**Supplementary material:** Participant Flowchart

Data attrition due to lack of child’s consent

Total number of children who underwent MRI scanning N=316;

Number of children who did not attend lunch n=158

**MRI scan of abdomen** n= 158

**Anthropometric measures:**

BMI n=379

Skinfolds: biceps (n= 368)

Triceps (n=366)

Suprailliac (n=363)

Subscupular (n=368)

Mid-arm (n=377)

Waist (n=377)

Body Adiposity Index (n=360)

**Participants with coded eating behaviours** n=386

Children leaving the room with food in their mouth or not facing the cameras n=96

Children not consuming any food n=1

**Attended Ad libitum buffet lunch** n=483

**Total participants in cohort**, N=1247

Assigned to a different research domain n= 764