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Cardiorespiratory fitness prevents the increase in blood pressure due to body fat in adolescents

Author/Address of institution:

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Background/Introduction:
Hypertension is increasing in children and adolescents, and if established early in life, it appears to be associated with early development of other metabolic consequences such as cholesterol disorders and insulin resistance. The main cause is the increasing paediatric obesity. Therefore, we intended to assess the relationships between body mass index (BMI), body fat (BF), and cardiorespiratory fitness on blood pressure (BP) levels.

Methods:
Cross-sectional study on 2041 boys and 1995 girls aged 10-18 living in the Lisbon area, Portugal. BMI and BP were measured as recommended. BP values were further converted into gender, age and height-specific z-scores. BF was assessed by bioimpedance. Fitness was assessed by the 20-meter shuttle run and the participants were classified as fit or unfit. Overweight and obesity were defined according to IOTF criteria using BMI (BMI-defined) or BF (BF-defined). High blood pressure was defined according to CDC criteria.

Results:
In both genders, BMI and BF were positively related with systolic (BMI only) and diastolic BP z-scores. No interaction was found between being fit and BMI categories regarding BP levels, while for BF a significant interaction (lower BP levels among fit participants) was found. Being fit reduced the BF-induced increase in the Odds ratio (OR) of presenting with high BP: OR (95% confidence interval) 1.01 (0.73-1.40) and 0.99 (0.70-1.38) for BF-defined overweight and obese fit boys, respectively, the corresponding values for unfit overweight and obese boys being 1.33 (0.94-1.90) and 1.75 (1.34-2.28), respectively (see figures below). The values were 0.88 (0.57-1.35) and 1.66 (0.98-2.80) for overweight and obese fit girls, respectively, the corresponding values for unfit overweight and obese being 1.63 (1.12-2.37) and 1.90 (1.32-2.73), respectively. Conversely, no interaction was found between fitness and BMI-defined overweight and obesity.

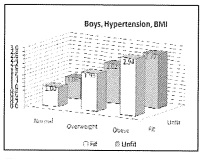

Figure 1a

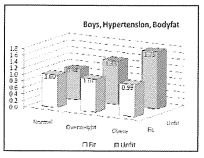

Figure 1b

Conclusion:
Being fit reduces the negative impact of BF on BP levels in both genders. This protective effect was not found with BMI. Our results emphasize the importance of fitness in the paediatric age.

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Overweight and obesity are unevenly distributed among migrants in Switzerland

Author/Address of institution:

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Background/Introduction:

Migrants tend to present higher overweight/obesity levels, but whether this relationship applies to all nationalities has seldom been studied.

Methods:

Data from a five-year nationwide cross-sectional interview survey (Swiss Health Surveys - SHS) from 1992 to 2007 (N=63,766) and from local cross-sectional examination survey (CoLaus study in Lausanne 2004-2006, N=6,743). Subjects were separated into Swiss, French, German, Italian, Portuguese, Spanish, former Republic of Yugoslavia, other European and other countries.

Results:

Compared to Swiss, German and French nationals presented lower prevalence of overweight and obesity, while nationals from Italy, Spain, Portugal and the former Republic of Yugoslavia presented higher levels. Adjusting the SHS data for age, gender, education, smoking, leisure-time physical activity and survey year, a lower odds for overweight + obesity was found for German (Odds ratio=0.80, 95% confidence interval [0.70-0.92]) and French (0.74 [0.61-0.89]) nationals, while higher odds were found for participants from Italy (1.45 [1.33-1.58]), Spain 1.36 [1.15-1.61], Portugal (1.25 [1.06-1.47]) and the former Republic of Yugoslavia (1.98 [1.69-2.32]). Similar findings were observed in the CoLaus study for Italian (1.63 [1.29-2.06]), Spanish (1.54 [1.17-2.04]), Portuguese (1.49 [1.16-1.91]) and former Republic of Yugoslavia (5.34 [3.00-9.50]).

Conclusion:

Overweight and obesity are unevenly distributed among migrants in Switzerland. Migrants from Southern Europe and former Republic of Yugoslavia present higher prevalence rates. This suggests that preventive messages should be tailored to these specific populations.

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Thyroid surgery in eastern Switzerland: who operates, how often and how radically?

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Background/Introduction:
In absence of a standardized nationwide reporting system there is no available data on the total number of thyroid procedures performed per year and the resection types selected. In countries with a systematic reporting system (e.g. Germany) an increase of more radical resections forms was demonstrated within the last years. To determine these missing facts we conducted a questionnaire-based investigation in eastern Switzerland involving all surgeons which based on their board certification would be legitimated to perform thyroid resections.

Methods:
Questionnaires were sent to all heads of surgical and ENT units, as well as to board certified general surgeons and ENT specialists in private practice (n=42) in the cantons of St. Gallen, Thurgau, both Appenzell and Glarus (total population: 820'000). Questions addressed the total number of procedures, form of thyroid resections performed and operative responsibilities for a year of reference (2008).

Results:
The overall response rate was 83% (35 of 42 questionnaires). The surgical and ENT clinics of all public hospitals had an extraordinary return rate of 100%.
A total number of 311 thyroid resections were performed in the year of 2008. Extrapolated on the entire Swiss population this amounts to **approximately 2'900** thyroid procedures per year or 414 procedures per million inhabitants as compared to 1'250 per million in Germany.
We identified 11 public (10 surgical, 1 ENT unit) and 2 private institutions doing thyroid surgery. Only 4 units performed more than 25 thyroid procedures in the year 2008. 5 public surgical units did not report any thyroid surgery performed. The privately practising colleagues contributed only 8 thyroid procedures to the collective.
The majority of patients (87%) underwent thyroid surgery for benign diseases.The predominant resection types were hemithyroidectomy (50%) and total thyroidectomy (43%), corresponding to 93% of radical resection forms. In contrast, the number of radical resections in Germany reached 57%. The majority (69%) of interventions were performed by an experienced senior surgeon, less than a third (31%) of resections was done by junior surgeons in training for the board certification under supervision.

Conclusion:
In Switzerland as a non-endemic goiter area only a fourth of thyroid resections are performed as compared to Germany. Thyroid surgery is performed predominantly in selected public hospital units by specialized surgeons and in a much lesser extent by ENT specialists. The number of radical resections is high and indicative of a very modern, recurrence-avoiding attitude in thyroid surgery for benign disease with the drawback of a potentially elevated risk of recurrent nerve palsy and hypoparathyroidism in inexperienced hands. These data suggest that thyroid surgery has become more demanding and complex in the past years and should be considered a demanding subspecialized procedure.

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Body image and desire to change weight in the adult Portuguese population

Author/Address of institution:

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Background/Introduction:
Many overweight and obese subjects have inadequate expectations regarding weight loss. Knowledge on how current body weight relates to weight perception and weight loss amount among Portuguese adults is limited.

Methods:
Cross-sectional data of a convenience sample of 315 Portuguese adults (range 18-92 years). Body image, amount of desired weight loss and timeframe for weight loss were assessed.

Results:
Women and overweight or obese individuals reported a higher dissatisfaction towards their current weight. The percentage of normal and overweight or obese men wishing to lose weight was 20.0% and 72.9% (56.2% and 95.8% in women) (both $p<0.001$).
Amongst individuals who desired to lose weight, men desired to lose 7.2±4.1 (mean ± standard deviation) Kg (8.7% weight) at a rate of 2.7±2.9 Kg/month, while women wished to lose 6.3±4.0 Kg (9.9% weight) at a rate of 2.4±2.0 Kg/month (p=NS compared to men). Overweight or obese men desired to lose 8.4±4.2 kg (9.8% weight) at a rate of 2.9±3.3 Kg/month, the corresponding values for normal weight men being 4.0±1.6 Kg and 5.6% weight (both $p<0.001$) and 2.2±1.5 Kg/month (p=NS). Overweight or obese women wished to lose 9.6± 4.4 Kg (13.8% weight) at 2.4±1.8 Kg/month, the corresponding values for normal weight women being 4.9±2.7 Kg and 8.2% weight (both $p<0.001$) and 2.5±2.1 Kg/month (p=NS).

Conclusion:
In both genders, although desired weight loss targets seem adequate, weight loss rates are unrealistic, which might impair weight loss attempts.

Jahresversammlung
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Société Suisse d'Endocrinologie
et de Diabétologie - SSED

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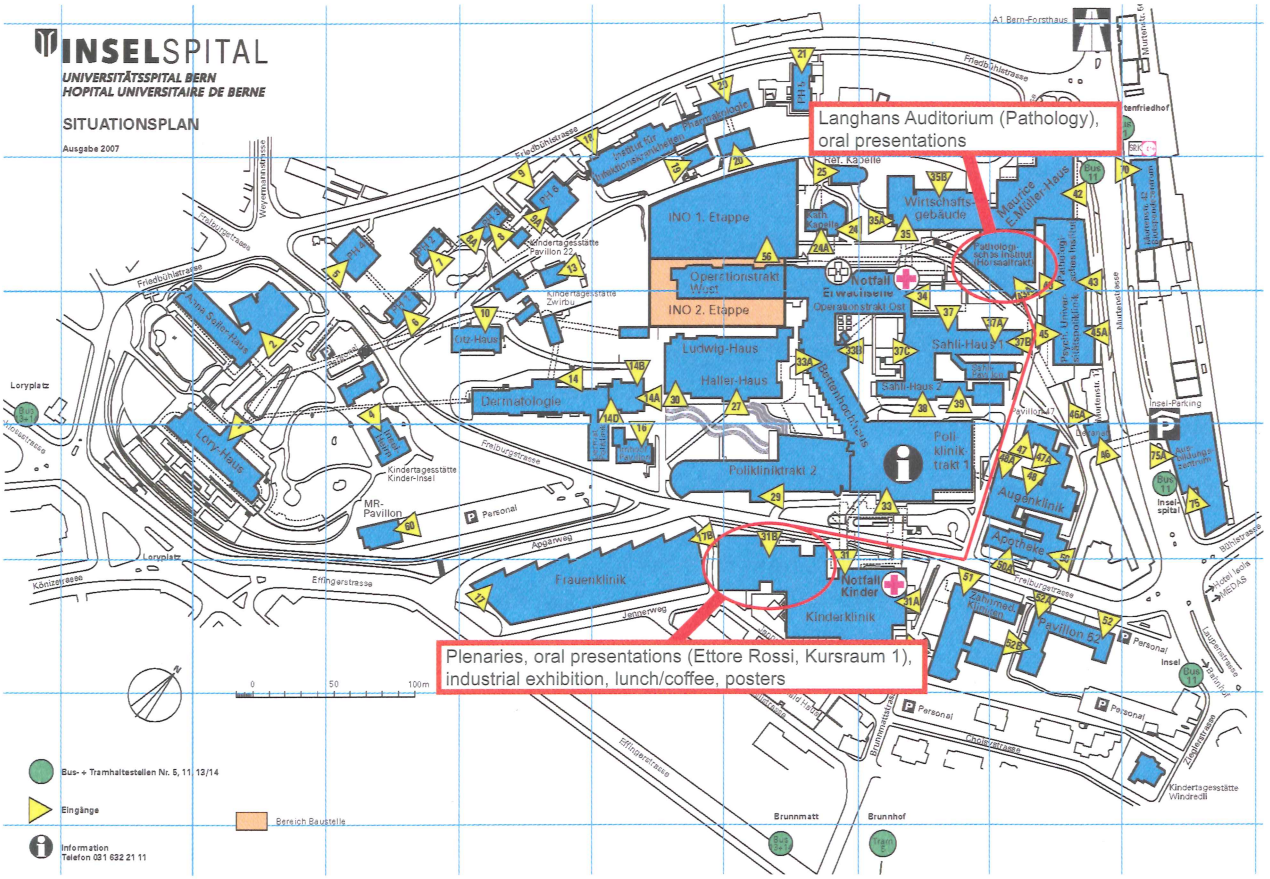

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Schweiz. Arbeitsgruppe Metabolismus und Obesitas

Schweizerische Gesellschaft für Endokrinologie und Diabetologie
Société Suisse d'Endocrinologie et de Diabétologie

Programme of the 5th Annual Meeting ASEMO-SAMO

Association Suisse pour l'Etude du Métabolisme et de l'Obésité
Schweiz. Arbeitsgruppe Metabolismus und Obesitas

(preceding the Annual Meeting of SGED)

Thursday, November 18, 2010, Inselspital Bern, Kinderklinik

Update lectures and new issues
Chairman: *Alain Golay*

9.15 – 10.00 **Overweight and obesity in Switzerland: costs and future prospects.**
Heinz Schneider, Basel

Research Communications
Chairmen: *Abdul Dulloo, Yves Schutz*

10.00 – 10.15 **Abstract 67 – PI3Kγ in Non-Hematopoietic Cells Plays a Major Role in the Promotion of Obesity, Inflammation, and Glucose Intolerance**
Giovanni Solinas, Romina Marone, Barbara Becattini, Fabio Zani, Abdul G. Dulloo, Jean-Pierre Montani, Frederic Preitner, Matthias P. Wymann; Fribourg, Basel, Lausanne

10.15 – 10.30 **Abstract 1 – Skeletal muscle insulin resistance and lipotoxicity: differential effects of diacylglycerols and ceramides**
Francesca Amati, Bret H. Goodpaster; Lausanne, Pittsburgh

10.30 – 10.45 **Abstract 33 – A multifactorial approach to prevent adiposity and improve fitness in predominantly migrant preschool children: cluster-randomized controlled trial (the Ballabeina Study)**
Puder JJ, Marques-Vidal P, Zahner L, Niederer I, Bürgi F, Ebenegger V, Hartmann T, Meyer U, Schindler Ch, Nydegger A, Kriemler S; Lausanne, Basel

10.45 – 11.00 **Abstract 25 – Cardiorespiratory fitness prevents the increase in blood pressure due to body fat in adolescents**
Gisela Marcelino, João Melich-Cerveira, Fred Paccaud, Pedro Marques-Vidal; Lisbon, Lausanne

11.00 – 11.30 Break with Coffee and Juice

Chairpersons: *Kurt Laederach, Anne Laurent-Jaccard*

11.30 – 12.15	**Obesity as cancer risk factor** *André-Pascal Sappino, Geneva*
12.15 – 12.45	**Bariatric surgery : the final cure for diabetes?** *Ulrich Keller, Basel*
12.45	End of the scientific ASEMO meeting

12.45 – 13.45 General Assembly of ASEMO for members

Access is free.

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