Background: The glycemic index (GI) and its effect on energy intake is a debated subject. Research has been done whether food with lower GI decreases hunger and lowers energy intake, which could be an effective tool to prevent overweight in children and adolescents. Breakfast eating is successful for maintaining a healthy weight and it’s therefore interesting to see if the quality of the carbohydrates matters.

Objective: To evaluate the scientific evidence regarding the effect of GI of breakfasts in children’s and adolescents’ energy intake.

Search strategy: To find relevant articles, a systematic literature search was made in the databases PubMed, Scopus and Cochrane. Search terms that were used were: breakfast, breakfast quality, children, glycemic index, energy intake, obesity.

Selection criteria: Randomized controlled trials and cohort trials, breakfast eating individuals, children and adolescents under 18 years old, reported glycemic index. Outcome measurements: Energy intake.

Data collection and analysis: Six original articles met the inclusion criteria and were reviewed by the SBU audit template for randomized and controlled studies. Thereafter one article was excluded because of very low quality of the study. The strength of evidence was evaluated using the GRADE system.

Main results: There is some evidence that a breakfast with lower GI contributes to a lower energy intake in the next meal for children and adolescents. The strength of evidence for this is low (++). Two studies show that a meal with lower GI results in a lower energy intake in the next coming meal, than after a meal with higher GI. The other three studies show no significant difference.

Conclusions: The scientific ground for recommending a breakfast with low GI for children and adolescents, regarding reducing energy intake, is inadequate. More studies with longer duration are required to get better evidence. There is low evidence (++) that a breakfast with lower GI gives a lower energy intake in the next coming meal than a breakfast with higher GI.