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 (Δz-BMI= −0.49±0.41) in all patients of group A, while in group B (Δz-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-BMI 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 ad adequate diet, especially to avoid the worsening of a state of malnutrition in excess, often already present at the diagnosis.

Abstract 1418 Table 1

	Age at diagnosis	z-BMI at diagnosis	z-BMI at follow-up	Δ z-BMI	follow-up lenght
A group (4M and 4F)	11.35±3.79	1.93±0.69	1.44±1.01	−0.48±0.41	11.62±1.68
B group (3M and 5F)	9.12±4.26	1.86±0.53	1.57±0.96	−0.28±0.54	12.62±1.60

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 Ninenty-seven subjects (M/F 53/44, mean age 11.0±2.4 yr, range 6.1–16.2) with overweight (M/F 8/18) or obesity (M/F 45/26) undergone 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.

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.

Methods 2374 pupils in primary education were considered for the study (1206 boys and 1168 girls). Statistical analyses were performed using SPSS version 15.0 (SPSS Chicago, IL USA). A p-value < 0.05 was accepted for statistical significance.

Results Cross-correlation between overweight and obese children and sex showed that more males (9.2%) are obese than females (5.3%). The rate of overweight children was at 23.9%, 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.

1421 THE IMPORTANCE OF IR-HOMA AND WTHR IN THE PREDICTION OF THE DEVELOPMENT OF METABOLIC SYNDROME (MS)

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Background and Aim Globesity has made visible the increased risk, yet among youngsters, of cardiovascular diseases, NAFLD, MS.[1][2]

The Aim of this study is to stress how two simple indexes (IR-HOMA and WtHR[3]) can be useful at out-patients level to detect the presence of an often still unidentified MS.

Methods 857 ow/ob children (405 female, 47.26%), aged 10.54±2.87, were included in this retrospective (5 years) study.

Results The standard risk factors of MS (NCEP ATP III modified) in the studied population were represented as follows: Waist Circumference ≥90°c 62.40%; Hypertension 21.52%; Triglycerides >95°c 12.34%, HDL < 5°c 5.52%, Glycaemia ≥100mg/dl 4.72%; besides, 34.64% showed IR-HOMA >2.5. The overall MS prevalence was 5.49%.

Due to an OR=5.29 (p<0.05) for IR-HOMA vs. MS factors, all patients with an IR-HOMA >2.5 are very likely to have 3 or more elements of MS. If both IR-HOMA and WtHR are abnormal, OR becomes 6.24 (p<0.05).

Conclusions In the ow/ob child, IR-HOMA and WtHR are important anticipating factors of MS, even at a very young age, much below the age of 10, presently considered the lowest age to diagnose such complication. This stresses once again how, in any case of obesity, an early intervention is needed, in order to prevent the development of cardiovascular disease in early adult age.[1]

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1422 STUDY OF THE RELATIONSHIP BETWEEN GESTATIONAL WEIGHT GAIN (GWG), CULTURAL LEVEL (CL), BIRTH WEIGHT (BW) AND OVERWEIGHT/OBESITY (OW/OB) OUTCOME

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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 3 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=0.58±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±8.67) 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.

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| 1423 | **PREVALENCE OF SECONDARY DYSLIPIDEMIA IN OBESE CHILDREN** |

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Objective In this study, we aimed to determine the frequency of dyslipidemia secondary to childhood obesity which has rapidly increasing prevalence in recent years and compare lipid profiles in obese and nonobese children.

Methods We scanned children between 2 to 16 years old whom appears were obese and the patients who has BMI above 95. percentile were included in study. These children's weight, height and BMI were determined and fasting serum triglyceride, cholesterol, HDL and LDL levels were measured and compared with the control group of 124 children in the range of similar age with normal BMI. In our study the mean values of total cholesterol and triglyceride levels of obese children were significantly higher than the control group and obesity was significantly associated with high total cholesterol (44.5%), triglyceride elevation (48.7%), LDL cholesterol elevation (38.7%) and HDL (23.5). In obese children the total cholesterol, triglyceride, LDL cholesterol and HDL cholesterol levels were significantly higher than the control group. A total of 62.6 % of the obese children showed an abnormal lipid profile. In case abnormal lipid profile was significantly higher than the control group.

Conclusion Obese children are at risk of dyslipoproteinemia and related diseases.

These findings demonstrate the importance of proper screening and early diagnosis of childhood obesity to prevent potential complications of obesity and dyslipidemia in both childhood and adult age.

| 1424 | **TWO SIDES OF THE SAME COIN: OPPOSITE PATHS IN PATIENTS TREATED WITH THE SAME STRATEGY** |

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DG(13 years), family-history hypertension(IA), dyslipidemia, CVD; MG(14 years), family-history IA, both Tanner IV.

Different school conducts-integration (DG:restless-good, MG: good-problematic); ~7h/day of sedentary, MG is solitary, DG wishes to be more social, trains(~6hrs/week) and walks.

No breakfast; junk food, or absent(MG); lunch and dinner alone or in family(MG); extra-snacks; soft-drink≥1/day. Both do nutritional mistakes.

Abstract 1424 Table 1

T0	z-BMI	W	WtHR	BP	Enlarged liver	HDL-C	LDL-C	Tg	U.S. Steatosis
DG	2,26	99	0,60	90/70	2 cm	29	-	269	mild
MG	2,39	107	0,60	110/70	2 cm	-	-	255	focal

W:waist; WtHR: waist-to-height ratio; U.S.: liver ultrasound; (unreported values:normal).

Both get balanced hypocaloric diet(1350kcal/day) and are pushed into sport.

Abstract 1424 Table 2

	after		z-BMI	W	WtHR	BP	HDL-C	LDL-C	Tg
DG	3	months	1,84	91,7	0,54	105/50			
	6		1,72	86,6	0,51	105/50			
	9*		1,74	89,5	0,53	105/50			
	12		1,33	77,6	0,45	120/60	-	-	-
MG	3	months	2,40	109,5	0,61	120/65			
	6		2,43	109,8	0,62	140/80			
	9		2,44	111,5	0,62	120/70			
	12		2,47	115	0,64	120/70	31	128	194

*DG increased sport(~4hrs/week), started having breakfast.

Conclusions At T_0 DG seems in a worse situation: this prompts him to better comply, with a general improvement.

MG ignores his health status, perpetuating incorrect lifestyles, showing deterioration, acquiring risk factors for MS (HDL-C, BP, W).

Even with similar initial status and similar strategy for both, the totally different results stress the importance of patients' compliance, even if still unable to plan future.

| 1425 | **THE RELATIONSHIP OF OBJECTIVE MEASURE OF SLEEP PATTERN AND ITS ASSOCIATION WITH OBESITY IN PRIMARY SCHOOL CHILDREN IN TEHRAN CITY** |

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