



**BOOK OF ABSTRACTS**

Magglingen, Switzerland,  
November 22–23, 2006

**1<sup>ST</sup> WORKSHOP  
FOR THE EXCHANGE  
OF EXPERIENCES IN PHYSICAL  
ACTIVITY AND SPORTS PROMOTION  
IN CHILDREN AND ADOLESCENTS**



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Federal Office of Sports FOSPO  
Swiss Federal Office of Public Health FOPH



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# ORGANIZER

Swiss Federal Office of Sports (Magglingen, Switzerland) in co-operation with the Swiss Federal Office of Public Health and HEPA Europe. Co-sponsored by the World Health Organization, Regional Office for Europe (Rome, Italy)

# ORGANIZING COMMITTEE

Urs Mäder + Christoph Nützi (chair)  
Anita Banderini + Corinne Hanselmann (administration)

# FOREWORD

The extraordinary importance of regular physical activity and exercise for disease prevention and health promotion is widely accepted. There is consensus that the origins of chronic diseases which normally manifest during adulthood lie in childhood. However, in many European countries physical activity decreases with increasing age among children and adolescent and results in a substantial proportion of inactive adults among the European societies. Physical activity promotional efforts in children and adolescents may therefore have a strong impact on physical activity behaviour and health benefit. This subject will be a key issue for future activities in the European network for the promotion of health-enhancing physical activity, HEPA Europe ([www.euro.who.int/hepa](http://www.euro.who.int/hepa)).

The purpose of this workshop is to present effective approaches to promote physical activity in this age group and to identify transferable and promising elements. Furthermore, current possibilities for monitoring physical activity behaviour among children will be presented.

Inspired by Brian Martin, Chair of the steering committee of [hepa.europe](http://hepa.europe) and our colleagues and friends during the WHO Member States intersectoral consultation on promoting physical activity for health in Ljubljana, Slovenia, we decided to bring together European researchers and experts in the context of a workshop here in Magglingen. It could be the start for further joint projects and activities

The organising committee would like to thank them for their most valuable cooperation and their support. A special thank to the WHO Regional Office for Europe and the Federal Office of Public Health for their support.

On behalf of the organising committee we wish you all a very warm welcome and an enriching and pleasant stay in Magglingen.

Urs Mäder and Christoph Nützi  
Swiss Federal Institute of Sports, Swiss Federal Office of Sports, Magglingen

# PROGRAM

## Tuesday, November 21, 2006

As of 17:00 Arrival

As of 18:00 Dinner and informal get together

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## Wednesday, November 22, 2006

08:00–08:45 Registration

Abstract

08:45–09:00 Opening of the Meeting

Walter Mengisen, Host Vice-Director  
Federal Office of Sports, Switzerland;  
Brian Martin, Chair of HEPA Europe

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### Presentations (Interventions, national and international approaches, part 1)

*Chair: Christoph Nützi, Federal Office of Sports, Switzerland*

09:00–10:00	Good health - One of education's most important goals	Johan Tranquist, Sweden	I 1
	Young Finland: Sports Adventure around the Globe	Pekka Oja, Finland	I 2
10:00–10:30	Coffee break		

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### Presentations (Interventions, national and international approaches, part 2)

*Chair: Lorenz Ursprung, Federal Office of Sports, Switzerland*

10:30–12:00	Physical activity promotion in youth: Approach of the Netherlands	Marijke Chin A Paw, The Netherlands	I 3
	Youth and Sport in Switzerland	Martin Jeker & David Egli, Switzerland	I 4
	WHO Europe's Children's Health and Environment Programme's Contribution to the Promotion of Physical Activity for Children	Sonja Kahlmeier, Italy	I 5
12:00–13:30	Lunch and/or workout		

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### Short Presentations (Interventions, part 3)

*Chair: Walter Mengisen, Federal Office and Institute of Sports, Switzerland*

13:30–14:45	WHO European Childhood Obesity Surveillance	Trudy Wijnhoven, Denmark	P 1
	Development and evaluation of a physical activity program for kindergarten children for the improvement of cognitive abilities	Julia Everke, Germany	P 2
	Physical activity promotion through accelerometer feedback and computer tailored advice: Feasibility and effectiveness among Dutch adolescents	Marijke Chin A Paw, The Netherlands	P 3
	Positive short-term effects of school-based weight gain prevention among adolescents	Amika Singh, The Netherlands	P 4
	Exercise training program in obese children: from randomized controlled trial to its application in the community	Nathalie Farpour-Lambert, Switzerland	P 5

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### General Discussion

*Chair: Pekka Oja, UKK Institute for Health Promotion Research, Finland*

14:45–15:30	Transferable Approaches to Promote Physical Activity (Evidence)		
15:30–16:00	Coffee break		

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### Workshops in 2 Groups

*Chairs: Pekka Oja, UKK Institute for Health Promotion Research, Finland and Brian Martin, Federal Institute of Sports, Switzerland*

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16:00–18:00 Development of Joint Approaches, Potential and Barriers

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19:00–23:00 Social Event and Dinner

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## Thursday, November 23, 2006

### Continuation: Workshops in 2 Groups

Abstract

*Chairs: Pekka Oja, UKK Institute for Health Promotion Research, Finland and Brian Martin, Federal Institute of Sports, Switzerland*

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09:00–09:45 Development of Joint Approaches

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### Plenary Session

*Chair: Urs Mäder, Federal Institute of Sports, Switzerland*

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09:45–10:30 Presentation of Work Groups

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10:30–11:00 Coffee break

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### Plenary Session

*Chairs: Urs Mäder Federal Institute of Sports and Christoph Nützi Federal Office of Sports, Switzerland*

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11:00–12:00 Conclusions and next Steps

HEPA Europe Workgroup: Experiences in Physical Activity and Sports Promotion in Children

Next Steps: Work Programme 2007

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12:00–13:30 Lunch and/or workout

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### Presentations (Monitoring, part 1)

*Chair: Urs Mäder, Federal Institute of Sports, Switzerland*

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13:30–15:00 Assessment of physical activity and fitness in population-based studies:

Striking the optimal balance between feasibility and validity

Søren Brage, United Kingdom

I 6

Physical activity, fitness and cardiovascular  
disease risk factors in young people

Jonatan R Ruiz, Sweden

I 7

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15:00–15:30 Coffee break

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### Presentations (Monitoring, part 2)

*Chair: Urs Mäder, Federal Institute of Sports, Switzerland*

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15:30–16:15 The Swiss Sport Observatory

Brian Martin, Switzerland

P 6

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### Plenary Session

*Chairs: Urs Mäder Federal Institute of Sports and Christoph Nützi Federal Office of Sports, Switzerland*

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16:15–17:00 Conclusions

Value of questionnaires, proxy-interviews, body fixed sensors

Next Steps

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17:00 Closing

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18:00–19:30 Dinner

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# **ABSTRACTS INVITED PRESENTATIONS**

**I 1-7**

## Good health – One of education's most important goals (I 1)

Johan Tranquist, Administrative Director, NCFE, National Center for Child Health Promotion, Örebro University, Sweden

Children and adolescents need to be physically active for at least one hour a day. This is why schools are one of several everyday environments that can play a crucial role in providing equal opportunities for daily physical activity, enjoying the fun of exercising and developing a positive attitude to physical activity. Exercise must become a natural part of everyday school life. This means that physical activity is no longer merely an issue for teachers of physical education and health in schools.

To emphasise the responsibility that schools have to offer daily physical activity within the framework of the school timetable, the government has added a supplement to the national curricula. *“Schools shall aim to offer all pupils daily physical activity within the framework of the school day”*

In 2004 the Swedish Government established the Swedish National Centre Promoting Physical Activity among Children and Adolescents, NCFE.

NCFE:

- takes an active and strategic role in encouraging schools to create and develop forms of work and supportive environments that promote physical activity
- are building networks and alliances
- foster cooperation between NGO and the schools
- helps to translate research into practical applications
- foster active transport to school
- highlights outdoor education/activities, and dance
- educate and support the teaching staff with knowledge and methods
- collecting learning examples and best practice

On 1 May 2006, the mandate of the NCFE was extended to promote good eating habits and other aspects of good health in children and adolescents.

## Young Finland: Sports Adventure around the Globe (I 2)

**Pekka Oja**<sup>1</sup> and Jukka Karvinen<sup>2</sup>

<sup>1</sup> *UKK Institute, Tampere, Finland and Karolinska Institute, Stockholm, Sweden*

<sup>2</sup> *Young Finland Association, Helsinki, Finland*

The Young Finland Association is a sports organisation with the main objective of promoting the well-being of children and the youth through physical activity. The Association is an umbrella organisation of 53 national sports and other federations. It organises activities in sports clubs, in schools and in kindergartens.

The Sports Adventure around the Globe campaign targets schoolchildren aged 6–12 years. It promotes daily physical activity, healthy eating and sufficient sleep. A school class is the basic campaign unit. With the aid of internet school classes record and accumulate daily physical activity bouts of 10 minutes and more during the 3-week campaign period with the support of teachers and parents. The activity bouts are converted to travel kilometres to cities in Finland, in Europe and in other places of the world where the classes would like to visit. In addition to quantitative indicators of the accumulated physical activity geographical, cultural and other information of the reached cities and regions is provided as feedback. Participating classes are eligible for daily and post campaign draws. In 2004 altogether 177 000 schoolchildren from 9000 classes participated in the campaign. The class teachers had integrated the adventure not only to physical education but also to environmental, data processing, mathematics, geography, biology, foreign languages and arts classes.

The Sports Adventure around the Globe campaign has proven to be a pupil-, class- and school-friendly way of stimulating daily physical activity of young school children.

## **Physical activity promotion in youth: National Approach of the Netherlands (I 3)**

Marijke Chin A Paw, EMGO Institute, Department of Public and Occupational Health, VU University Medical Center, Amsterdam, The Netherlands

In the Netherlands, about 25% of the children aged 10–18 years meet the physical activity recommendation (daily 60 minutes moderate intensity physical activities). Although there are no accurate data on temporal trends in physical activity participation in the Netherlands, it is clear that opportunities for children to be sedentary in their leisure time have increased through greater access to “pay” television, electronic games, computers and the internet. Data from the Amsterdam Growth and Health Study suggest a downward trend in the prevalence of participation in physical activity, as children grow older. To increase the level of physical activity among youth many local and national initiatives have been started. However, view of these initiatives has been evaluated on their effectiveness.

This presentation will give an overview of promising strategies aimed at promoting physical activity in the Netherlands, developed for implementation in the school setting. Three different strategies will be addressed: 1) sufficient availability of high quality physical education; 2) opportunities for physical activity during school hours; 3) stimulating sports and physical activity after school.

One of these initiatives will be discussed in more detail: “JUMP-in”. JUMP-in is a primary-school-based program that aims to promote physical activity among children ([www.JUMP-in.nl](http://www.JUMP-in.nl)). The program addresses environmental, personal and behavioural components. JUMP-in is developed in 2002 by the municipal health centre of the city of Amsterdam and the Department of Sports, Recreation and Sports Stimulation of the Institute of Social Services & Development of Amsterdam. The effect and process evaluation are currently being examined in a quasi-experimental controlled trial.

## Youth+Sport in Switzerland (I 4)

David Egli & Martin Jeker, Swiss Federal Office of Sports, 2532 Magglingen, Switzerland

“Youth+Sport” (Y+S) is a national programme of the Swiss Federation to promote sport among young people. The programme was launched in 1972 and supported activities of 14 to 20-year old youths in 16 sport disciplines in the beginning. Today, more than 70 disciplines are included and the lower age limit has been decreased to 10 years.

The Swiss Federation, the 26 cantons, and the sport federations train instructors by following a standardised procedure. In each discipline, a head and his team of instructors are responsible for the advancement of the sport and the training courses. Among others, discipline specific teaching material is developed and handed over to the instructors. After attending the basic education of 6 days, the instructors achieve the qualification to conduct courses in sport associations, sport federations, schools, and communities that are supported by Y+S. Higher qualifications may be achieved by attending further instructor courses (up to 40 days for the Y+S expert). Every other year, the qualification has to be renewed by attending further training of at least one day.

Annually, 2000 training courses are organised for 48 000 instructors. 50 000 sports courses and camps are organised by those Y+S instructors and more than 550 000 children and adolescents participate. This corresponds to 60% of the Swiss youth aged 10 to 20. The Swiss Federation supports all activities of this programme with 56 million CHF (35 million Euro), annually.

During the past few years, an extensive database has been developed to administer this comprehensive programme. This crucial instrument is available to 700 certified administrators of the Swiss Federation and the cantons.

## **WHO Europe's Children's Health and Environment Programme's Contribution to the Promotion of Physical Activity for Children (I 5)**

Leda Nemer, **Sonja Kahlmeier**

WHO European Centre for Environment and Health, Rome Division, Rome, Italy

The children's health and environment programme advocates the rights of children to live and grow in an environment that allows them to reach their highest attainable level of health.

To achieve this goal, the programme carries out activities in the European Region and supports the implementation of recommendations from Regional Ministerial Conferences on Environment and Health, in coordination with efforts from the global community.

### **Reasons for concern**

Increasing hazards where children live are raising concern about the effects of the deterioration of the environment on their health. Children have a special vulnerability to environmental pollution, and their specific exposure patterns make them subject to higher exposures.

Although children's health in the WHO European Region is currently satisfactory on the whole, warning signals are emerging. They include the return of diseases previously under control (e.g., diphtheria and tuberculosis), the increase of chronic diseases (e.g., asthma and allergies), and the new morbidity from substance abuse, injuries and mental disorders. Adverse effects on children's health also result from increasing socioeconomic inequalities across the Region, the consequences of armed conflict, child labour and the sexual exploitation of minors.

(from <http://www.euro.who.int/childhealthenv>)

## **Assessment of physical activity and fitness in population-based studies: Striking the optimal balance between feasibility and validity (16)**

Søren Brage, MRC Epidemiology Unit, Cambridge, United Kingdom

Precise measurement of physical activity and fitness is important for characterising the dose-response relationship between activity and health outcomes, for specifying which dimension of activity is most important, for comparisons between different cultural settings and time eras, and finally in lifestyle intervention studies to ascertain the extent to which the intervention was delivered or perhaps accompanied by compensatory behaviour in other activity domains. Available objective methods include heart rate and accelerometry, which provide information on intensity patterns, whilst at the same time being considered feasible for use in large-scale epidemiological studies. One limitation to accelerometry is the lack of universality in the relationship between accelerometry and physiological intensity across biomechanically different activities and a limitation to heart rate monitoring is its elevation due to factors other than physical activity, e.g. emotional stress. Another challenge for applying these techniques in larger studies is the necessity for individual calibration.

This talk will discuss different ways by which individual calibration may be performed, ranging from a graded exercise (treadmill) test covering a wide intensity range with simultaneous measurement of respiratory gas exchange, a simple step or walk test with or without measurement of respiratory gas exchange, to no dynamic calibration. These procedures also produce estimates of cardiovascular fitness, a relatively stable and therefore more easily measurable exposure.

An additional question is how physiological and biomechanical monitoring information may be combined to increase measurement precision. One example is branched equation modelling for combining heart rate and accelerometry. An overview is provided of this technique's ability to estimate physical activity intensity in various activities, for multiple levels of calibration.

## Physical activity, fitness and cardiovascular disease risk factors in young people (I 7)

Jonatan R. Ruiz<sup>1,2</sup> and Michael Sjöström<sup>1</sup>

<sup>1</sup> *Unit for Preventive Nutrition, Department of Biosciences and Nutrition at NOVUM, Karolinska Institutet, Sweden*

<sup>2</sup> *Department of Physiology, School of Medicine, University of Granada, Granada, Spain*

The most common causes of morbidity and mortality in the industrialized countries are coronary heart disease, stroke, obesity, hypertension, type 2 diabetes, allergies, and several cancers. A sedentary lifestyle is a major risk factor for these diseases, and is close to overtaking tobacco as the leading cause of preventable death. The protective effect of intentional physical activity on the above mentioned non-communicable diseases has been widely reported in both young and adult people. Physical activity has been shown to be negatively associated with total and central adiposity, markers of insulin resistance/sensitivity, cardiorespiratory fitness, and with features of metabolic syndrome already in school-aged children.

Low cardiorespiratory fitness is also an important health problem. Cardiorespiratory fitness is as a direct marker of physiological status and reflects the overall capacity of the cardiovascular and respiratory systems. Physical activity and cardiorespiratory fitness are closely related in that fitness is partially determined by physical activity patterns over recent weeks or months. High cardiorespiratory fitness during childhood and adolescence has been associated with a favourable plasma lipid profile in both overweight and non-overweight adolescents, with total body fat, abdominal adiposity, features of the metabolic syndrome, and with arterial compliance. The positive impact of fitness on novel risk factors such as homocysteine and C-reactive protein has also been described in young people. Collectively, these findings suggest that cardiorespiratory fitness is potentially an important health marker, and should be considered to be included in the pan-European Health Monitoring System.



# **ABSTRACTS SHORT PRESENTATIONS**

**P 1–6**

## WHO European Childhood Obesity Surveillance (P 1)

Initiative **Wijnhoven TMA**, Branca F, WHO Regional Office for Europe Nutrition and Food Security Programme, Copenhagen, Denmark

Prevention of obesity in childhood is recognized as the only feasible option for curbing the current epidemic since current treatment practices of obese children are largely aiming at bringing the problem under control rather than effecting a cure. The implementation of a simple, effective, standardized and sustainable childhood obesity surveillance system in Europe will be important to tackle and monitor the obesity epidemic in children, reduce the incidence of childhood obesity and evaluate the impact of obesity preventive interventions. The Nutrition and Food Security Programme of the WHO Regional Office for Europe is therefore developing this system for use in public health action and program planning and evaluation. It is aiming to measure trends in obesity in primary school children in order to have a correct understanding of the progress of the epidemic but also allowing inter-country comparisons within the Region.

Anthropometric measurements (weight, height, waist, hip and umbilical circumferences) will be performed following standardized procedures in 5–7 year-old primary school children and repeated in two years in a new cohort (5–7 years) and in the same initial cohort (7–9 years). Once a national representative sample of primary schools is selected at the time of implementation of the system, the same schools will remain to be the nationwide sentinel sites for the system. The data will be collected once a school year by trained paediatricians, school nurses or other school personnel according to common protocols. Specialized training in taking measurements as accurately and precisely as possible will be provided and standardized measurement equipment made available. Depending on the resources available, countries may include additional data collection on indicators of children's dietary intake, physical activity patterns and morbidity. Family's socioeconomic and demographic characteristics will be obtained through the parents informed consent form. A national institute will be responsible for the overall national coordination of the system (e.g. training/standardization, data management).

# Development and Evaluation of a Physical Activity Program for Kindergarten Children for the Improvement of Cognitive Abilities (P 2)

Julia Everke, Department Prof. Woll, Sport Science, University Konstanz, Germany



## Cognition and Motor activity in Kindergarten

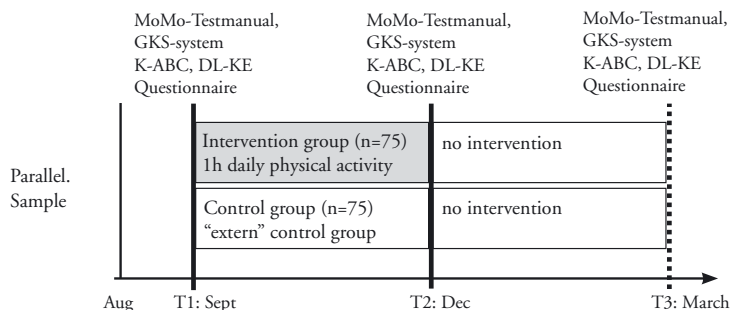
Study

**Introduction:** Motor development and cognition are closely related, as expressed by Jean Piaget (1975) by the term “sensomotor intelligence” in early childhood. Scientific studies about the connection between motor abilities and cognition have shown different results: from the claim of “no connections” between motor abilities and cognition (e.g. Matsuda & Sugihara, 1973) and “partial connections” (e.g. Leithwood & Fowler, 1971; Schilling, 1973) to “significant connections” between motor function and cognition (e.g. Ismail & Gruber, 1967; Scherrer, 2000; Graf, 2003). There is a tendency towards the last statement in recent scientific studies, especially in terms of the connection between coordination items (balance) and cognitive abilities. However, the sample of preschool children (age 3–5 years) is affected by a lack of research and controlled evidence based intervention studies.

**Methods:** The purpose of this study is the development of a physical activity program for preschool children (3-5 years) for the improvement of cognitive abilities (e.g. concentration, memory) and motor abilities (coordination skills).

### Design

Sample n= 170, preschool-children, 3-5 years old



In a pre- and post-test experimental design, 75 kindergarten children (3-5 years old) participate in a three-month physical activity program, while those in the control group (n=95) participate in the regular curriculum. The experimental group completes two motor ability tests (MoMo-Testmanual, Bös et al., 2004 as well as GKS balance-system, GK-1000 light) and two cognitive tests (K-ABC, Kaufmann/Kaufmann, 1999 as well as DL-KE, Kleber/Kleber, 1974). The parents complete a questionnaire about their socio-economic status, their physical activity and questions about their child’s behaviour. The physical activity program will be conducted by trained kindergarten teachers. The intervention (5times/week) starts in September 2006 and ends in December 2006. The follow-up evaluation will be conducted in March 2007.

## **Physical activity promotion through accelerometer feedback and computer tailored advice: Feasibility and effectiveness among Dutch adolescents (P 3)**

Marijke Chin A Paw, Sander Slootmaker, Jantine Schuit, Jaap Seidell and Willem van Mechelen  
EMGO Institute, Department of Public and Occupational Health, VU University Medical Center,  
Amsterdam, The Netherlands

The health benefits of a physically active lifestyle are now universally accepted. However, in the Netherlands about three quarters of the adolescent population aged 12–18 is insufficiently active (daily 60 minutes moderate-intensity physical activities). Levels of physical activity tend to decrease with increasing age. This decrease is most marked between age 13 and 16 years. It is however, unclear to what extent adolescents are able to make a good judgement of their actual physical activity behaviour. Inactive people are often not aware of their inactivity. Providing feedback on the actual physical activity level by an activity monitor may increase awareness and in combination with an individually tailored physical activity advice promote a physically active lifestyle.

In a 3-months randomized controlled trial the feasibility and effectiveness of providing adolescents (aged 12–18 yrs) with an activity monitor in combination with a personal physical activity advice through the Internet was examined. Outcome measures were level of physical activity and determinants of physical activity. Participants were relatively inactive volunteers. The feasibility and effectiveness of this innovative method to promote physical activity will be presented.

## Positive short-term effects of school-based weight gain prevention among adolescents (P 4)

Amika Singh, EMGO-Institute Department of Public and Occupational Medicine, VU University medical center, Amsterdam, The Netherlands

### Objective

The number of well-designed trials in the field of obesity prevention in adolescents is limited. Hence there is an evident need for randomized controlled trials, using a range of objective measures of body composition. We aimed to determine whether a multi-component health promotion intervention for Dutch adolescents would be successful to influence body composition and aerobic fitness.

### Design

Randomized controlled trial.

### Setting

Ten intervention and eight control prevocational secondary schools.

### Participants

978 adolescents, mean age 12.7 years.

### Intervention

An interdisciplinary multi-component intervention program with an adapted curriculum for 11 biology and physical education lessons and environmental change options, including additional lessons physical education and advice on the school canteen assortment.

### Main outcome measures

Body height and weight, hip and waist circumference, four skin folds, and aerobic fitness.

### Results

Multilevel analyses showed significant differences in changes after the eight-month intervention period in favor of the intervention group with regard to hip circumference (mean difference 0.53 cm, 95% confidence interval 0.07 – 0.98), and sum of skin folds among girls (mean difference – 2.31 mm, 95% confidence interval -4.34 – -0.28). In boys, the intervention resulted in a significant difference in waist circumference (mean difference – 0.57 cm, 95% confidence interval -1.10 – -0.05). No significant intervention effects were found on aerobic fitness.

### Conclusions

The multi-component DOiT-intervention program positively influenced a number of measures of body composition, both among girls and boys. Our results indicate that secondary prevocational school curriculum changes may contribute to excessive weight gain prevention among adolescents.

## Exercise training program in obese children: from randomized controlled trial to its application in the community (P5)

Farpour-Lambert N.J.<sup>1</sup>, Keller-Marchand L.<sup>1</sup>, Martin X.<sup>1</sup>, Schwitzgebel V.<sup>2</sup>, Aggoun Y.<sup>3</sup>, Beghetti M.<sup>3</sup>

<sup>1</sup> *Sports Medicine, Pediatric Cardiology Unit*

<sup>2</sup> *Endocrinology and Diabetes Unit*

<sup>3</sup> *Pediatric Cardiology Unit, University Hospital of Geneva, Switzerland*

**Introduction:** There is an urgent need for action to strengthen treatment in obese children to pre-empt the spread of the cardiovascular diseases and diabetes.

**Aims:** To evaluate the effectiveness of a 3-month exercise training program on blood pressure, markers of the metabolic syndrome and quality of life in obese children.

**Aims:** To evaluate the effectiveness of a 3-month exercise training program on blood pressure, markers of the metabolic syndrome and quality of life in obese children.

**Methods:** Randomized controlled trial including 40 prepubertal obese children aged 6 to 11 years (20 intervention and 20 controls). Moderate exercise training program integrated 3 sessions per week (60 minutes). Before and after intervention, 24-hour ambulatory blood pressure (ABPM); body fatness by DXA; fasting lipids, glucose and insulin; physical activity count by accelerometer, cardiorespiratory fitness by a treadmill test; and quality of life by Child Health Questionnaire (QOL), were measured.

**Results:** At baseline, 56% and 57% of obese children had hypertension and at least 3 criteria for the metabolic syndrome, respectively. QOL was significantly reduced compared to lean controls. The 3-month exercise program resulted in significantly reduced ABPM, and increased physical activity and QOL, compared to obese controls. Participation rate was high (85%). There was a trend toward lower BMI and percentage of total and abdominal fat in the intervention group, however differences were not significant.

**Conclusion:** We showed that exercise training, without nutritional intervention, is effective to reduce blood pressure and increase physical activity and quality of life in obese children. Three months intervention may be too short to see significant effects on body fatness and metabolism. We recently created the Sportsmile Foundation ([www.sportsmile.ch](http://www.sportsmile.ch)) and set up 15 exercise training programs in the community in Switzerland.

## **The Observatory Sport and Physical Activity Switzerland – towards a monitoring system for physical activity levels in all age groups (P 6)**

Brian W. Martin<sup>1</sup>, Urs Mäder<sup>1</sup>, Markus Lamprecht<sup>2</sup>

<sup>1</sup> Swiss Federal Institute of Sports Magglingen, Swiss Federal Office of Sports

<sup>2</sup> Lamprecht und Stamm SFB AG, Zurich, Switzerland

In 2000 the Swiss government, the Swiss Federal Council, has adopted its “Concept for a Sports Policy in Switzerland” with health, education, performance, economy and sustainability as its main priorities and with “more physically active people” as its first objective. The Swiss Observatory for Sport and Physical Activity was established in 2002 based on the following suggestion in the concept: “The Federal Council wishes to be informed periodically on developments in the area of sport. Positive as well as negative developments shall be detected by a yet to define ‘Observatory.’”

The observatory has a website at [www.sportobs.ch](http://www.sportobs.ch), it is operated by Lamprecht und Stamm Sozialforschung und Beratung AG and financed by the Swiss Federal Office of Sports and other partners. The observatory will cover about 40 thematic groups of indicators, about 30 of them being already available. Regular overview reports and more detailed publications on items of particular interest are published.

Indicator number one of the observatory covers physical activity levels in the population of Switzerland. First estimates with respect to the current recommendations for health-enhancing physical activity were based on smaller surveys since 1999, reliable representative data on adults is available since the Swiss Health Survey 2002. With the growing focus on physical activity in children and the respective national recommendations published in 2006, developing a monitoring system for children has become a priority.

# PARTICIPANTS



## INVITED SPEAKER

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