



the british
psychological society
promoting excellence in psychology

GUIDANCE

Covid-19 public health road map: Eating behaviour

AIM OF THIS DOCUMENT

This roadmap aims to support health officials to consider changes to eating behaviour that may have occurred during the Covid-19 pandemic and to use psychologically-informed behaviour change approaches to optimise health improvement and mitigate negative eating patterns. It will focus on eating a balanced diet, as opposed to eating behaviours related to disordered eating. This guidance should be used alongside the *Achieving Behaviour Change (ABC) guide*¹ for local government and partners, and the *Improving People's Health behavioural and social science* strategy².

BEHAVIOURAL SCIENCE RECOMMENDATIONS

Eating a balanced diet can benefit both physical and psychological health. Eating behaviour is influenced by what we know and what we can do (capability); the people around us and our physical environment (opportunity); and our beliefs, what we want, how we see ourselves, how we regulate our emotions, and our habits (motivation). To support possible changes to eating behaviour since Covid-19:

Consider whether any disruption to daily routines, finances, access to food, storage/cooking facilities and/or social support may have influenced people's ability to eat a balanced diet.

Where needed, proactively put in place strategies to mitigate influences on eating behaviour (e.g. food provision for those with lack of access).

Promote alternative ways to regulate emotion if eating behaviour has been influenced (e.g. due to anxiety, low mood or boredom).

Facilitate planning of how to eat a balanced diet in the event of unpredictable circumstances (e.g. ensuring food essentials are available in the home if there is a need to self-isolate/quarantine).

Promote eating a balanced diet for the benefit of physical health and psychological wellbeing, particularly in relation to boosting the immune system.

We recommend following the British Psychological Society's *Behavioural Science and Disease Prevention Psychological Guidance*³ to shape any policy and/or communications strategy.

GUIDANCE

TARGET BEHAVIOUR: EATING A BALANCED DIET

Eating a balanced diet^{4,5} based on the Eatwell Guide is important for optimal health and wellbeing. The British Dietetic Association⁵ recommends eating food in moderation and consuming a varied diet from a range of foods. This includes five portions of fruits and vegetables per day, and reducing intake of energy-dense foods containing high levels of fat, salt and sugar^{4,5,6}. Meals should be based around starchy carbohydrates and contain lean sources of protein. Drinking enough fluids (6–8 cups/glasses) to stay hydrated is also promoted⁴.

WHY IS EATING A BALANCED DIET IMPORTANT?

Diet and nutrients play an important role in immune function⁷. The World Health Organization⁶ highlights that eating a balanced diet can help to maintain a healthy weight; reduce the risk of conditions including obesity, diabetes, heart disease, stroke, cancer and osteoporosis (weak and brittle bones), and can help with the management of these long-term conditions.

POSSIBLE CHANGES TO EATING A BALANCED DIET SINCE COVID-19

Covid-19 lockdown measures required individuals to remain in their homes, with the exception of key workers and their children. People could only leave their home to shop for basic necessities (including food), take one form of exercise per day, attend to any medical needs, provide care to a vulnerable person, or commute where absolutely necessary. Even with the easing of lockdown measures, there are likely to be long-standing changes to everyday life.

Changes to eating behaviour may have occurred due to changes to routine, lack of availability of nutritious foods (e.g. within shops creating ‘food desserts’ most often in areas of higher deprivation, and provided through school-dinners), and the use of food to regulate emotion. The lockdown placed people at risk of social isolation, and there is evidence that loneliness is a significant risk factor of malnutrition⁸. Moreover, food is often used as a coping strategy for dealing with stressful events, negative mood and boredom, known as emotional eating⁹.

An Italian survey¹⁰ found that 46.1% of respondents reported eating more during the Covid-19 lockdown, with a particular increase in comfort food consumption, such as chocolate, ice-cream, desserts, and salty snacks. Almost half of this sample attributed this change in eating behaviour to increased anxiety levels¹⁰. Other research demonstrated that almost half of 12–86 year olds perceived themselves to have gained weight during lockdown¹¹.

A survey commissioned by the British Nutrition Foundation (BNF)¹² revealed that 27% of British people felt that their eating habits have become worse since lockdown. ‘Boredom (63%) and ‘stress, anxiety and tiredness’ (45%) were cited as the main reasons for eating less healthily than usual. Low motivation to eat well was seen in 48% of this population. In another UK study¹³, 17% of respondents reported eating more food during lockdown, and 40% reported an increase in weight. Older adults were least likely to change their eating behaviours, while young people, women and people from Black, Asian and Minority Ethnic (BAME) groups were more likely to have made changes. Adults aged 30–59 years and women were reported to be most likely to have gained weight, whilst adults under the age of 30 and people from BAME groups were most likely to have lost weight.

Food security is also important during this time. Following school closures, children and young people entitled to free school meals were eligible for a voucher to continue support for their nutrition. However, it has been reported that 49% of those eligible for free schools meals did not receive any support¹⁴. Inability to work, furlough pay at 80%, and financial support delays

for those who are self-employed may have also led to or worsened food insecurity during this time. Those who experience financial strain, adverse life events, and are living in food insecure households without support from friends and family, have less opportunity to eat healthful foods, or even eat at all¹⁵. This impacts on their ability to manage conditions such as type 2 diabetes¹⁶, potentially putting them at risk of adverse consequences.

WIDE-SCALE PUBLIC HEALTH INTERVENTION

Health officials have the opportunity to support national behaviour change through a number of policy levers. Table 1 highlights existing approaches and suggestions for future development. Using this document, alongside the [ABC guide](#)¹ and support from experts in behaviour change, such as health psychologists, can help to optimise reach and impact of public health efforts.

Table 1: Policy categories from the Behaviour Change Wheel^{1,17,18} that could support eating a balanced diet during the Covid-19 pandemic and beyond.

Policy categories	Definition	Examples and suggestions
Communication/ marketing	Using print, electronic, telephonic or broadcast media.	Promote a holistic approach to nutrition through campaigns such as Change4Life . Use the BPS Psychological perspectives on obesity guidance ^{9,19} to support eating behaviours linked to the prevention and treatment of obesity, ensuring non-stigmatising language and images are used. Clearly communicate food provision (e.g. free school meals) and charities such as Foodbank.
Guidelines	Creating documents that recommend or mandate practice. This includes all changes to service provision.	Promote guidance such as the UK Government's Eatwell Guide and dietary recommendations ⁴ and make more relevant both culturally and in the context of Covid-19.
Fiscal measures	Using the tax system to increase or reduce the financial cost.	Continue increased taxes on high fat, salt and sugar (HFSS) foods. Consider tax cuts and reduced financial cost on fresh healthful foods.
Regulation	Establishing rules or principles of behavioural practice.	Regulate front of pack labelling. Enforce minimum standards on food provided in educational settings, workplaces and public buildings.
Legislation	Making or changing laws.	Ban high fat, sugar and salt (HFSS) food advertising.
Environmental/ social Planning	Designing and/or controlling the physical or social environment.	Ensure there is access to healthful foods locally. Rethink product placement so that high fat, salt and sugar foods are less easy to see and access.

Service Provision	Delivering a service.	<p>Provide nutritional support for those most in need (e.g. access to Foodbanks and mutual aid societies to deliver food to those who are vulnerable and shielding).</p> <p>Ensure that new services that promote healthier food choices (e.g. Better Health) are rooted in behavioural science.</p>
-------------------	-----------------------	--

UNDERSTANDING INFLUENCES ON BEHAVIOUR USING A COM-B DIAGNOSIS

To help in understanding behaviour and behaviour change, the COM-B model^{17,18}, suggests that there must be considerations made for the target population in relation to their:

Capability to enact the Behaviour, that relies on both psychological (e.g. knowledge and skill) and physical (e.g. ability and strength) capability factors;

Opportunity to enable the Behaviour, that considers both social (e.g. norms, support) and physical (e.g. resources, environment) opportunity facilitators; and

Motivation to perform the Behaviour, that involves both reflective (e.g. attitudes, confidence, intentions, identity) and automatic (e.g. emotion, habit) motivational processes.

The likely influences to consider when developing policies, campaigns or messaging to support physical activity based on a COM-B behavioural diagnosis are presented in Table 2.

DIFFERENT AUDIENCES TO CONSIDER

WHO NEEDS THIS INFORMATION

World Health Organization, International partners and public health teams, Public Health England, Public Health Scotland, Public Health Wales, Public Health Agency Northern Ireland, local authorities, commissioners, clinical commissioning groups, health and social care providers, retailers, charities interested in food poverty (e.g. the Trussell Trust), mental health services, weight loss groups, all agencies and organisations with a remit of eating behaviour, people who are recovering from Covid-19.

WHO WILL BE INFLUENCED MOST BY COVID-19

There is a need for researchers and policy makers to address how these barriers and facilitators differ based on occupation, role and employment status, gender/sex, socio-economic group, ethnic group, experience of physical and/or learning disabilities, age group, differing levels of risk for Covid-19 and those in Covid-19 recovery.

USING A BEHAVIOURAL SCIENCE APPROACH

This document provides considerations for the initial stages of intervention development using the Behaviour Change Wheel^{13,14} approach described in the [ABC guide](#)¹ to support behaviour change. For further support on the full development and evaluation of interventions and the translation of this into practice using the whole system approach, you can contact the [BPS Division of Health Psychology](#) (with the subject title Covid-19). We would also encourage you to contact your local university or one with expertise in behaviour change, and/or [find a psychologist](#) via the Society's website.

Table 2: COM-B behavioural diagnosis of the likely influences on eating behaviour.

Capability psychological/physical	Opportunity social/physical	Motivation reflective/automatic
Knowledge of own eating behaviour and what constitutes a balanced diet. (Psychological)	Social support to buy and prepare healthful foods (e.g. if self-isolating or shielding). (Social)	Belief that eating a balanced diet will lead to positive health outcomes and enjoyment of healthful foods. (Reflective)
Having the cognitive (e.g. headspace) and interpersonal skills (e.g. able to negotiate access to healthful foods) to eat a balanced diet. (Psychological)	Overcoming the influence of others in the household who may have unhelpful eating patterns. (Social)	Having the confidence to buy, prepare and eat healthful foods. (Reflective)
Remembering to eat a balanced diet throughout the day when routine may have changed. (Psychological)	Influence of societal and cultural norms to eat a balanced diet. (Social)	Holding strong intentions to eat a balanced diet. (Reflective)
Knowledge of how to shop for healthful foods and/or eligibility/access to food support schemes (e.g. free school meals/Foodbank vouchers). (Psychological)	Availability of healthful/unhealthful foods (e.g. in the home, educational setting, workplace, shops). (Social)	Having a goal to eat a balanced diet. (Reflective)
Ability to plan to buy/access healthful food. (Psychological)	Having travel restrictions to reach healthful food outlets. (Physical)	Holding an identity of someone who eats a balanced diet. (Reflective)
Skill to prepare and cook healthful foods. (Physical)	Access to powered storage (fridge) and cooking facilities. (Physical)	Overcoming influences on eating behaviour (e.g. when anxious, lonely, bored, stressed or sad). (Automatic)
Physical health restrictions that may limit the purchase/preparation of healthful foods. (Physical)	Financial restrictions (e.g. due to reduction in income) to buy or access healthful foods or to store and cook (e.g. gas and electric) healthful foods. (Physical)	Overcoming the habit to snack outside of meals and non-mindful eating. (Automatic)

RESOURCES

- British Dietetic Association
 - [Healthy eating: Food fact sheet](#)
 - [Covid-19 / Coronavirus – Advice for the general public](#)
 - [Basic store cupboard ideas to support older adults in the community](#)
- British Heart Foundation
 - [Healthy eating](#)
- Change4Life
 - [Food facts](#)
 - [Meal ideas](#)
- Foodbanks
 - [Coronavirus and food banks](#)
 - [The UK's independent food banks](#)
 - [Find a food bank](#)
- Mind
 - [Food and mood](#)
- NHS Choices
 - [Eat well](#)
 - [Food and diet](#)
- NHS One You
 - [Eat better](#)
- World Health Organization
 - [Food and nutrition tips during self-quarantine](#)
 - [Healthy diet](#)

CONTRIBUTORS

Produced by Ellie Whittaker, Neil Howlett, Shanara Abdin, Paul Chadwick, Gillian Shorter, Jo Hart, Christopher Armitage, Tracy Epton, Lucie Byrne-Davis, Madelynne Arden, Atiya Kamal, Lesley Lewis, John Drury, Emily McBride, Daryl O'Connor, Vivien Swanson, Sam Thompson and Angel Chater.

On behalf of the [BPS Covid-19 Behavioural Science and Disease Prevention Taskforce](#).

REFERENCES

- ¹ West, R., Michie, S., Atkins, L. et al. (2019). *Achieving Behaviour Change: A guide for local government and partners*. London: Public Health England.
- ² Public Health England (2018). *Improving people's health: Applying behavioural and social sciences to improve population health and wellbeing in England*. London: Author.
- ³ Chater, A., Arden, M., Armitage, C. et al. (2020). *Behavioural science and disease prevention: Psychological guidance*. Leicester: British Psychological Society.
- ⁴ Public Health England. (2018). *The eatwell guide guidance*. London: Author.
- ⁵ British Dietetic Association (2020). *Healthy eating: Food fact sheet*. Birmingham: Author.
- ⁶ World Health Organization. (2018). *Healthy diet: Fact sheet no.394*. Geneva: Author.
- ⁷ Childs, C.E., Calder, P.C. & Miles, E.A. (2019). *Diet and immune function*. *Nutrients*, 11(8). doi.org/10.3390/nu11081933
- ⁸ British Dietetic Association. (2020). *Loneliness and malnutrition*. Birmingham: Author.
- ⁹ British Psychological Society. (2019). *Psychological perspectives on obesity: Addressing policy, practice and research priorities*. London: Author.
- ¹⁰ Scarmozzino, F. & Visioli, F. (2020). *Covid-19 and the subsequent lockdown modified dietary habits of almost half the population in an Italian sample*. *Foods*, 9(5), 675.
- ¹¹ Di Renzo, L., Gualtieri, P., Pivari, F. et al. (2020). *Eating habits and lifestyle changes during COVID-19 lockdown: An Italian survey*. *Journal of Translational Medicine*, 18(1), 1–15.
- ¹² British Nutrition Foundation. (2020). *Healthy Eating Week at Home 2020: BNF survey reveals stress, anxiety, tiredness and boredom are the main causes of unhealthy eating habits in lockdown*. London: Author.
- ¹³ Fancourt, D., Steptoe, A. et al. (2020). *COVID-19 Social Study*. London: University College London.
- ¹⁴ Parnham, J.C., Laverty, A.A., Majeed, A. & Vamos, E.P. (2020). *Half of children entitled to free school meals do not have access to the scheme during the COVID-19 lockdown in the UK*. *medRxiv*. doi.org/10.1101/2020.06.19.20135392
- ¹⁵ Prayogo, E., Chater, A., Rahmawati, N.D. et al. (2018). *Who uses foodbanks and why? Exploring the impact of financial strain and adverse life events on food insecurity*. *Journal of Public Health*, 40(4), 676–683. doi:10.1093/pubmed/fox133
- ¹⁶ Chan, J., DeMelo, M., Gingras, J. & Gucciardi, E. (2015). *Challenges of diabetes self-management in adults affected by food insecurity in a large urban centre of Ontario, Canada*. *International Journal of Endocrinology*. <https://doi.org/10.1155/2015/903468>
- ¹⁷ Michie, S., van Stralen, M.M. & West, R. (2011). *The behaviour change wheel: A new method for characterizing and designing behaviour change interventions*. *Implementation Science*, 6(42). doi:10.1186/1748-5908-6-42.
- ¹⁸ Michie, S., Atkins, L. & West, R. (2014). *The Behaviour Change Wheel: A Guide to Designing Interventions*. London: Silverback Publishing.
- ¹⁹ Chater, A. (2020, 24 September). *Psychological perspectives on obesity: Policy, practice and research priorities*. *British Psychological Society* [blog post].



the british
psychological society
promoting excellence in psychology

St Andrews House,
48 Princess Road East,
Leicester LE1 7DR, UK

☎ 0116 254 9568 🌐 www.bps.org.uk ✉ info@bps.org.uk