we assessed weight, height, BMI and z-BMI at diagnosis and 1 year later. We also investigated the compliance with the prescribed food program and GFD, then selecting only patients with strict adherence to GFD, and subdividing them into 2 groups: A (balanced diet) and B (non-controlled diet).

**Results** The characteristics of A and B, as in Tab 1, show a reduction of z-BMI (\(\Delta z\)-BMI = -0.49±0.41) in all patients of group A, while in group B (\(\Delta z\)-BMI = -0.28±0.54) the z-BMI increased in 2 cases and reduced in 6, but less than in A.

**Conclusions** Probably due to the small number of cases, the differences in the z-BMIs changes between OCC with a balanced GFD and those with a non-controlled GFD are not significant. Nonetheless, we assert that is fundamental that these patients follow an adequate diet, especially to avoid the worsening of a state of malnourishment in excess, often already present at the diagnosis.

### Abstract 1418 Table 1

<table>
<thead>
<tr>
<th>Age category</th>
<th>Age at diagnosis</th>
<th>z-BMI at diagnosis</th>
<th>z-BMI at follow-up</th>
<th>Δ z-BMI</th>
<th>follow-up length</th>
</tr>
</thead>
<tbody>
<tr>
<td>A group (4M and 4F)</td>
<td>11.35±3.79</td>
<td>1.93±0.69</td>
<td>1.44±0.11</td>
<td>-0.48±0.41</td>
<td>11.62±1.68</td>
</tr>
<tr>
<td>B group (6M and 5F)</td>
<td>9.12±4.26</td>
<td>1.86±0.53</td>
<td>1.57±0.98</td>
<td>-0.28±0.54</td>
<td>12.62±1.60</td>
</tr>
</tbody>
</table>

### Abstract 1419

**OBESITY AND BINGE EATING DISORDER IN CHILDHOOD: AN INTEGRATED THERAPEUTIC APPROACH**

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**Background** Binge Eating Disorder (BED) is related to obesity in children; treatment of obesity could be improved by using either a nutritional and psychotherapeutic strategy.

**Aims** To assess the prevalence of BED and weight trend in an overweight or obese pediatric population; to evaluate an Integrated Therapeutic Approach (ITA) in a BED positive group.

**Methods** Ninety-seven subjects (M/F 55/44, mean age 11.0±2.4 yr, range 6.1–16.3) with overweight (M/F 8/18) or obesity (M/F 45/26) underwent physical examination, body weight, waist and hip circumference and blood pressure. A Binge Eating Scale (BES) to evaluate BED (positive≥17) was used. All BED-positive patients were asked for a normocaloric diet for age and regular physical activity for at least an hour a day and followed with monthly checks; six BED-positive children undergone both medical visits and 10 sessions of psychotherapy (ITA). BED was evaluated before and after psychotherapy.

**Results** BED was found in 29/97 (29.9%) subjects, of whom 20 (69%) had a BMI >95th percentile. BMI did not change in the six BED-positive children followed with ITA nor in a matched group of six BED-positive children followed without ITA (3/6 dropped-out). Instead, ITA reduced gravity of BED in all patients and negativized (BES<17) in four patients.

**Conclusions** Early improvements in BED can be achieved with an integrated therapeutic approach as a first step for long-term reduction of obesity.

### Abstract 1420

**EXAMINATION OF THE RELATION OF DIET AND PHYSICAL ACTIVITY WITH THE APPEARANCE OF OBESITY AT GREEK STUDENTS**

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**Background** Childhood obesity increases the likelihood of several consequences for a child (precocious puberty, polycystic ovary syndrome, diabetes mellitus type 2, etc) and also later in adulthood (increased mortality due to cardiovascular disease, diabetes mellitus, etc).

**Aim** The aim of the current study was to investigate the prevalence of overweightness and obesity among Greek students and to determine the correlation between diet and physical activity.

**Results** The rate of overweight children was at 25.9%, of obese children at 7.3% and the rate of central obesity was at 35.5%. Regarding children that did not follow a healthy diet in school, 34.1% of them were overweight or obese and 38.6% had central obesity; 32% of the children that had a healthy diet in school were overweight or obese, and 27.8% of them had central obesity. In multiple regression analyses, central obesity was associated with hours of daily TV watching and with the hours of daily computer use.

**Conclusions** It is important adhering to a healthy lifestyle which emphasizes healthy food choices and habits, regular physical activity, and limiting screen time.

Methods A sample of 856 children (396M), aged 10.29±2.77, was divided into 3 groups according to maternal GWG (group A, inadequate=323; group B, adequate=250; group C, excessive=283). They were compared for BW, z-BMI and WtHR.

According to maternal education level, we also assigned patients to 5 different groups (PS: primary school; SS: secondary school; GR: graduation), assessing the relationship with GWG, BW, z-BMI and WtHR.

Results Statistics show a different prevalence of adequate BW children (2.500–4.199kg), in B(92%), A(89%) and C(88%), and of WtHR (A=0.59±0.058; B=0.52±0.05; C=0.59±0.05). Student’s t-test has p<0.05 between both inadequate (A-C) and adequate GWG (B) for both parameters.

About z-BMI, only the comparison between A and C is significant (A=1.96±0.57, C=2.07±0.49; p=0.026).

GWG also shows significant differences in PS (15.39±6.67) and SS (14.93±7.24) vs. GR (13.19±6.12). The same for z-BMI in PS (2.08±0.61) and SS (1.937±0.48), and in PS and GR (1.915±0.48).

Conclusions We can confirm the positive relationship between inadequate GWG and inadequate BW in children, and the increased risk of OW/OB. Besides, there is strict relationship between low maternal cultural level and inadequate GWG, and increased risk of OW/OB outcome.

A strict anthropometric surveillance of pregnant women is desired, to prevent offspring’s future malnutrition in excess.

Bibliography
1. Fraser A et al. Circulation 2010; 121:2557–2564