

## Concurrent Session 6: Glycaemic Control

### The effect of a low glycaemic index diet on cutaneous and hormonal markers of *acne vulgaris*

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**Background** – Recent evidence suggests a low glycaemic index (GI) diet may improve *acne vulgaris* (acne).

**Objective** – To investigate the effect of low GI vs high GI diets of similar carbohydrate, fat and protein contents on cutaneous and hormonal markers of acne severity in an 8-wk randomised, parallel study.

**Design** – 46 young males with acne (16.5 ± SD 1.1 years, BMI 23.4 ± SD 3.8 kg/m<sup>2</sup>) were assessed at baseline and 8-wk for severity of inflammatory lesions of the face, chest and back; and blood sampled for assay for molecules implicated in acne pathogenesis, including insulin, androgens and insulin-like growth factor-1. Weight was measured weekly, snack foods were provided and weekend food diaries completed.

**Outcomes** – Acne severity decreased significantly on both diets but differences between diets did not reach significance (total acne score out of 9: low GI -1.17 ± SEM 0.41 vs high GI -0.55 ± SEM 0.28, P=0.232; face score out of 3: low GI -0.65 ± SEM 0.16 vs high GI -0.35 ± SEM 0.13, P=0.146). Food diaries showed diets differed significantly in GI (low GI diet 51.2 ± 0.9 vs high GI diet 60.9 ± 2.4, P=0.0002). There were no significant differences in biochemical markers between groups. Weight changes were minor and similar between groups (low GI -0.16 ± 0.40 kg vs high GI 1.12 ± 0.54 kg, P=0.059).

**Conclusion** – Both the low and high GI diets improve clinical assessment of acne severity over an 8-wk period. Weight loss and differences in protein content may explain previous findings.

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### Lived experiences of GI: A qualitative study of attitudes, behaviours and motivations to use the glycaemic index

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**Background** – Nutritional behaviour is formed by many psychosocial and physiological determinants. There is very little known about how people use or apply the glycaemic index (GI) concept in their lives.

**Objective** – To investigate the attitudes, motivations and food consumption behaviours relating to GI

**Study Design** – A qualitative methodology was used in a cohort of educated, urban people with prior knowledge of GI. Informants (n=40) were sorted by profession into 7 focus groups that explored their lived experiences of GI. Discussions were recorded and transcribed verbatim and a modified content analysis was used to identify key aspects. These were applied to the conceptual framework of Social Cognitive Theory to extract meaning and link attitudes, motivations and behaviours relating to GI.

**Outcomes** – Three key aspects of *relevance*, *experience* and *dissonance* emerged. Results indicated that most people could articulate a simple explanation of GI, but not its complexities. GI was almost universally understood to mean low GI and the concept, when *relevant*, was an engaging new message, seen to be consistent with ‘healthy’ minimally processed cereals and starchy vegetables. Low GI foods were easily substituted and often termed ‘good carbs’ that for some, helped re-establish the value of carbohydrate in a balanced diet. A person’s expectations and *experience* of low GI foods reinforced their motivation to use them. A general *dissonance* pervades GI with perceptions of confusion, contradiction and cynicism to the nutrition environment in general, and to GI in particular. Some informants recognised GI to be only one of the nutritional attributes of healthy food. Others noted if the full ‘benefits’ claimed for GI were to be gained, GI needed to be considered alongside the ‘amount’ of carbohydrate consumed.

**Conclusion** – GI is a positive message that needs to be kept simple and tools provided to assist people to use it. Educators need to align and build GI upon existing nutrition messages.