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REFERENCES

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This article was peer-reviewed by Laura Thomas (PhD, RNutr). Laura is a Registered Nutritionist who specialises in non-diet nutrition and intuitive eating. She also hosts the popular 'Don't Salt My Game' podcast and runs regular online courses for both healthcare professionals and the general public about intuitive eating.

NON-DIET NUTRITION: EXAMINING THE EVIDENCE

This article will discuss the evidence base related to non-diet (ND) nutrition which is gaining popularity both amongst healthcare professionals and in the media.

Modern culture puts a strong emphasis on dieting in order to achieve an idealised weight. Many people feel that weight defines health status; which is compounded by the fact that traditional nutrition and dietetic practice is also very weight-centric. Weight can also be associated with personality traits, overall success and happiness; whether that be at a conscious or subconscious level.

ND nutrition takes the focus away from weight and dieting and instead uses a holistic approach to encourage healthy behaviours and overall wellbeing. This approach celebrates weight inclusivity and body positivity. Therefore, weight is not measured during ND consultations and, also, weight stigma is opposed. The ND approach highlights too, that dieting is associated with weight cycling and health problems; including psychological problems, disordered eating and metabolic issues (as discussed below).

Intuitive eating is an important part of the ND approach. This technique uses specific tools to teach clients how to listen and respond to their own hunger and fullness cues, as well as their psychological needs. 'Gentle nutrition' is a concept within intuitive eating which encourages clients to nourish their body with satisfying food, without imposing food rules or giving moral superiority to any type of food.



NON-DIET NUTRITION AND HEALTH OUTCOMES

There is contention about whether weight should be viewed as a key marker of health. Many people feel that there is a clear link between weight and chronic disease. However, some scientists feel that more research is needed to establish whether adipose tissue itself poses a health risk and to what degree this may affect health.¹

A systematic review by Clifford et al (2015) of ND interventions, reported no evidence of significant weight gain, worsened blood pressure, worsened cholesterol, or worsened blood glucose levels as a result of this approach.² Two studies in the review also demonstrated larger improvements in biochemistry as a result of the ND approach. A more recent Canadian study which used a healthy lifestyle intervention aligned with Health at Every Size (HAES), found a significant increase in intuitive eating, as well as improvements in overall diet quality as a result of the ND intervention.³ However, the researchers highlighted that more studies are needed to investigate the link between intuitive eating and diet quality.

There is some limited evidence from randomised controlled trials that mindful eating may improve the quality of life of adults with Type 2 diabetes, as well as self-management of the condition.^{4,5} There is also some evidence that intuitive eating is associated with improvements in the

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following: HbA1c levels in adolescents with Type 1 diabetes;⁶ glycaemic control in women with gestational diabetes (when combined with dietary education and yoga);⁷ glycaemic control in non-diabetic people;⁸ insulin sensitivity; and glycaemic control and HbA1c in those with Type 2 diabetes.⁹ However, as this is still a relatively new concept, more research is needed to see whether intuitive eating is a useful approach on a public health level.¹

Intuitive eating is associated with improvements in psychological health.¹⁰ There is also strong evidence that intuitive eating is beneficial in the treatment of binge eating and binge eating disorder (BED).¹¹⁻¹² Furthermore, Clifford et al (2015) found that ND health interventions significantly reduced disordered eating and depression; as well as improving self-esteem levels.¹

Intuitive eating may have a role in relapse prevention for those with anorexia nervosa.¹³ There is also some preliminary evidence that intuitive eating may be useful for inpatient eating disorder recovery.¹⁴ However, more research is needed to investigate this, especially as this can be counter-productive in the acute treatment phase due to the tendency to ruminate at meal times.¹³⁻¹⁴ Furthermore, Richards et al (2017) highlight that, 'Intuitive eating should never be used as the immediate intervention and dietary model for medical stabilisation and weight restoration'.¹⁴

THE EFFECT OF WEIGHT CYCLING

There is a common claim that 95% of diets lead to substantial weight regain in the long term; which seems to come from a study in 1959.¹⁵ More recent data has found that only 57% of those who participate in weight loss programmes⁴ lose a clinically significant amount of weight (i.e. 5% weight loss).¹⁶ Furthermore, five years after weight loss, individuals appear to regain 79% of

the weight they initially lost on average.¹⁷ It has also been reported that roughly 20-30% of men and 20-55% of women have a history of weight cycling.¹⁸ These high rates of weight cycling may be related to difficulty in adhering to diets in the long term, whereas ND interventions may have higher compliance rates. For example, a six-month randomised controlled trial found that the drop-out rate of the traditional diet group was 41%, compared to 8% in the ND group.¹⁹

Although some observational studies have found that weight cycling is associated with an increased risk of mortality, cardiovascular disease and Type 2 diabetes, overall the evidence is conflicting.¹⁸⁻²² A review of this topic from 2014 concluded that, 'the evidence for an adverse effect of weight cycling appears sparse, if it exists at all'.²²

There does seem to be a consistent association between weight cycling and an increased risk of BED,²³⁻²⁵ but the direction of this relationship isn't entirely clear. The association between weight cycling and other psychological issues, such as depression, is less consistent.²³⁻²⁵ However, a greater risk of psychological harm has been observed in higher weight people who weight cycle.²⁶

There is also conflicting evidence about whether weight cycling itself makes it more difficult to lose weight on subsequent attempts.²⁷⁻²⁸ Interestingly, some studies have found a higher risk of major weight gain with weight cycling among adolescents and among those who begin within the 'normal' BMI category.²⁹⁻³⁰ There also seems to be an increased risk of cardiovascular disease in those in the 'normal' BMI category who weight cycle.¹⁸

Weight cycling may be related to homeostatic feedback systems which maintain weight at a certain 'set point'.³¹ Part of this feedback system is called 'metabolic adaptation', which is a larger than expected reduction in metabolic rate following weight loss (i.e. when the reduction in body mass is taken into account).³² A six-

year study from 2016, the longest study to date investigating metabolic adaptation, (based on *The Biggest Loser* TV show) found that following significant weight loss, the participants' metabolism was approximately 500 calories per day lower than expected.³³ It is suggested that this may occur due to changes in adipose tissue. Hormonal changes may also play a role, as levels of leptin and insulin drop and ghrelin levels increase during weight loss, which is associated with increases in appetite and weight regain in lab studies.³³⁻³⁵ However, there is not enough evidence to suggest that these changes have a direct impact on weight regain following weight loss in free-living humans.³⁵

THE EFFECT OF WEIGHT STIGMA

Studies which associate weight with poor health outcomes often fail to account for the effects of weight stigma. A recent report from the UK All Party Parliamentary Group on Obesity found that 88% of people in the 'obese' weight category reported having been stigmatised, criticised, or abused because of their size.³⁶

Feeling discriminated against due to weight has been associated with a significant increase in: physiological stress (measured as allostatic load), metabolic dysregulation, inflammation, depression and disordered eating; as well as a

reduction in health behaviours.³⁷⁻³⁹ In addition, it has been found that experiencing weight stigma during discussions with healthcare professionals can lead to avoidance of healthcare settings.⁴⁰ Worryingly, weight discrimination has also been associated with increased mortality, even when physical and psychological risk factors were taken into account.⁴¹

CONCLUSION

The ND approach takes a holistic view of health rather than focusing on diets and weight loss. This approach carries a low risk of harm, especially from a psychological point of view; which is particularly important in view of the evidence that weight stigma can significantly contribute to health problems. Research is emerging about the beneficial effects of the ND approach.

There is currently good evidence for the role of intuitive eating for those with disordered eating patterns and for the treatment and prevention of BED. However, more research is needed to examine whether the ND approach is also beneficial in other medical contexts and in a public health setting. Similarly, the effect of weight cycling, increased adipose tissue and the mechanisms related to metabolic adaptation warrant further investigation.

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