Mindfulness in healthy weight and diabetes

Lucy Aphramor

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Article points

1. Mindfulness includes interconnectedness, compassion and non-judgement to oneself. Connected eating relies on listening to body cues and supports a healthy relationship with food and sustained improvements in eating behaviours, clinical outcomes and psychological wellbeing across patient groups.
2. A paradigm approach of health-gain and respect for all (regardless of size) enhances personal wellbeing, reduces health inequalities and advances social justice.
3. A shift from weight management and loss to health-gain and respect for all provides an alternative technique, which is ethical, effective and evidence-based.

Key words

- Connected eating
- Health-gain
- Mindfulness
- Respect for all

Author

Lucy Aphramor is a registered dietitian and founder of Well Founded.

Mindfulness is receiving renewed attention across diverse healthcare disciplines. But what exactly does the term mean, and is it relevant in diabetes and weight management? This article looks at what practitioners need to know about the concept of mindfulness and addresses any concerns that mindful and connected eating (listening to body cues to guide eating) could be harmful if individuals then eat with abandonment. Teaching connected eating and mindfulness in a weight-equitable health-gain paradigm, rather than a weight-loss paradigm, is a practical and ethical technique supported by a strong evidence base. It also meets the NICE requirement for respectful, non-judgemental approaches to weight-management services.

The defining feature of mindfulness practice is noticing something on purpose, in the present moment and without judgement (Kabat-Zinn, 1990; 2004). Mindfulness is an ancient practice and is often taught in structured classes, although it may also be practised less formally as "tuning in" (for example, focussing on our breathing, and when thoughts enter our minds, rather than judging ourselves for being distracted, we let them slip by). As a practice, being fully present in the moment and noticing without judgement can help strengthen the body–mind link.

Over time, mindfulness practice quietens the inner critic and encourages self-compassion (Kabat-Zinn, 1990). Realistic ways to encourage mindfulness practice include "minute meditations", which involve taking a brief moment to be fully present with an action or state of being. Mindfulness can be practiced in any activity; for example, a minute meditation with a cup of coffee could involve consciously and deliberately noticing the physicality of a cup of coffee; the smoothness and heat of the mug in the palm; the sensation of the steam on the skin and nostrils; and the smell of the drink. Other forms of mindfulness practice include guided visualisations, body scans, meditation and some types of yoga and martial arts. Mindfulness practice is not goal orientated; nevertheless, a growing number of studies, albeit some of small scale, show mindful-based interventions can be cost-effective (Shonin et al, 2013) and they are clinically useful in a range of study populations (e.g. Rosenzweig et al, 2007; Kouvonen et al, 2008; Godfrey et al, 2012; Foureur et al, 2013; van Son et al, 2014; Youngwanichsetha et al, 2014; Mindfulness Scotland, 2015; Tak et al, 2015).

A shift in teaching paradigm in diabetes and weight management?

In diabetes and weight management, a shift is underway with dietary-based treatment being reoriented away from teaching cognitive restraint and towards enhancing mindfulness. Advocates of mindfulness argue that the most effective way to help individuals stabilise at their set-point weight and enjoy the dietary and psychological benefits of healthful eating is, paradoxically, to shift clinical focus away from "weight reduction" and towards "health gain". This shift recognises that the "weight-reduction approach" has proved ineffective in achieving weight-loss or long-term dietary improvement for the majority, that it fuels shame and weight stigma and ignores social determinants of health. Strategies for supporting patients in mindfulness, connected eating and internal eating

regulation are introduced in this article as part of a weight-equitable health-gain approach*.

What is mindful eating?

Mindful, or intuitive, eating involves using the body's interoceptive sensitivity as a cue to guide food choices. It refers to the practice of being non-judgementally attentive when eating by tuning in to the food's appearance, flavours, aroma and texture. This same attention is also given to noting body cues in the moment that precede and follow eating or other self-care practices (Tribole and Resch, 2012).

"Mindful eating for weight-loss" is a misnomer; weight-loss is goal orientated and premised on non-acceptance, both of which render it incompatible with mindfulness practice. However, in the literature, mindful eating is taught within both a weight-loss framework and a weight-equitable framework (see *Table 1*).

Mindfulness has been shown to improve glycaemic control in the absence of changes to diet or activity in some small intervention studies (e.g. Rosenzweig et al, 2007).

*In keeping with the shift away from using weight as an independent health marker, the descriptive terms "fat" and "thin" are used instead of "overweight", "obese" and "ideal weight" in this article.

What is connected eating?

Connected eating supports people to rely on body cues from their own personal regulatory systems, as well as using their knowledge, experience and circumstances to guide food choices (Aphramor, 2013a).

As such, connected eating incorporates many well-established features of mindful eating. Most obvious among these are attunement, compassion and legitimising foods (see *Box 1*). Unlike mindful eating, connected eating is always taught from a non-diet or health-gain approach. Other key differences are that connected eating articulates the social and contingent aspects of eating, and offers a framework that more readily integrates cognition and a "Body First™" (Aphramor, 2013a) approach to nutrition science (explained later in this article). Connected eating explicitly articulates the link between physical and emotional hungers.

Relying on internal regulation

In connected eating, body cues from internal regulation such as energy levels, emotions and gut function are taken into account to influence food choices. The internal regulation systems that affect long-term eating behaviours are sensitive to body fat and work to maintain a stable set-

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Table 1. Characteristics of the weight-loss and weight-equitable paradigms.

	Weight loss (Focus on weight management)	Weight equitable (Focus on health gain and body respect for all)
Starting premise	"I should lose weight" (Judgement – incompatible with mindfulness)	"I accept myself as I am"* (Acceptance – consistent with mindfulness)
Locus of control	External Body, mind and social cues are disconnected (Incompatible with mindfulness)	Internal Body, mind and social cues are connected (Consistent with mindfulness)
Weight outcomes	Short-term weight loss Weight fluctuation Long-term weight gain in the majority	Weight-stability at set-point
Long-term health outcomes	Majority show health detriment (Mann et al, 2007)	Health improvement (Bacon and Aphramor, 2011)
Societal outcomes	Size stigma	Size inclusion
Associated eating behaviours	Eating disorder symptomology (e.g. stimulus-, emotional- and binge-eating)	Reduced eating disorder symptomology
Associated psychological outcomes	Shame Reduced mental wellbeing	Self-compassion Enhanced mental well-being
Science-base includes social determinants	No (increases health inequalities)	Yes (promotes health equity)
Critique of usefulness of BMI at individual level	No	Yes

*People do not already have to be at a place of self-acceptance. The starting place can refer to being mindful (i.e. neutrally noting the wish to have a different body, thin privilege or more social power).

Box 1. Characteristics of connected eating.

- "Tuning in" to feelings and emotions, hunger, satiety, appeal of foods and other embodied cues to guide food choices (attunement) rather than relying on rules, nutrition facts or weight-loss goals.
- Using attunement in conjunction with your experience and knowledge to enhance your feelings of wellbeing and congruence (e.g. drinking regularly in the absence of thirst, eating seasonally if this is important to you, awareness of omega 3 intake).
- Eating in a way that connects you to others socially, which may mean food is not the only focus of an occasion.
- Being present in a way that enables you to find pleasure in the experience of eating (the tastes, textures, company, occasion etc.).
- Sometimes eating "on the hoof" without feeling like a failure.
- Identifying emotional and physical drivers for eating.
- Allowing food and eating to meet a range of social, cultural, emotional, nutritional and other needs in a way that enhances health in its widest sense.
- Being compassionate when emotional state or external circumstances disrupt eating.
- Recognising the role and limits of diet in self-care and health-outcomes.
- Relying on a broad scope of evidence to inform practice.

point weight. In a large systematic review, the most consistent long-term effect of disrupting the internal body fat regulation system by dieting was found to be weight gain (Mann et al, 2007). Evidence from the Women's Health Initiative, which involved over 20 000 women keeping a reduced-calorie diet and exercising more for nearly 8 years, showed that the participating women stayed almost the same weight throughout the study period (Howard et al, 2006). The results provide support for the homeostatic efficiency and strength of the set-point weight regulatory system. The system prompting eating can be over-ridden, as an energy deficit leads to weight loss in the short term. Typically, the regulatory system can adjust to ameliorate energy insufficiency, and weight is regained in an attempt to return to the set-point weight (Mann et al, 2007). Although years of restrictive eating can damage the ability to tune into internal signals, it is possible for people to relearn to detect and rely on these signals.

Approaching connected eating in the clinic

Making sense of internal regulation: Reasons for hunger

A useful starting point to mindfulness and connected eating is in supporting people to understand if they are reaching for food to meet mainly biological or mainly emotional needs. This is one of the first stages in moving towards connected eating. Factors such as speed of eating, pleasure derived, awareness of food, associated emotional state before, during and after eating, and timing of last food intake will all help to make sense of eating behaviour.

Biological hunger

There are several tools that can be introduced in the clinic and used in the home-setting to identify mainly biological hunger from mainly physical hunger.

The "hunger-o-meter"

The "hunger-o-meter" enables people to visualise various stages of hunger and fullness and become more atuned to their own body cues. They typically have a scale from 0 (ravenous) to 10 (uncomfortably full [see *Figure 1*]). The hunger-o-meter concept can also be used in conjunction with blood testing (Bacon and Matz, 2010).

The food detective: Hunger for particular foods

Once someone has an understanding of their hunger level, they are ready to explore what would satisfy that hunger.

Connected eating recognises that food is more than fuel, and, when someone eats what they feel like eating, they will feel satisfied. There

can be a period of recalibration as people switch from asking themselves "What should I eat?" to "What do I feel like eating?". Prompts about the physicality of food can help answer this question; for example, "Do they feel like eating something hot or cold, tangy, crunchy…?" (Aphramor, 2013b).

Legitimising foods

Removing barriers to satisfying hunger is integral in supporting people to make choices that meet their needs.

Connected eating teaches people to legitimise all foods. The compulsion to eat particular foods dissipates when restrictions are removed. The evidence suggests that it is the dieter, not the connected eater, who has the urge to "tidy up" the last few pieces of chocolate cake; cognitive restraint associated with dieting is associated with chaotic eating whereas tuning in to body signals supports eating regulation (Bacon and Aphramor, 2011). Legitimising foods and eating in an intuitive and intrinsic way have been shown to be effective in achieving nutritional wellbeing and weight stability, thus preventing the weight gain associated with set point dysregulation in dieting (Outland 2012; Schaefer and Magnuson, 2014). Understandable concerns about the effect of removing food boundaries for people with diabetes have so far been unfounded (Miller et al, 2014).

Emotional hunger

There are strategies within the connected eating paradigm to help people recognise when the drive to eat is mainly emotional and how to develop alternative responses (May and Fletcher, 2012; Aphramor, 2013a). As someone gains insight into why they eat in the absence of physical hunger – and then relinquishes self-judgement – their eating behaviour can begin to make more sense to them. This increased sense of agency and self-compassion, can lead to a reduction in binge eating, as well as enhanced overall wellbeing.

Drivers to action: Relinquishing judgement

Teaching people what they should and should not eat is a cornerstone of cognitive restraint and diet mentality thinking. This mode of teaching

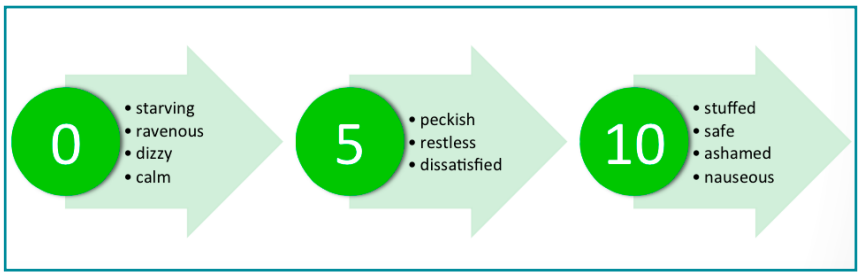

Figure 1. The hunger-o-meter (Aphramor, 2013b).

nutrition constructs hierarchical categories where some foods and body shapes are good or healthy and others are bad or unhealthy. There is no acceptance of body diversity, food is reduced to nutrients (often simply to calories) and there is no room for emotions. Although the goal is well intentioned, the driver for such action is judgement. Judgement gives rise to the critical self-talk and body dissatisfaction that is familiar to dieters. It is this judgement that fuels the eat-judge-distress cycle. Picture a scenario where Pat binges because she is angry and then judges herself harshly for eating (and maybe also for being angry). She may compensate by starving, but soon enough she will be driven to food from hunger or difficult emotions. She may also feel guilty for her weight and blame herself for lacking the willpower to eat sensibly.

Drivers to action: Compassion and acceptance

Relinquishing judgement offers a way to stop the eat-judge-distress cycle and can stabilise eating (Tylka et al 2014; see *Figure 2*). It may help for patients to think of "being kindful" or "kindful eating" (Aphramor, 2013b) when they feel caught in the eat-judge-distress cycle. Now picture a scenario where Pat eats because she is angry and instead of judging herself for eating or being angry, she extends the same kindness to herself that she would to a friend. She accepts her emotions without judgement and is compassionate towards herself. She feels ambivalent about her weight and accepts this ambivalence. She reminds herself that whatever she eats or weighs, she is worthy of respect. She does not blame herself for being angry, after all, emotions are not "wrong". She does not judge herself for not loving her body 24/7 even though she would like to.

Page points

1. Once someone has an understanding for their hunger level they are ready to explore what would satisfy that hunger.
2. Removing barriers to satisfying hunger is integral in supporting people to make choices that meet their needs.
3. There are strategies within the connected eating paradigm to help people recognise when the drive to eat is mainly emotional and there are strategies to help develop alternative responses.

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1. Other considerations such as budget, availability, time, cooking facilities, ability, allergies and others' wishes may affect food choices.
2. Encouraging people to be attentive to their own embodied experience of eating certain foods does not make nutritional science redundant.
3. Reorienting individuals' goals away from weight loss and towards improved wellbeing can improve health and may enable weight to stabilise at individuals' set-points.

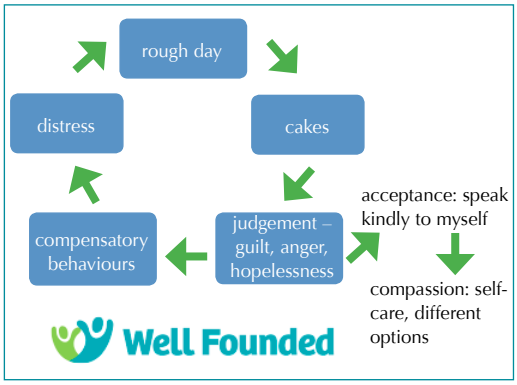

Figure 2. Compassion and acceptance in breaking the eat-judge-distress cycle.

Other considerations: Factors other than hunger affecting food choice

Individuals may have considerations other than hunger when making food choices, such as budget, availability, time, cooking facilities, ability, allergies and others' wishes. Personal history, politics and exposure to advertising will also exert an effect. It can be useful to explore the reasons for food choices because it may be that someone recognises how far any real choice is circumscribed by circumstance. As practitioners we can validate their experience and emotions and support them in self-compassion.

A place for nutritional education: A "Body First™" approach

Encouraging people to be attentive to their own embodied experience of eating certain foods does not make nutritional science redundant. Understanding nutritional science accurately can help people enhance their quality of life, but the important point in connected eating is that the science is taught in a way that reinforces peoples' understanding of how it affects them rather than in an abstract, disconnected way. This means adopting a "Body First™" approach (Aphramor, 2013b). In this approach the body's response is established first and then science is used to explain these responses. For example, someone is aware that when they eat plenty of fruits, vegetables or legumes they experience ease of bowel movements and steady energy. This can be explained by the fibre content and low glycaemic index of these foods. Another example may be that someone notes that skipping meals leads to irritability, poor concentration, low-energy levels and the urge to binge. One possible explanation for this could be spikes and dips in blood glucose.

Nutritional fact-giving can be helpful in some instances, and by eliciting people's existing knowledge and keeping actual foods and meals in mind (rather than reverting to talk of abstract nutrients and a didactic teaching style), it is possible to support individuals to integrate their existing knowledge with science in a way that is meaningful to them (Aphramor, 2013a).

Health gain versus weight loss

Proponents of connected eating are against the pursuit of weight loss but not against individuals losing weight; when weight loss occurs, it is seen as a secondary outcome to becoming more mindful. This might read like semantic wrangling, but for the patient who alternates between periods of deprivation with periods of eating with abandonment the message, "let's pack away the scales and support you to learn to listen to your appetite and nourish yourself", offers a lifeline of hope. This does not mean abandoning health goals, but rather thinking about health and health measurement in ways other than the number on the scales. Health can be measured in terms of dietary quality, HbA_{1c}, blood pressure, fitness, mental wellbeing and eating disorder symptomology for example. Reminding patients that health gain can arise from behavioural change with or without weight loss, and that people of all sizes are worthy of respect, can further support them in sustaining self-care. It is also useful to remember that health is strongly influenced by non-lifestyle factors such as attachment (a child's bond with its primary carer) and social class (Bacon and Aphramor, 2014).

When weight-focused goals are prioritised, there is anecdotal support that a minority of patients will lose weight and maintain it. However, the evidence shows that the majority of individuals who have tried to lose weight will regain it over time and become caught in a yo-yo dieting cycle (Mann et al, 2007) that is both physically and psychologically damaging. Reorienting individuals' goals away from weight loss and towards improved wellbeing can improve health and may enable weight to stabilise at individuals' set-points (Bacon and Aphramor, 2011).

Body respect

There may be concern that focusing on health and respect for all, rather than emphasising weight loss, is tantamount to giving up on fat individuals or that diet and activity do not matter. This is a misunderstanding: the message that "everybody deserves respect" and "enhanced health behaviours can improve wellbeing in people of all sizes" enables people to drop an ineffective approach in order to adopt an effective one (Bacon and Aphramor, 2011; Tykla et al, 2014). The move to promoting health and respect for all sizes (known in the literature as Health at Every Size® or HAES®) offers an evidence-based approach that addresses the impact of living with size biases and other stigma on people's metabolic fitness, health behaviours, sense of self and life opportunity.

Research into salutogenesis (an approach focusing on the factors that support human health and well-being, rather than on factors that cause disease) recognises the prerequisite role of self-worth in improved wellbeing (Antonovsky, 1996). In other words, the best way to promote wellbeing is to support people to value and take care of themselves as they are right now. This is not the same as saying everybody is healthy whatever their weight or suggesting there is no link between weight and health.

The bigger picture of health: Stigma

The NICE obesity guidelines advise that referral and discussions around weight management services should be respectful and non-judgemental (NICE, 2014). Researchers and organisations warn that using weight as an independent marker of health leads to size stigma (Holm, 2007; Daníelsdóttir et al, 2009). Weight stigma has been associated with greater biochemical stress mediated by cortisol (Tomiyama et al, 2014), and it is possible that weight stigma may contribute to any poor health associated with fatness. It is incumbent on the healthcare practitioner to recognise the very real challenges that living in a fatter body may present and to be confident in addressing issues of body shame and size (and other) stigma with individuals.

The bigger picture of health: Social determinants

The HAES® philosophy also considers the social determinants of health (the conditions in which people are born, grow, live, work and age [World Health Organization, 2012]). While health behaviours and mindfulness can make a difference to someone's quality of life and metabolic fitness, ultimately, factors such as the stress of poverty and stigma may impact health outcomes more (Marmot, 2006; Raphael et al, 2010). Integrating data on social determinants is especially significant to diabetes care given the strong association between social disadvantage and type 2 diabetes, even when BMI and activity are controlled for (Raphael et al, 2010).

At its simplest, letting individuals know that life experiences have been implicated in the development of diabetes (Raphael et al, 2010) can help to reduce guilt, improve resilience and facilitate engagement. For example, if a patient is worried about their health because they have to rely on the food bank and have restricted food choices, the healthcare professional can provide emotional support and help them to relinquish self-blame by highlighting their efforts in a difficult situation and validating their strength as well as their struggles. Being supported by a caring listener can, in itself, enhance wellbeing. As a healthcare practitioner, refraining from discussions about diet and weight loss does not mean that you are doing nothing – quite the contrary. Research in psychology and public health attests to how the sense of dignity, mutuality and trust fostered when people feel respected, heard and understood can impact self-efficacy, health and health-seeking behaviour (Antonovsky, 1996; Jordan et al, 2004). The research consistently finds a role for a reorientation of policy and practitioner education that is grounded in supporting social change.

Conclusion

Mindfulness practice is associated with improvements in many dimensions of wellbeing. Although not directly encouraging improvements in health behaviours, such as around nutrition and exercise, mindfulness is likely to foster improved self-care and influence such behaviours. Connected and mindful eating involves using body, mind and social cues to guide food choices, and supports weight stability, metabolic fitness, and psychological and nutritional wellbeing (Bacon and Aphramor, 2011). More research into mindfulness

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and connected eating in diabetes care and with UK populations is warranted, and initiatives that identify and support practitioners' training needs are recommended. That said, the current evidence supports a shift in focus from cognitive restraint and weight-goals to mindfulness, health-goals and body respect for all. There are immediate practice implications and initiatives that can be implemented. ■

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