} – hence the importance of the plan not causing the individual to feel deprived. The NT

may also provide practical guidelines, such as menus and pictorial representations of appropriate meals, snacks and portion sizes.

Ultimately, there is no miracle cure for obesity. But if just a small part of the investment in searching for a 'cure' could be diverted to more individualised patient care, more people may lose weight and keep it off. Perhaps we would then begin to see a fall in the shocking obesity-related morbidity figures.

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