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Effect of racial differences on glycaemic responses:
Western European vs. South East Asian
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Background – Glycemic Response (GR) is the extent to which any food raises the blood glucose level and is controlled by the structure of the carbohydrate and its rate of digestion and absorption by the small intestine. Glycaemic index (GI) is a measure used to rank carbohydrates based on their effect on the blood glucose level relative to a standard such as pure glucose. One of the factors which may change the rate of gastrointestinal emptying, digestion and absorption and hence influence the GR and GI value is ethnicity.

Objective – To ascertain the effect of racial differences on glycaemic response and glycaemic index of white bread: comparing Western European vs. South East Asian cohorts.

Design – The standard Oral Glucose Tolerance Test (OGTT) was performed for both the standard food (glucose solution) and the test food (white bread) on 40 healthy individuals, age 18 to 45 years from Western European and South East Asian backgrounds. The “Homebrand” white bread was selected as the test food and was consumed on one occasion. A 50g glucose solution was used as the standard food and consumed on 3 occasions by the subjects. Finger prick blood samples in duplicates were obtained and instant blood glucose concentration was measured using automatic analyzers (HemoCue® glucose 201) over a two hour period. The area under the curve (AUC) for each 2h blood glucose response to the glucose solutions and the white bread was calculated and used to determine the GI value of the test food.

Outcomes – There were 55% females and 45% males in each ethnic group. The AUC for both the glucose standard (M = 234, SD = 8.1) and the test food (M = 174, SD = 13.4) were greater in Asian subjects compared with Caucasians (M = 214, SD = 12.6) and (M = 153, SD= 4.2). An ANOVA test showed no significant differences in the GI value of white bread F (2, 37) = 0.29, P =0.6 between Asian (M= 78, SEM= 5.4) and Caucasians (M= 73, SEM= 8.6).

Conclusion – The in vivo determination of the GI value of foods can not be influenced by ethnicity of the participants.

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Influencing children’s food preferences: parents’ strategies
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Background – The origins of children’s food preferences remain largely unexplored. However, experimental research suggests they are affected by parents’ feeding behaviours. Outside of the laboratory context, in daily life, there is little indication of how parents attempt to influence their children’s food likes and dislikes, and associations between feeding behaviours and children’s food preferences. Furthermore, parents’ use of feeding behaviours may be partly determined by characteristics of the child, especially their food neophobia.

Objective – To explore parents’ use of strategies for influencing their preschool-aged children’s food preferences, and associations with children’s food preferences and food neophobia.

Design – Semi-structured interviews were conducted with three groups of parents: those of (a) children with healthy food preferences (N=20), (b) children with unhealthy food preferences (N=18), and (c) food neophobic children (N=19). Parents were asked to describe how they tried to influence their children’s food preferences in general, as well as a specific time when they attempted to promote liking or disliking of a food. Interviews were transcribed verbatim and entered into a qualitative software package (N6) for thematic analysis and extraction of quotes.

Outcomes – Several themes concerning parents’ feeding behaviours emerged, some of which differed by group. Themes that arose from parents of children with healthy food preferences included use of exposure, repeated exposure, encouragement, parental modelling, manipulating peer influence and involving children in food preparation and selection. Conversely, themes emerging from parents of unhealthy or food neophobic children included forcing, fighting, restricting and controlling, rewarding or bribing and indulging children’s desires.

Conclusions – The results support the hypothesis that parents’ feeding behaviours may be a source of variation in children’s food preferences. Parents’ use of feeding behaviours promoting unhealthy food preferences may be partially in response to children’s food neophobia. Education of parents about effective strategies for promoting healthy food preferences in children, and especially food neophobic children, is needed.