

## The full obesity System Map showing all 108 indicators

- Accessibility to opportunities for physical exercise** Physical activity environment Physical accessibility (distance, safety) of opportunities for physical exercise
- Acculturation** Social psychology Degree to which a (dominant) culture is assimilated
- Alcohol consumption** Food consumption —
- Ambient temperature** Physical activity environment average environmental temperature indoors
- Appropriateness of embryonic & fetal growth** Physiology Degree to which the physiological environment for the embryo provides optimal nutrient and physical environment for growth
- Appropriateness of child growth** Physiology Degree to which speed of growth and physiological status of the child are in balance with each other and thus to prevent early onset of adipose tissue formation
- Appropriateness of maternal body composition** Physiology Degree to which the maternal body has the optimal physiological condition at conception, pregnancy and birth
- Appropriateness of nutrient partitioning** Physiology Degree to which the body is able to maintain the appropriate balance between fat, protein and carbohydrate metabolism and storage
- Availability of passive entertainment options** Social psychology Availability of recreational options that involve only limited physical exercise (tv, computer games)
- Children's control of diet** Social psychology Degree to which children exert influence on dietary choices in a family
- Conceptualisation of obesity as a disease** Social psychology Degree to which people consider obesity to be a abnormal deviation from the healthy norm
- Conscious control of accumulation** Engine Level at which cognitive/reflexive processes exert influence on energy intake and expenditure
- Convenience of food offerings** Food consumption The degree to which food offerings cater to the desire for convenience
- Cost of ingredients** Food production Cost of ingredients used in processed foodstuffs
- Cost of physical exercise** Physical activity environment Financial cost of physical recreation
- Degree of innate activity in childhood** Individual physical activity Degree to which physical activity is part of typical childhood behaviour
- Degree of optimal GI signalling** Physiology Degree of intestinal signals resulting from digestion and absorption of food that help to control the intake of type and amount of foods.
- Degree of physical education** Individual physical activity Degree to which people have learned to use their body (for labour, leisure and transport)
- Degree of primary appetite control by brain** Physiology Degree to which the brain automatically (non-consciously) responds to signals of the digestive system to control type and amount of food intake
- Demand for convenience** Food consumption Consumer demand for convenient (time/effort saving) food offerings
- Demand for health** Food production —
- Demand for indulgence/compensation** Individual psychology Strength of demand for psychological release after stress or effort
- Desire to differentiate food offerings** Food production Industry-internal drive to distinguish themselves from competition
- Desire to maximise volume** Food production Industry-internal drive to maximise volumes sold on the market

**Desire to minimise cost** Food production Industry-internal drive to minimise the cost of production

**Desire to resolve tension** Individual psychology Desire to resolve psychological conflict between what people desire and what they need to stay healthy

**De-skilling** Food consumption The degree to which individuals are not able anymore to engage independently in routine tasks for daily living (such as cooking)

**Dominance of motorised transport** Physical activity environment Degree to which motorised transport dominates other ways of transport

**Dominance of sedentary employment** Physical activity environment Degree to which average citizens influence one another's choices

**Education** Social psychology —

**Effort to acquire energy** Engine Effort people spend to acquire bodily energy via food intake

**Effort to increase efficiency of consumption** Food production By consumers

**Effort to increase efficiency of production** Food production Effort by economic actors (industry)

**Energy-density of food offerings** Food consumption Number of calories per unit food weight

**Exposure to food advertising** Social psychology —

**Extent of digestion and absorption** Physiology Degree of optimal energy and nutrient absorption by the human body

**Female employment** Food production —

**F2F social interaction** Individual psychology Intensity of face-to-face interaction between individuals

**Fibre content of Food & Drink** Food consumption —

**Food abundance** Food consumption The aggregate amount of food (volume) that is at any moment in time available in UK society

**Food exposure** Food consumption The number of food cues individuals are confronted with on a daily basis

**Food literacy** Individual psychology Degree to which people are able to assess nutritional quality and provenance

**Food variety** Food consumption The number of different food products (natural and processed) available at any moment in time

**Force of dietary habits** Food consumption The degree to which behavioural patterns related to food intake are dictated by routine and habit

**Functional fitness** Individual physical activity Level of physical fitness to perform daily tasks

**Genetic and/or epigenetic predisposition to obesity** Physiology Degree to which a person is predisposed by his genetic make-up to develop obesity; degree of indirect inheritance that contributes to obesity susceptibility

**Importance of ideal body-size image** Social psychology Degree to which there is a dominant image of an ideal body size in a society

**Importance of physical need** Engine Degree to which physical need for energy triggers energy spending and acquiring behaviour

**Individualism** Individual psychology Weakness of social fabric

**Learned activity patterns in early childhood** Individual physical activity Degree of activity experienced by the foetus, newborn and child in early life through parental physical activity

**Level of adipocyte metabolism** Physiology Degree to which fat is rapidly absorbed and stored in adipose tissue (fat storage cells)

**Level of available energy** Engine Level of energy available to an individual

**Level of domestic activity** Individual physical activity Level of physical activity exhibited in the domestic arena

**Level of employment** Food production —

**Level of fat-free mass** Physiology Relative level of fat-free tissue (muscle) in comparison to fat tissue (adipose tissue)

**Level of female employment** Food production —

**Level of infections** Physiology Degree of general occurrence of all type of diseases in society

**Level of occupational activity** Individual physical activity Level of physical activity associated to professional duties

**Level of recreational activity** Individual physical activity Degree to which people engage in physical activity for recreation

**Level of satiety** Physiology Degree to which food digestion and absorption in the gut reduces the need for food intake

**Level of thermogenesis** Physiology Degree of energy needed to maintain body temperature

**Level of transport activity** Individual physical activity Level of physical activity associated to transport

**Market price of food offerings** Food production —

**Media availability** Social psychology Availability of media across formats

**Media consumption** Social psychology Degree to which people make use of the media offerings

**Non-volitional activity (NEAT)** Individual physical activity extent to which people engage in non-volitional activity (twitching etc)

**Nutritional quality of Food & Drink** Food consumption —

**Opportunity for team-based activity** Physical activity environment —

**Opportunity for unmotorised transport** Physical activity environment Availability of facilities/infrastructure for unmotorised transport

**Palatability of food offerings** Food consumption —

**Parental control** Social psychology Level of control exerted by parents on children's choices

**Parental modelling of activity** Individual physical activity Degree to which parents act as a role model in physical activity related behavioural patterns

**Peer pressure** Social psychology Degree to which average citizens influence one another's choices

**Perceived danger in environment** Physical activity environment —

**Perceived inconsistency of science-based messages** Individual psychology Degree to which there is incompatibility between scientific assessments on food related issues which (are perceived) to be similar

**Perceived lack of time** Social psychology By all citizens, particularly those engaged in economic activity

**Physical activity** Individual physical activity Level of physical activity people engage in

**Portion size** Food consumption —

**Predisposition to activity** Physiology —

**Pressure for growth and profitability** Food production Degree to which economic actors are led in their decisions by financial measures of performance

**Pressure on job performance** Food production Pressure on employees, as generic production factors in an industrial economy

**Pressure to cater for acquired taste** Food production Industry-internal pressure to calibrate food offerings to what consumers are used to/like

**Pressure to improve access to food offerings** Food production Industry-internal drive to bring food offerings as closely as possible to consumers

**Psychological ambivalence** Individual psychology Degree to which people experience a psychological conflict between what people desire (e.g. fatty, sweet foods) and the need to stay healthy

**Purchasing power** Food production —

**Quality & Quantity of breast feeding** Physiology —  
**Rate of eating** Food consumption Time-span devoted to consuming a meal  
**Reliance of labour-saving devices** Physical activity environment Reliance on labour-saving devices for daily chores  
**Reliance on pharma remedies** Physiology —  
**Reliance on surgical interventions** Physiology Reliance on pharma & surgical remedies to deal with effects of obesity  
**Resting metabolic rate** Physiology Degree of energy utilised by the metabolism in a resting state (no physical nor intestinal activity)  
**Safety of unmotorised transport** Physical activity environment Level of risk for harm by engaging in non-motorised transport  
**Self esteem** Individual psychology Sense of purpose and self-confidence of individuals  
**Side-effects of drug use** Physiology —  
**Smoking cessation** Social psychology Number of people quitting smoking  
**Social acceptability of fatness** Social psychology —  
**Social depreciation of labour** Physical activity environment Degree to which manual labour is negatively valued in a given socio-cultural group  
**Social rejection of smoking** Social psychology —  
**Societal pressure to consume** Food production Endemic pressure (via a variety of channels and actors) to consume  
**Sociocultural valuation of food** Social psychology Degree to which food is positively valued within a given socio-cultural group  
**Sociocultural valuation of physical activity** Physical activity environment Degree to which physical activity is positively valued in a given socio-cultural group  
**Standardisation of food offerings** Food production Degree to which processed foodstuffs are based on similar production processes, ingredients and market positioning  
**Strength of lock-in to accumulate energy** Engine Degree to which behavioural patterns to spend and acquire energy are psychologically, biologically, institutionally locked in  
**Stress** Individual psychology Perceived level of stress by individuals  
**Tendency to graze** Food consumption Tendency to eat outside fixed meal times  
**Tendency to preserve energy** Engine Tendency of people to reduce expenditure of bodily energy  
**TV watching** Social psychology Time spent watching tv  
**Use of medicines** Individual psychology —  
**Walkability of living environment** Physical activity environment —