The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Study for the ENVI Committee

2016
Abstract

This document summarises the presentations and discussions taking place at the workshop organised by Policy Department A on the role of education and sport in the fight against cancer, held at the European Parliament in Brussels in July 2016. The aim of the workshop for the Committee on Environment, Public Health and Food Safety was to provide background information and highlight ways in which sport and physical activity can be promoted to help reduce the overall impact of cancer.

Firstly the scientific evidence for the link between physical (in)activity and cancer was presented. Risk reductions were discussed, as well as the risks of inactivity, followed by recommendations on improving activity levels. The evidence so far is strong for colon, breast and endometrial cancers. Secondly the focus was on policy initiatives to fight against cancer through education, sport, and physical activity, with discussions on strategies and actions of the European Commission and the WHO. Finally, presentations were given by organisations set up to promote activity during or after cancer treatments, along with recommendations to prevent cancer.
This document was requested by the European Parliament’s Committee on Environment, Public Health and Food Safety.

**CONTRIBUTING EXPERTS**

MEP Mr Alojz PETERLE, co-Chair ENVI Health Working Group  
Prof. Michael LEITZMANN, Department of Epidemiology and Preventive Medicine, University of Regensburg, DE  
Dr Margo MOUNTJOY, Medication and Scientific Commission, International Olympic Committee  
Mr Yves Le LOSTECQUE, Head of Sport Unit, DG EAC, European Commission  
Dr Susanna KUGELBERG, World Health Organisation, Regional Office of Europe  
Dr Wendy YARED, Director, European Cancer Leagues  
Mr Jaka JAKOPIČ, former Professional Footballer, Ambassador of Movember Movement (SI)  
Mr Olivier LAPLANCHE, CAMI Regional Director for the Paris region (FR)  
Ms Petra THALLER, founder of Outdoor against Cancer

**SUMMARY PREPARED BY**

Ms Yoline KUIPERS CAVACO  
Ms Alicia MCNEILL  
Mr Matteo MASCOLO  
Milieu Ltd  
Brussels, Belgium

**RESPONSIBLE ADMINISTRATOR**

Dr Marcelo SOSA IUDICISSA

**EDITORIAL ASSISTANT**

Ms Eva ASPLUND

**ABOUT THE EDITOR**

To contact the Policy Department or to subscribe to its monthly newsletter please write to:  
Policy Department Economic and Scientific Policy  
European Parliament  
B-1047 Brussels  
Poldep-Economy-Science@europarl.europa.eu

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LIST OF ABBREVIATIONS

DG EAC  Directorate General for Education and Culture
DG ENVI  Directorate General for the Environment
DG SANTE  Directorate General for Health and Food Safety
EC  European Commission
ECL  European Cancer Leagues
EU  European Union
HEPA  Health-enhancing Physical Activity
IARC  Internal Agency for Research on Cancer
IOC  International Olympic Committee
MEP  Member of European Parliament
NCD  Non-communicable diseases
OaC  Outdoor against Cancer
PE  Physical Education
WHO  World Health Organisation
EXECUTIVE SUMMARY

On 13 July 2016, the Committee on Environment, Public Health and Food Safety (ENVI) of the European Parliament held a workshop, ‘The fight against cancer is a team sport: the role of education and sport’. The workshop was hosted by Mr Alojz PETERLE (MEP), co-chair of the Health Working Group within the ENVI Committee.

Mr Peterle opened the discussion by stressing the important role of sports and exercise in the prevention and treatment of cancer. Using his own cancer diagnosis as an example, Mr Peterle outlined the impact of increased physical activity on his own lifestyle and approach to life.

The first part of the workshop examined the scientific evidence for the link between physical (in)activity and cancer. Prof. LEITZMANN of the University of Regensburg, Germany, began by giving an overview of the latest evidence and trends in academic research. He noted the substantial observational evidence for the link between physical activity and cancer prevention (especially for colon, breast and endometrial cancer). For other types of cancer, the links are less clear. Further research is also needed into the type of physical activity that counters cancer risk and the stage of life when the activity is done, as well as gaining a clearer understanding of the underlying biological mechanisms.

Dr MOUNTJOY of the International Olympic Committee (IOC) was next, focusing on the health and fitness of young people. She outlined the health implications of physical inactivity in children, including cardiovascular and metabolic health, bone health, obesity, mental health, and injury risk, before giving comprehensive recommendations. The recommendations, based on academic studies, require a coordinated, collaborative, global effort between many stakeholders, with input also from young people themselves. Such stakeholders include sport organisations, governments, and NGOs, as well as those involved in the education system, the healthcare system, and academic research.

The second part of the workshop addressed policy initiatives. Mr LE LOSTECQUE, Head of Sport Unit at the European Commission (DG EAC-Education & Culture) opened by introducing the 2013 Council Recommendation on HEPA (Health-Enhancing Physical Activity) to promote good practices, and outlining the key role of schools in encouraging children to do physical activity. He referenced Expert Group recommendations and Council conclusions on the topic, as well as the Eurydice report on physical education (2013). Funding, such as Erasmus +, the programme for Education, Training, Youth and Sport (2014-2020) is still small but significant, and promoting HEPA is a priority. Mr Le Lostecque then outlined the success of the first European Week of Sport, before finishing his presentation by setting out the recent recommendations of the High Level Group on Grassroots Sport.

Dr KUGELBERG of the WHO was next, presenting an overview of strategies and guidance developed by the WHO. She stressed the importance of physical activity throughout the life-course, and the different impacts for young people, adults, and older people. She also referenced the recently published Physical Activity Strategy for the WHO European Region 2016-2025, with a focus on the second Priority Area – Supporting the Development of Children and Adolescents, and the third Priority Area - Promoting physical activity for all adults as part of daily life. Dr Kugelberg concluded that citizens must be engaged, and opportunities continually assessed and improved, to increase physical activity in day-to-day life.

The third part of the workshop was dedicated to civil society participating in the fight against cancer. The first speaker was Dr YARED of the Association of European Cancer Leagues (ECL). She introduced the European Code Against Cancer, which was developed
by the European Commission and entrusted to ECL. Dr Yared drew attention to Number 4 of this code, which encourages people to be physically active in everyday life and limit the time spent sitting. Dr Yared concluded with two examples of campaigns to raise awareness, a Slovakian ‘Jumping Squats’ challenge and a football-oriented educational poster from the Irish Cancer Society.

Mr JAKOPIČ, a former professional footballer and current ambassador for the Movember Movement, then detailed his own experiences with cancer. He explained how football was his priority in life until he became ill. He described the shock of his diagnosis, compounded by the fact that it happened despite his healthy lifestyle. He stressed that staying physically active and being in peak physical condition played a large role in his treatment and recovery. He returned to football after his recovery, but it was no longer his sole priority. After recovering, he returned to football, but while football was his life prior to his diagnosis, after it was just a job. Now, Mr Jakopič raises awareness of cancer, particularly how it can happen to everyone, even sportsmen in top physical condition. Finally, he spoke about his involvement with the Heads Up Project and the Wheel of Life Project, designed to raise awareness of cancer.

Mr LAPLANCHE of CAMI Sport & Cancer spoke about the French experience. CAMI, founded by an oncologist and an elite athlete, provides a training structure for all cancer patients in order to increase their survival and quality of life, reduce chronic fatigue, and prevent other diseases. Using the ‘Butterfly Trail’, CAMI ensures that all patients have access to training classes no matter their age, type of cancer, abilities and financial means, with 1,600 patients cared for per week. Mr Laplanche stressed that this is a public health issue (given that relapses of cancer are costly) and a non-pharmacological treatment, which helps to re-build the body and body image.

The final speaker of the afternoon was Ms THALLER (Outdoor against Cancer). She stressed the importance of sport both as a preventative measure and during the treatment of cancer, and also the role of sport throughout life. She reiterated that a strong body and a strong mind make people more resilient when ‘knocked down’ by a cancer diagnosis. Ms Thaller talked about Outdoor against Cancer, which has been offering free weekly outdoor training sessions in Munich since late 2015, including strength and endurance training, stand-up paddling, outdoor yoga and hiking trips. Ms Thaller noted that, although people who do sport may still get cancer, sport can help to engage people with life and improve feelings of overall wellbeing.

Questions from the audience (including medical and engineering students) were welcomed after each part of the workshop, as were comments from MEPs in attendance. The MEPs, who all reiterated the importance of sport for cancer treatment, also emphasised the role of diet in treatment and prevention, and highlighted the challenges in engaging previously inactive cancer patients with sport.

In his closing remarks, Mr PETERLE thanked the speakers and stressed that the fight against cancer will not be won through new treaties and regulations. Rather, joint actions undertaken by the EU Member States in the area of sports and physical activity will provide the real added value for citizens across the EU.
LEGAL AND POLICY BACKGROUND

Physical inactivity is the fourth leading risk factor for death globally, responsible for 6% of deaths worldwide and for 5–10% in the WHO European Region. Recent figures show that in the EU, six out of 10 people over 15 years of age never or seldom exercise or do sports, and that more than half never or seldom engage in other kinds of physical activity, such as cycling, dancing or gardening. Physical inactivity has been estimated to cause 9% of all breast cancer cases and 10% of all colon cancer cases, which has considerable consequences for direct healthcare costs and indirect costs, due to increased periods of sick leave, work disabilities and premature deaths. In recent years, sedentary behaviour has emerged more prominently in scientific studies as a potential determinant of cancer risk. As a consequence, around one million deaths (about 10% of the total) and 8.3 million disability-adjusted life years are lost each year in the WHO European Region.

Sports and physical activity have been proven to provide a range of health benefits and to play an important role in primary prevention of various cancers, including colon, endometrial and breast cancer. Physical activity has also been shown to have positive effects among on cancer survivors, as it can decrease the side effects of cancer therapy and treatment, speed up recovery after a cancer diagnosis, improve overall survival rates and provide emotional and psychological benefits. It is thus important to promote the importance of physical activity and sports in cancer control programmes, and increase public awareness in order to positively influence people's lifestyle choices and behaviours.

Many organisations and institutions have launched initiatives to promote sport and physical activity. The WHO, for example, developed a Global Action Plan for the prevention and control of non-communicable diseases 2013–2024, which calls for a 10% relative reduction in the prevalence of insufficient physical activity, and highlights the importance of ensuring that adults (including older people) undertake at least 150 minutes of moderate intensity aerobic physical activity each week.

The importance of sports and physical activity in the prevention of cancer has also been addressed through a range of European and international initiatives. EU cancer prevention policies have been a priority since 1985, when the European Council launched the first ‘Europe Against Cancer’ programme. Since then, successive European Action Plans Against Cancer strive to promote concrete actions to tackle risks factors and health determinants, including physical inactivity.

Today, EU cancer policy is based on the 2009 Commission Communication on a European Partnership for Action Against Cancer, which aims to support Member States and other

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stakeholders in their efforts to tackle cancer more efficiently, and includes the specific objective of developing national cancer control plans in every Member State. As a result of the first European Cancer Plan, the European Code Against Cancer was created jointly by the International Agency for Research on Cancer (IARC) and the European Commission (EC) as an information tool to advise citizens on cancer prevention. A new version of the European Code Against Cancer, based on the most updated scientific evidence, was launched on 14 October 2014. One of its key messages is that certain cancers may be avoided by adopting healthier lifestyles and it recommends physical activity in everyday life and limited time spent sitting. In addition to preventing cancer, the Commission also promotes physical activity to counter health risk factors through other initiatives, such as the High Level Group on Nutrition and Physical Activity, and the EU Platform for Action on Diet, Physical Activity and Health.

Sport promotion is a very important part of improving health. In 2007 the Commission adopted the EU White Paper on Sport, setting out policy guidelines, with three actions focusing specifically on the link between public health and physical activity. When the Lisbon Treaty entered into force in 2009 it gave the EU competence in sports policy for the first time under Article 165. This gave the Commission a mandate to develop a specific EU sports programme, with an associated budget. While the promotion of health-enhancing physical activity is primarily the responsibility of the Member States, the Commission can support, coordinate and complement national actions. On the basis of this mandate, in 2011 the EC published a Communication on Developing the European Dimension in Sport, which proposed action at EU level in the areas of the societal role, the economic dimension and the organisation of sport. The Communication recognises physical activity as one of the most important health determinants and emphasises the fundamental role of sport in physical activity promotion.

Currently, the Directorate General for Education and Culture of the European Commission (DG EAC) is focusing on five initiatives to promote health through physical activity. Firstly, the EC is implementing the Council Recommendation on a European network for the promotion of health-enhancing physical activity (HEPA). A key element of this initiative is a light monitoring framework that takes into account the 2008 EU Physical Activity Guidelines. This should help to improve information and data on HEPA levels and policies, as well as strengthening cooperation between stakeholders (such as the Member States, WHO, and civil society). Secondly, the EC has adopted recommendations to encourage

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physical activity at a younger age. Thirdly, it is financing projects (e.g. Erasmus+, a programme which includes sport actions) that will contribute to the development of a European dimension to sport, as well as increasing cooperation and harmonisation between sport organisations. Fourthly, in 2015 the European Week of Sport was launched for the first time. This involved all European citizens, irrespective of their age, background or fitness level, aiming to inspire them to be active on a regular basis and to create opportunities for exercise in everyday life. Lastly, the EC is implementing the recommendations of the High Level Group on Grassroots Sport, set up under the political leadership of Commissioner Navracsics. These recommendations address the issues fundamental to the contribution of grassroots sport to European societies, such as health, social inclusion, informal learning and skills development, volunteering, sustainable financing, urban planning and infrastructure.

At the international level, the recent physical activity strategy for the WHO Region (2016-2025) builds on the commitments of Health 2020 (the WHO European policy framework for health and wellbeing) and aligns with existing WHO frameworks and strategies, such as the Global action plan for the prevention and control of non-communicable diseases 2013—2020, the Action plan for implementation of the European Strategy for the Prevention and Control of Non-communicable Diseases 2012—2016, the Global Strategy on Diet, Physical Activity and Health and the WHO Global Recommendations on Physical Activity for Health. It is linked to landmark documents in related areas of health promotion and intersectoral collaboration, such as the Parma Declaration to the WHO European Region Food and Nutrition Action Plan 2015—2020. It also builds on the ongoing work of WHO in the field of physical activity, as illustrated by guiding documents such as Steps to Health: a European framework to promote physical activity for health and A healthy city is an active city: a

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25 Steps to health: a European framework to promote physical activity for health. Copenhagen: WHO Regional Office for Europe, 2007 (http://www.euro.who.int/en/health-topics/disease-prevention/physical-
physical activity planning guide\textsuperscript{26}, and by the emerging work of the WHO Commission on Ending Childhood Obesity.

The final goal of the WHO strategy is to inspire governments and stakeholders to work towards increasing levels of physical activity among all citizens of Europe by: promoting physical activity; reducing sedentary behaviours; ensuring an environment that supports physical activity through engaging and safe environments, accessible public spaces and infrastructure; providing equal opportunities for physical activity regardless of gender, age, income, education, ethnicity or disability; and removing barriers to, and facilitating, physical activity\textsuperscript{27}.

Despite these initiatives at international and European level, a variety of challenges remain, and all opportunities must be taken to promote physical activities and sports and to support healthy policies in education for children, young people and the public at large.


PROCEEDINGS OF THE WORKSHOP

1.1. Introduction

1.1.1. Welcome and opening

**MEP Mr Alojz PETERLE, Co-Chair, ENVI Health Working Group**

Mr PETERLE opened the workshop by welcoming the audience and thanking both the speakers and the Secretariat for their work in organising the workshop and producing such a large meeting document. He noted that while this workshop did not address the “Brexit” issue, he recalled that during the last cancer event, British collaborators and partners stressed that the EU is an ally in the fight against cancer, a sentiment he himself echoed.

Mr Peterle then turned to cancer and sport, stating that he, a cancer survivor himself, starts each morning with a run. He noted that health is, in the first instance, each individual’s personal responsibility, before any role played by the state and the EU. Before his own cancer diagnosis, he told the audience, he believed himself to be living a very healthy life. After his diagnosis, however, he realised that he could introduce more daily physical activity, a decision he does not regret.

1.2. Part I: Scientific evidence: the link between physical (in)activity and cancer

1.2.1. The role of physical activity and sports in cancer primary prevention

**Prof. Michael LEITZMANN, Department of Epidemiology and Preventive Medicine, University of Regensburg, Germany.**

Prof. LEITZMANN took the audience through some of the latest scientific data, which is based mainly on formal quantitative meta-analysis. He began with two definitions used in such studies. The first defined physical activity to be any bodily movement produced by skeletal muscles that results in energy expenditure, and the second defined exercise activity as a subset of physical activity that is planned, structured, and repetitive and has the objective to improve or maintain physical fitness.

Prof. Leitzmann noted that there have been numerous recommendations for physical activity issued in recent decades, each prescribing different types of activity, intensity, and duration. Prof. Leitzmann, however, drew attention to the recommendation of the US Surgeon General, which advocates including a moderate amount of physical activity (e.g. 30 minutes of brisk walking) on most, if not all, days of the week. Later recommendations, such as those from the American Cancer Society, the World Cancer Fund, and the WHO, differ slightly, but all agree that moderate — rather than light intensity activity is needed, that activity needs to be done on a continuous basis on most, if not all, days of the week, and that the duration should be 30 minutes per session or longer.

Prof. Leitzmann presented data showing that around 30% of people in Europe report engaging in no physical activity. He noted that, somewhat surprisingly, there is a slight

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29 Data showing prevalence of reporting ‘no recreational activity participation’ for 15 EU countries taken from IARC Handbook on Cancer Prevention Vol 6: Weight Control and Physical Activity, 2002.
On the topic of cancer prevention, Prof. Leitzmann stated that while there are many observational epidemiological studies examining the relationship between physical activity and cancer, there are virtually no data from directed, randomised studies looking at the relationship with the first occurrence of cancer. Such observational evidence relies on self-reporting, or measurements taken from wearable devices, and follow-ups over time to track the first occurrence of cancer. He drew attention to the preliminary cumulative evidence linking etiologic pathways to cancer prevention, highlighting the lack of data on the proportion of cancer in the population that could be prevented if physical activity is increased. The reasons for this lack of data, he explained, is that there are no sufficient and reliable estimates of physical activity in the population. Estimates mostly rely on self-reporting – therefore prone to misreporting and errors – and there are no objective data for the general population which can be used as a database to form such estimates. The best estimate is that 10% of cancers in the population could be prevented if the population moved from physical inactivity to being physically active, which, he explained, still gives no indication of the level of activity.

Prof. Leitzmann then described 10 specific cancer sites which are thought to be related either strongly or weakly to physical inactivity. He started with colon cancer, the most commonly studied site, and the one studies suggest has the strongest risk reduction. The risk of cancer decreases about 25% for both proximal and distal colon cancer. Prof. Leitzmann noted the higher risk for colon cancer compared to rectal cancer, and the evidence for a greater risk reduction in men compared to women. The reasons for this were, he said, unclear, and may be due to men being more vigorously or frequently active than women, or for biological reasons, such as hormone levels. He stated that there are clear risk reductions for vigorous activity (compared to light activity) and long-term activity (compared to short-term or transient levels of activity).

For breast cancer, studies point to a risk reduction of about 20%. Prof. Leitzmann noted the higher risk reduction associated with recreational activity verses occupational activity, as well as with recent past activity verses distant past. He explained that this meant that women who are physically active in their 40s and 50s benefit more than women who were active in their younger years. He also stated that a stronger link is seen for normal weight women compared to overweight women, and post-menopausal women compared to pre-menopausal women.

The third cancer site presented by Prof. Leitzmann was endometrial cancer, which also has a risk reduction of approximately 25%. Risk reduction has been observed for both vigorous and moderate intensity activity, and there is preliminary evidence for a more pronounced inverse relation with recent past activity compared to that of the distant past.

The remaining cancers discussed by Prof. Leitzmann all had less consistent evidence. Pancreatic cancer, for example, shows around 30% risk reduction, but is covered by far fewer studies, especially when compared to the number of studies on colon cancer. Lung cancer has been relatively extensively studied and, although it shows risk reduction, ‘confounding by smoking’ cannot be excluded. This means a third variable may bias the relationship: people who are physically active tend to smoke less, and smokers have an increased risk of lung cancer, and thus data must be treated with caution.

Prof. Leitzmann then briefly mentioned ovarian cancer (approximately 20% risk reduction), gastric cancer (both occupational and recreation activity leads to 10-20% risk reduction)

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30 IARC Monograph on weight control and physical activity, 2002.
and renal cell cancer (risk reduction of just over 10%). Lastly, he mentioned prostate cancer, which shows a risk reduction of around 10% for total physical activity. However, most prostate cancer is detected through screening and those most likely to undertake such screening are more likely to be physically active.

Having shown that at least three cancers are impacted by physical activity, with at least another six showing moderate evidence of such links, Prof. Leitzmann drew attention to the possible biometric mechanisms through which physical activity may prevent cancer. He pointed out that most mechanisms operate around hormonal pathways, metabolic pathways or inflammatory pathways, which may be mediated through the reduction of body fat. He pointed out that physical activity reduces weight gain, creating a hormonal balance which helps to prevent cancer, either because of the glucose metabolism or inflammatory markers. He noted that some pathways operate independently of issue levels, for example those thought to be related to enhanced DNA repair capacity, enhanced anti-oxidative capacity or enhanced exposure to UV radiation. He noted that many people exercise outdoors, boosting Vitamin D production and helping to fight cancer.

Prof. Leitzmann concluded by highlighting the many research difficulties that stem from imprecise measurements of physical activity, stating that this must be improved. He also noted that little is known about the type, intensity, frequency, and duration of physical activity that counters cancer risks, given that studies have focused on one or another of these elements. Similarly, little is known about the time of life during which physical activity is carried out (adolescence, middle age, or the elderly) and, finally, only very imprecise estimates of the population attributable risk are available.

1.2.2. International Olympic Committee consensus statement on the health and fitness of young people through physical activity and sport

Dr Margo MOUNTJOY, Medical and Scientific Commission, International Olympic Committee

Dr MOUNTJOY began her presentation by stressing that, in between the Olympic Games, the International Olympic Committee (IOC) is very active in promoting athletes’ health, and that they recognise their obligation to use sport as a means to promote health globally.

Dr Mountjoy began by asking if children are really fit and active. Looking at studies, children’s activity levels have decreased over time, but only very slightly, with VO2 levels (mL/kg/min) decreasing by only 0.1%. While this is encouraging, looking at other parameters, Dr Mountjoy notes a substantial deterioration of about 4.0% per decade in maximal aerobic performance, which involves the transport of body mass.

Dr Mountjoy then highlighted the health implications of physical inactivity. These include cardiovascular and metabolic health, with higher levels of hypertension, hypercholesterolemia, and cardiovascular risk factors for the metabolic syndrome in children. Practitioners are used to seeing this in adults, but it is becoming more prevalent in children. The second health implication covered by Dr Mountjoy was bone health. Children and the elderly have a 30-50% risk of fractures, and physical activity improves bone health. Dr Mountjoy pointed out, for example, that young people engaged in weight-bearing sports have higher bone mass than their non-athletic peers, and thus have stronger bones less likely to fracture.

Dr Mountjoy raised the issue of childhood obesity, with obese children found to be less active than their normal weight peers. Obesity is increasing, one of the factors being that playing outside until dark has been replaced by video games.
Physical inactivity also has an impact on mental health, with physical activity having small to moderate benefits in reducing depression and anxiety, and increasing self-esteem. Other effects are also observed, such as improved cognitive behaviour, classroom behaviour, and academic achievement, with academic performance not affected by the time taken out of the curriculum to perform physical activity. Finally, Dr Mountjoy highlighted an increased risk of injury in sport for those with low fitness levels, meaning that an inactive child encouraged to join sport is more likely to experience injury.

Dr Mountjoy outlined some options for change, beginning with evidence from community interventions and referencing the systematic review from Kriemler et al. (2011)\textsuperscript{31}. Creating safe environments for free play or active travel has the potential to increase population levels of physical activity, and Dr Mountjoy noted that community interventions also show positive effects on body composition and on levels of physical activity. Similarly, school interventions show a positive effect on in-school and out-of-school interventions in overall physical activity, with 55\% showing increased fitness levels. Dr Mountjoy concluded that there is strong evidence to suggest that a coordinated programme for children will improve levels of physical activity and, subsequently, health.

Dr Mountjoy detailed the recommendations of the experts convened by the IOC, noting that effective change requires a coordinated, collaborative, global effort between many stakeholders, and working in isolation will not be successful. Young people must be involved in the planning of these activities to ensure that they are engaging, something that is especially relevant for sport organisations, e.g. the Youth Olympic Games, which have a very different format to the adult games. Sports coaches should be educated on youth development and physical activity, and sports organisations should lower barriers to participation in sport, for example abolishing high swimming pool fees.

Recommendations for governments stress the importance of developing and implementing policies to promote sport and physical activity among young people and enhance funding for youth involvement. Other key areas are supporting multi-sector policies and provisions of school-wider community partnerships to improve the opportunities for physical activity for young people. According to Dr Mountjoy, governments can also ensure that providers of recreational programmes for young people limit the time spent in sedentary pursuits. A summer programming camp for children, for example, should be balanced with opportunities for physical activity throughout the day. Governments should also foster collaboration with international, regional and national physical activity promotion networks, and support research to better understand the role of physical activity in children.

Dr Mountjoy turned next to the recommendations for the education system. These called for effective physical education (PE) classes in school to be delivered by qualified professionals, with children having regular activity totally 120 to 180 minutes per week, spread over at least three lessons. Children should also have access to a variety of settings, so a child interested in synchronised swimming, for example, is not forced to play basketball or volleyball five days a week. Dr Mountjoy also stressed the need for the education system to collaborate with community organisations to create accessible and safe physical activity and sport environments. For example, permitting communities to use school sports facilities when the school day has finished. Finally, Dr Mountjoy called for the allocation of adequate financial resources to PE and physical activity programmes.

Continuing with the recommendations for the healthcare system, Dr Mountjoy recommended that healthcare professions be educated on the benefits and prescription of

physical activity for young people. Referencing her own work in a school of medicine, Dr Mountjoy noted that time is spent on pharmacology rather than physical activity. It is necessary that healthcare professionals and providers of physical activity collaborate, and the healthcare financing system should be revised so that doctors are remunerated for prevention as well as treatment.

Dr Mountjoy noted that governments can assist NGOs by evaluating the efficacy of the programmes, having a registry of sport and non-sport NGOs, and by developing a partnership to ensure that all NGO activities in physical activity programming are effective and sustainable. The final recommendation given by Dr Mountjoy was that all research conducted on sport and youth physical activity should aim to better inform policy and practice of governments to promote physical activity in children.

In conclusion, Dr Mountjoy reiterated the important role that sport can play in the current global health crisis of rising morbidity and mortality from non-communicable diseases caused by inactivity in young people. She thanked the participants of the project with the IOC, finishing with a quote from the UN, ‘Participation in sport has significant physical benefits, contributing to people’s ability to lead long and healthy lives, improving wellbeing, extending life expectancy and reducing the likelihood of several major non-communicable diseases’.

1.2.3. Questions & Answers

Mr Michael YARED (student) asked Dr Mountjoy if there is a point at which a student can do too much physical activity, thereby negating the benefits in terms of academia and general health. Dr Mountjoy acknowledged the difficulty of answering such a question, noting that elite sports people do a lot of physical activity and that, in her own profession, she has seen considerable injury and illness arising from too much physical activity. She stressed, however, that elite sportspeople are exceptional in that they can tolerate a heavy load, physically and mentally. The question of how much is too much depends, for the most part, on the individual and the type of physical activity.

Mr Yared then followed up with a request for an example of good policy for physical activity in children. Dr Mountjoy replied that New Zealand, in particular, is doing a good job, as are the Netherlands and Canada. Much work, however, remains to be done.

1.3. Part II: Policy initiatives to fight against cancer through education, sports and physical activity

1.3.1. Commission initiatives to promote health through physical activity

Mr Yves LE LOSTECQUE, Head of Sport Unit, DG EAC, European Commission

Mr LE LOSTECQUE began by outlining the current work of the Commission in the field of sport and physical activity, including fighting doping, efforts against match-fixing, volunteer promotion, good governance in sport, and, particularly, promoting sport and physical activity. He stressed that the competence for promoting sport and physical activity lies with each Member State, and the EU is not there to impose rules but rather to support and coordinate when needed.

Mr Le Lostecque began with current initiatives at EU level. First, he outlined the implementation of the Council Recommendation on Health-enhancing physical activity
(HEPA)\textsuperscript{32}. This first Council Recommendation in the field of sport at EU level was adopted in 2013, showing the importance of HEPA. Following these recommendations, Member States were to develop a cross-sector approach via national strategies and action plans involving sport, health, education, environment and transport sectors. The Commission was asked to promote the exchange of good practices (Mr Le Lostecque referenced the Expert Group on HEPA) and provide support to the national HEPA Focal Points for capacity-building and training. Mr Le Lostecque explained that these focal points, each one delegated to one Member State, fall under the monitoring framework established by the Council Recommendation on HEPA across sectors. This also set out 23 indicators, in cooperation with the WHO, and under which the first physical activity country fact sheets were published in 2015.

Mr Le Lostecque then addressed the initiatives encouraging physical activity in younger age groups. This sector has attracted new political attention at EU level, and he highlighted two key documents. The first was the Expert Group recommendations to encourage physical education at school, including motor skills in early childhood, and to create valuable interactions with the sport sector, local authorities and the private sector\textsuperscript{33}. Mr Le Lostecque also drew attention to the Council’s conclusions on the promotion of motor skills, physical and sport activities for children\textsuperscript{34}, and mentioned the Eurydice report on physical education\textsuperscript{35}.

Mr Le Lostecque highlighted the need to continue to support recommendations and documents, introducing Erasmus+, the programme for Education, Training, Youth and Sport. This new tool, while not specifically dedicated to sport, gives 1.8% of its budget to sport, providing EUR 34 million in 2016 for sport projects, collaborative partnerships, events, and evidence-based policy reports. So far, HEPA has been a priority, with 26 collaborative partnerships directly promoting sport and physical activity financed in 2014 and 2015. Currently, 34 projects are being analysed under the 2016 call.

Mr Le Lostecque then drew attention to a very visible initiative - the European Week of Sport. Organised for the first time last year, he stressed that it is not simply to promote visibility, but also a tool to promote long-term sport and physical activity. Despite initial scepticism, 27 of the 28 Member States now participate in the initiative.

Mr Le Lostecque concluded by mentioning the recommendations of the High Level Group on Grassroots Sport. This Group, comprising 15 high-level members, presented its recommendations to the Commissioner in June 2016 and, as some of these are linked to promoting sport and physical activity, it is now the Commission’s responsibility to build future initiatives based on these recommendations.

1.3.2. The health benefits of sport and physical activity: strategies and guidance developed by WHO

\textit{Dr Susanna KUGELBERG, World Health Organisation, Regional Office of Europe}

Dr KUGELBERG began by highlighting the WHO’s focus on the life-course approach, meaning the importance of physical activity at different stages of life. Throughout childhood and adolescence, physical activity encourages basic motor skills and musculoskeletal development, while in adulthood it is very important to maintain muscle strength,  


\textsuperscript{33} \url{http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=19860&no=1}

\textsuperscript{34} \url{http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015XG1215(07)}

\textsuperscript{35} \url{http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/150en.pdf}
something that is especially important in older people, for whom physical activity helps to maintain functional independence and enhance social participation.

De Kugelberg briefly defined what is meant by physical activity, ranging from active play and active transport to high athletic development. However, she emphasised the need to promote all kinds of physical activity, given that they are interrelated. The WHO Global Recommendations on Physical Activity for Health are intended to guide policy makers by recommending the frequency, duration, intensity, type, and total amount of physical activity. The recommendations cover three age groups, each of which Dr Kugelberg then discussed separately. For children and adolescents aged 5-17 years, a minimum of 60 minutes of moderate to vigorous intensity physical activity daily is required, most of which should be aerobic. Vigorous intensity activities should be done at least three times a week. For adults, 150 minutes of moderate intensity aerobic physical activity should be done per week, in sessions of at least 10 minutes, and including muscle strengthening activities. For adults older than 64, the recommendations are the same, but strength and balance exercises should also be included.

Physical inactivity remains a major risk factor, with estimates showing that it is responsible for 6-10% of non-communicable disease, including chronic heart disease, diabetes, breast and colon cancer. Dr. Kugelberg added that it causes about 9% of premature mortality, i.e. the risk of dying at younger than 70 years. Estimates show that more than one-third of adults in Europe are insufficiently active to meet their health needs. Even more alarming is the situation for adolescents aged 11-17 years old, with between 60 and 90% found to be insufficiently active. She noted a gender imbalance also, with girls being less active than boys in all EU countries.

Dr Kugelberg then introduced the WHO European Region Physical Activity Strategy, developed in response to the growing incidence of non-communicable diseases and high levels of inactivity. This strategy, in place until 2025, is based on a longer policy process, taking into account global policy frameworks focusing on diet, physical activity and health. It includes extensive consultations both with Member States and civil society and experts. Dr Kugelberg briefly described its mission to inspire governments, increase physical activity for all by promoting physical activity and reducing sedentary behaviours, create an environment that supports physical activity, provide equal opportunity regardless of gender and age, and remove barriers to physical activity everywhere.

Dr Kugelberg outlined the Strategy’s guiding principles, i.e. to reduce inequities, to promote a life-course approach encouraging physical activity throughout all stages of life, to use evidence-based strategies, to empower people and communities in the policy-making process, to promote an integrated partnership-based approach at local levels and to ensure a range of settings. She described the five Priority areas around which the strategy is built. The first relates to providing leadership and coordination, and Dr Kugelberg stressed that it is important to have competent leaders with influence in policy, especially policy sectors such as environment, culture or education. The next three Priority areas are structured around the life-course approach and address children and adolescents, adults, and older people respectively. The final Priority focuses on the need to build up a stronger information system with monitoring and surveillance, which is very important in planning and evaluating policies.

Dr Kugelberg focused on Priority Area 2 – Supporting the Development of Children and Adolescents. The focus here is the school setting, promoting activity early in life, in preschool and in primary school. It also includes implementation measures to ensure

36 Hallal, P.C. et al., 2012.
37 Global Health Observatory Data Repository. Geneva World Health Organization
quality PE classes totalling at least two hours per week. There is a need to reach adolescents after school, through the likes of afterschool activity programmes, as well as a need for innovative approaches to reach this target group.

Priority Area 3 deals with the promotion of physical activity for all adults as part of daily life. Dr Kugelberg outlined the focus on reducing car traffic by different measures, including improving infrastructure in order to increase cycling and walking suitability. The Priority also targets the workplace and the workplace layout. Although almost all of the EU Member States have national physical activity recommendations in place, and most have national policies targeting sport for all, only half have schemes for the workplace. She noted, however, that these policies focus less on sport promotion in schools, and especially after school programmes.

Dr Kugelberg then addressed barriers and challenges to implementation, stating that, at a local level, challenges are strongly related to a lack of commitment and interest from decision-makers. This could reflect a need for stronger leaders, as well as better evaluation of policies and initiatives.

Dr Kugelberg closed by looking at how success can be defined in this field. A healthy and active city, she said, engages its citizens and continually assesses and improves opportunities for physical activity in day-to-day life in the built and social environments according to individual capabilities and motivations.

1.3.1. Questions & Answers

Mr PETERLE asked if those MEPs present wished to contribute anything at that point. MEP Stefan ECK (GUE) commented that while physical activity is a very important tool to fight cancer and other diseases, the role of a good diet is also very important. On a personal note, he mentioned that he himself is vegan, and therefore promotes a healthy diet as a way to prevent cancer. MEP Dubravka SUICA (PPE) echoed the sentiment of her colleague Mr ECK and the previous speakers, adding that diet and exercise is becoming very difficult in modern life. She stressed that diet and physical activity should be a lifelong approach, pointing out that if one waits until the first sign of illness, it is already too late. It is better, therefore, to promote good habits from kindergarten, although this is not without its difficulties. Ms Suica concluded her statement by thanking Mr Peterle for his hard work in the fight against cancer.

Mr Peterle himself pointed out that one does not need an Olympic stadium or a forest in order to be active. He began running barefoot in his apartment, at first five minutes at a time, now up to 20-30 minutes if the weather is not good enough to go outside.

Mr Antoun KHOURY, a medical student and ECL Youth Ambassador asked about the evidence used to support such guidelines. He pointed out that it may be difficult to differentiate between physical activity and metabolic syndromes, especially given that someone may be physically fit and still suffer from a metabolic syndrome. Prof. Leitzmann replied that recommendations are formed on the basis of expert consensus, based on a combination of observational epidemiological studies and smaller scale clinical-type studies. Small scale clinical-type studies can also isolate parameters such as DNA repair or glucose metabolism, or examine specific amounts of physical activity in relation to physiological changes. Prof. Leitzmann noted that recommendations are aimed at the general public, however there are also recommendations for specific subsets of the population, for example diabetics or cancer survivors. He concluded by saying that multi-variate statistical modelling is used to take into account potential biases, as well as other confounding effects such as smoking, poor diet, and other lifestyle factors which may impact physical activity.
Mr Khoury stated that, as a medical student of seven years, he had never heard about preventative medicine and asked how professors in medical school might include it in their curriculum. Prof. Leitzmann replied that the field of epidemiology and preventative treatment is part of the curriculum in Germany, found under the guise of bio-statistics and bio-informatics. Such modules teach a combination of medical statistics, biometrics, and preventative medicine. Many students, however, enter medical school in order to treat presenting diseases, with less interest in treating healthy people who are not yet sick. Prof. Leitzmann said that a lot of his work is spent on raising awareness of prevention as opposed to treatment.

1.4. Part III: Initiatives in the EU: the fight against cancer through education, sports and physical activity

1.4.1. Healthy lifestyle and fitness messages of the European Code Against Cancer

Dr Wendy YARED, Director, European Cancer Leagues

Dr YARED began by introducing the European Cancer Leagues (ECL). The pan-European umbrella organisation of cancer leagues around Europe (with 53 Member States) serves as a platform for the exchange of best practices, with members learning from each other’s experiences. Their vision is ambitious, a Europe free of cancer, achieved through influencing cancer control policies, in cooperation with Mr Peterle. The ECL promotes cancer prevention, encourages cancer screening at EU level, ensures access to treatment and support, and supports the development and implementation of national cancer control programmes and cancer registries.

Dr Yared introduced the European Code Against Cancer\(^{38}\). This is a set of 12 recommendations that are easy for the lay person to understand, informing people of the actions they themselves can take to reduce their risk of cancer. The first edition was published in 1987 as an EC initiative. The fourth edition was developed in 2012-2013 and launched in 2014 by cancer specialists, scientists, and other experts from across the EU. The project was coordinated by the WHO’s International Agency for Research on Cancer, with financial support from the EU Health Programme. Dr Yared pointed out that although she is neither from the Commission nor the WHO, the Commission gave the ECL the remit to promote the Code, together with an Operating Grant.

The Leagues are the main charities involved with cancer prevention communication in their countries, and they are the ones trusted by their citizens to provide information. These, therefore, are the organisations promoting and helping to revise the Code. Funding comes from the public and, given that these organisations have an income of over EUR 100 million, this indicates a high degree of trust. She highlighted that they are the most active organisations promoting the Code, and lead actions during the European Week Against Cancer, held in the last week of May each year.

Dr Yared did not go through the Code in detail, instead singling out the recommendation to be physically active in everyday life and limit the time spent sitting. Dr Yared admitted that this is very difficult for those sitting in front of computers, or who are in meetings every day, but she stressed the need to recognise the risk and take steps to make lifestyles healthier.

Healthier lifestyles reduce risk, as a normal body weight leads to a decrease in the metabolic systems associated with obesity that cause cancer. This includes impacts on

blood sugar and insulin levels, other related hormones, sex hormones, inflammation, and immune function, all of which affect cancer risk. Dr Yared recommended avoiding foods that promote weight gain, such as sugary and fast food, and being moderately active for at least 30 minutes per day. She pointed to the positive evidence for breastfeeding women and recommended eating mostly plant-based food. As a quick aside, Dr Yared mentioned the EU Platform on Diet, Physical Activity and Health. Although they are trying to work with industry to make sure everyone leads a healthy lifestyle, this is not always easy with McDonalds and Quick as part of the platform.

The risk of cancer is about 4% lower in people who are moderately active for at least 30 minutes per day (or at least 150 minutes per week) versus those who are physically active for less than 15 minutes per day. While she admitted that this may sound low, Dr Yared assured the audience that any reduction is good. The risk reduction is higher for some cancers, for example breast cancer (about 10%) and endometrial cancer (between 20 and 30%). Looking at the types of cancer affected by body weight, Dr Yared also mentioned reduced risk for kidney, pancreatic, oesophageal and gall bladder cancers. Physical activity can also reduce the risk of other chronic diseases, such as coronary heart disease, stroke, hypertension, Type 2 diabetes, abnormal cholesterol levels, osteoporosis, and depression. Dr Yared compared two brain scans, showing an observable change in endorphin levels after just 20 minutes of walking.

Dr Yared noted that while the workshop had covered how much exercise is recommended, there had not yet been an explanation of what ‘moderate to vigorous activity’ actually means. She then presented three categories. Light intensity includes standing, walking, cycling, stretching, table tennis and golf. Moderate types of activity include brisk walking, moderate cycling, badminton, yard work, and bowling. Vigorous activity is defined as hiking, jogging, fast cycling, lap swimming, carrying heavy loads, and soccer. Dr Yared reiterated that children and young people should have 60 minutes of moderate to vigorous intensity activity per day, while adults should undertake moderate intensity activity for around 21 minutes a day.

To close, Dr Yared presented two examples of initiatives to reduce cancer rates. The first is the Jumping Squat Challenge of the League Against Cancer in Slovakia. People around the country are asked to count and videotape themselves doing these jumping squats, and the League is hoping to take this global. The second was a poster from the Irish Cancer Society called the Men United against Cancer. The poster uses a football field to illustrate the steps (especially) men can take to avoid cancer.

As a final point, Dr Yared acknowledged the presence of the ECL Youth Ambassadors in the audience who were shortly to attend their own workshop. She drew attention to their work helping ECL to promote the Code Against Cancer in their countries, and also globally and on social media.

1.4.2. Lessons from sports to beat cancer

Mr Jaka JAKOPIČ, former Professional Footballer, Ambassador of Movember Movement in Slovenia

Mr JAKOPIČ began by explaining that, as a professional sportsperson, his life is very different from those who have a low level of activity. In his case, he admitted, it was perhaps a case of too much sport. As with many professional sportspersons, he was committed to the sport almost from birth, dedicating his whole life to succeeding in football.

A professional sportsperson is constantly thinking about when to rest, how to rest, how to train, how to eat, how to improve.

For Mr Jakopič, he wanted to prove how good he was. This led to a high level of commitment, and, in his words, perhaps giving too much influence to what other people might say, resulting in him training while on antibiotics, or with a broken foot, because he didn’t want to lose his place on the team or show weakness. However, at aged 24, he was diagnosed with cancer. His first question was ‘why?’ He had never smoked, never drank, focused on rest, ate good food, and yet he got cancer. After enduring 15 rounds of chemotherapy and 32 treatments of radiation, Mr Jakopič wanted to stress that he was happy he got cancer so soon.

Before his diagnosis, Mr Jakopič had been blind to everything but football success. Cancer stopped him, he said, and sport helped him. During chemotherapy, as his body had previously been very healthy, he had faster recovery between treatments and he began to realise that every second of life counts. After his cancer treatment, everything was the same but Mr Jakopič said he had discovered what was important in life and he could begin living life the way he wanted to.

After his cancer treatment, Mr Jakopič started playing football again and he also became a role model for cancer awareness. One of the projects he mentioned was the Heads Up project, through which he worked to raise awareness in football, targeting people who had no experience of cancer, who did not know what it was, nor that it could affect anyone. His message reached more than half a million people over 10 games and has since spread outside Slovenia. Mr Jakopič stated that he was delighted that cancer is now talked about openly because of this initiative.

The second initiative mentioned by Mr Jakopič was the Wheel of Life Project. This project targeted men who are, Mr Jakopič said, more reluctant than women to discuss cancer, believing that men hide their illnesses. Through Wheel of Life, Mr Jakopič and nine other cancer survivors cycled and visited all hospitals in Slovenia, travelling 600km in one week. Mr Jakopič’s key message was that before his diagnosis, football was his life, while now it is just one part of it. He plays differently, and counts his family as his biggest success, after beating cancer. Mr Jakopič finished by reiterating that family is the most important thing next to looking after yourself.

1.4.3. Physical activity as part of cancer treatment – the French experience

Mr Olivier LAPLANCHE, CAMI Regional Director for the Paris region

Mr LAPLANCHE began by introducing CAMI Sport & Cancer as a national federation with 22 departments in France. Formed 15 years ago by Dr Thierry Bouillet, an oncologist, and Mr Jean-Marc Descotes, a high performance karate expert, CAMI focuses on three areas: oncology, haematology, and paediatric oncology. Mr Laplanche explained the CAMI is available for all patients, from early treatment to remission, and activity is developed by a scientific committee composed of experts in oncology, sports medicine, physiology and sport theory. Mr Laplanche also referenced the structure by which all instructors are trained (more detail below), and the importance of research and development.

According to Mr Laplanche, Cami is a combination of three different worlds, the patient, the medical world, and sport, all working together to achieve three main effects – to increase survival, increase quality of life and reduce chronic fatigue, and prevent co-morbidities. CAMI sees a 50% reduction in relapse risk in prostate, colon and breast cancer. He also noted that, in France, sport is the only treatment for chronic fatigue, with no other (chemical) treatment available. He added that as sport improves the quality of life for a
chronic fatigue sufferer, treatment can also increase. With regard to co-morbidities, Mr Laplanche referenced diabetes, cardiovascular and degenerative neurological diseases, and osteoporosis.

In order to explain how CAMI functions, Mr Laplanche introduced the ‘Butterfly Trail’, which is used nationwide by 1,600 patients. Using a diagram, Mr Laplanche explained how a patient with a cancer diagnosis can change their behaviour and become more active. After a diagnosis, the patient goes for an initial check-up either in town classes (in the community) or in hospital (referred to as sport and cancer Poles). From there the patient starts treatment, either in town classes for those who live at home and can attend them, or in hospitals. Treatments are a minimum of two times per week for at least eight months, although Mr Laplanche admitted the co-founders of CAMI would recommend four to six times a week. Regular testing is done every six months and there is no time limit on the treatment. After remission, After Cancer Sports is available to make sure people continue training.

Mr Laplanche stressed that CAMI deliberately requires a minimum financial contribution. Dr Thierry works in the north-east parts of Paris, in poor neighbourhoods where public transport is limited, in order to ensure that every patient has access to the classes.

Mr Laplanche then introduced Médiété, a registered method developed by CAMI. This method started off with karate but now also includes running, table tennis, swimming, tai-chi, all sorts of yoga, canoeing, and contemporary dance. Lessons of maximum 12 people per class are offered in town classes, in, for example, gyms owned by local authorities, offered and paid for by the cities. Mr Laplanche explained that in Paris there are 25 different sites, spread between wealthy and poor neighbourhoods.

For Sport and Cancer Pole programmes held in hospitals, CAMI works directly with oncology, haematology, and paediatric oncology. Haematology must be treated in protective isolation, so instructors work one-to-one with patients, adapting the programme according to whether the patient can stand, sit, or must stay in bed. The aim is to mobilise all joints and at least sustain, if not gain, muscle mass. There are few barriers to participation, with the exception of some bone cancers where patients cannot move the way in the way the programme needs.

Mr Laplanche explained that by working with university-trained instructors, quality and security can be assured in each class. Instructors all have a sports diploma, as well as a specific Sport and Cancer University Diploma, thus all instructors hold two qualifications. This means that the programme is used nationwide, increasing continuity.

CAMI has developed significant performance criteria for effectiveness. These include a sustained intensity of at least 50 minutes, a frequency of three times per week, programmes mixing endurance and resistance training, a period of practice lasting at least six months (especially for chronic fatigue), and a safe and pleasant practice.

Mr Laplanche finished by noting that this is a public health issue. A relapse in breast cancer, for example, costs society EUR 10,000 per patient per month, so if the relapse rate can be reduced by 15 to 30%, then this is significant. Patients from all social backgrounds benefit from non-pharmacological treatments and the opportunity to re-build their body and body image.
1.4.4. Outdoor against Cancer: supporting people through therapy

Ms Petra THALLER, founder of Outdoor against Cancer (OaC)

Ms THALLER began by stating that although she is happy to see the link between sport and cancer now recognised by the European public, she warned against seeing sport as a magic bullet. Making reference to the experience of Mr Jakopič, she noted that sport alone will not prevent cancer entirely.

On the basis of over 2,000 studies, Ms Thaller presented three facts. Firstly, practicing sport reduces the side effects of cancer therapy. Secondly, sport reduces the risk of relapse. Thirdly, people who practice sport on a regular basis, with intense training three times a week, reduce the risk of cancer in the first place. However, Ms Thaller acknowledged that all of this means nothing to a patient and family when confronted with a cancer diagnosis. Ms Thaller admitted that in this instant, their world collapses, just as hers did when she received her own diagnosis. Questions like ‘why me?’ can leave a patient in their own body for a certain period of time, cut off from the rest of the world.

A healthy body makes for a healthy mind. Strengthen the body, and the mind will also strengthen. This, according to Ms Thaller, is where sport becomes important. People who practice sports their whole life are stronger, both physically and mentally. It is also very important to maintain personal resilience, especially in the face of a cancer diagnosis, when mental strength must be as high as possible. Ms Thaller stressed that resilient people are better able to recover from a knock such as being diagnosed with cancer.

Ms Thaller then introduced Outdoor against Cancer (OaC), a charitable umbrella organisation rooted in the outdoor sector, which aims to help cancer patients who require additional support alongside traditional medical treatment. They are different from other cancer organisation, as they encourage outdoor activities and have established an OaC quality seal for associated organisations and their products and services. OaC has offered free weekly outdoor training sessions for cancer patients (and their loved ones) in Munich since December 2015. Additionally, they offer a constantly expanding range of activities: weekly running training, strength and endurance training, daily stand-up paddling sources at Starnberger Lake near Munich, outdoor yoga and hiking trips, and much more. Their goal is to expand the OaC network nationally and beyond.

Cancer patients can sign up online and OaC can use the information provided to collect data and improve their knowledge of patient needs. This includes exercise before, during, and after illness, a personal evaluation of physical and mental conditions, and activities they would like to have during and after their cancer treatments.

Ms Thaller noted that there is a wealth of studies available for patients encouraging physical exercise during cancer treatments, however, such studies do not motivate people into action. Her own experience has been that it is very hard to get cancer patients who are not used to regular workouts before their diagnoses to start a weekly exercise routine. There are, however, many positive feelings of wellbeing that come with practicing sport.

1.4.5. Questions & Answers

Mr Peterle opened the floor for questions, inviting Irish MEP Sean Kelly (PPE) to share his comments. Mr Kelly admitted that he is a sports man, coming from Ireland, and has seen several sportspeople affected by testicular cancer in particular. He believes in the value of sport, not just from a leisure point of view, but also with regard to therapeutic benefits.

40 www.outdooragainstcancer.de
He noted that it was pointed out that people previously active in sport are more likely to be active after a cancer diagnosis, as well as highlighting the difficulties in encouraging young people to become active. Mr Kelly reiterated the benefit of sport and lifelong physical activity, which is becoming more and more difficult with modern lifestyles. He concluded that getting people involved in sport, whether or not they have cancer, remains the biggest challenge.

Mr Khoury asked Mr Jakopič how easily he had accepted his cancer diagnosis, given that he had made deliberate choices to live a healthy life. Mr Jakopič replied that indeed it was difficult to hear a cancer diagnosis, requiring him to change from committing all of his time to football to, instead, committing all of his time to beating cancer. Instead of trusting his coach in the field, he placed all his trust in his doctor. However, Mr Jakopič insisted that sport helped him to recover. Instead of being in hospital for three days following a treatment, he was home after one day, as his body was already used to physical stress.

Dr Yared then responded to the remarks of Mr Kelly. She agreed that the issue of getting young people involved in sport is indeed very worrying, particularly as they become more sedentary. For this reason, ECL has engaged the Youth Ambassadors, who are young people aged 18 to 30 years old to help to raise awareness of the European Code Against Cancer and provide advice on implementation. It is up to young people, Dr Yared said, to know what is possible.

1.4.6. Closing remarks by the Chair

Mr Peterle again thanked the speakers, noting that the discussion had been very encouraging. He reminded the audience that those who fight cancer are not alone. He also stated that, at present, there is less talk about more Europe, or how to provide more Europe. Instead, the focus is how to avoid much less Europe, and indeed some politicians who would advocate less Europe. However, Mr Peterle stressed that while the fight against cancer will not be won through new EU treaties and regulations, it is important that Member States join forces and undertake joint policy actions. Many elements of European policy aim at better health across the EU and much can still be done to benefit European citizens.
ANNEX 1: PROGRAMME

Workshop

The fight against cancer is a team sport: The role of education and sport

Wednesday 13 July 2016 from 12.30 to 14.45
European Parliament, Brussels

AGENDA

Chair: Mr Alojz Peterle, MEP, co-Chair ENVI Health Working Group

12:30 – 12:35 Opening and welcome by the Chair

Part 1 – Scientific evidence: the link between physical (in)activity and cancer

12:35 - 12:45 The role of physical activity and sports in cancer primary prevention
Prof. Michael LEITZMANN - Department of Epidemiology and Preventive Medicine, University of Regensburg, Germany

12:45 – 12:55 International Olympic Committee consensus statement on the health and fitness of young people through physical activity and sport
Dr Margo MOUNTJOY, Medical and Scientific Commission, International Olympic Committee

12:55 – 13:10 Questions & Answers

Part 2 - Policy initiatives to fight against cancer through education, sports and physical activity

13:10 – 13:20 Commission initiatives to promote health through physical activity
Mr Yves LE LOSTECQUE, Head of Sport Unit, DG EAC, European Commission

13:20 – 13:30 The health benefits of sport and physical activity: strategies and guidance developed by WHO
13:30 – 13:45  Questions & Answers

Part 3 - Initiatives in the EU: the fight against cancer through education, sports and physical activity

13:45 – 13:55  Healthy lifestyle and fitness messages of the European Code Against Cancer
Dr Wendy YARED, Director, European Cancer Leagues

13:55 – 14:05  Lessons from sports to beat cancer
Mr Jaka JAKOPIČ former Professional Footballer, Ambassador of Movember Movement in Slovenia

14:05 – 14:15  Physical activity as part of cancer treatment – the French experience
Mr Olivier LAPLANCHE, CAMI Regional Director for the Paris region

14:15 – 14:25  Outdoor against Cancer: supporting people through therapy
Petra THALLER, founder of Outdoor against Cancer (OAC)

14:25 – 14:40  Question & Answers

14:40 – 14:45  Closing remarks by the Chair
ANNEX 2: SHORT BIOGRAPHIES OF EXPERTS

Prof. Michael LEITZMANN

Prof. Leitzmann’s main research interests are the relationship of diet, body size and physical activity to the development of chronic diseases. He holds an MD from the University of Berlin and an MPH and a DrPH from the Harvard School of Public Health. He currently serves as Chair of the Department of Epidemiology and Preventive Medicine at the University of Regensburg, Germany. He was previously appointed as investigator at the U.S. National Cancer Institute. He serves as a member of several journal editorial boards and as an expert reviewer for numerous international research organisations.

Dr Margo MOUNTJOY

Dr Mountjoy is a sports medicine physician practicing at the Health + Performance Centre at the University of Guelph. She is an Associate Clinical Professor in the Department of Family Medicine at McMaster University Medical School. Dr Mountjoy works for several international sports organisations in the field of sports medicine, including the International Olympic Committee (Games Group), the International Federation for aquatics (FINA), the Association of Summer Olympic International Federations and for the World Anti-Doping Agency. She is a retired elite synchronised swimmer.

One of her areas of expertise is physical inactivity in sport. She led the IOC Consensus project on the Fitness & Health of Children (BJSM 2011). She is an active advocate of Exercise is Medicine through the American College of Sports Medicine and the Canadian Academy of Sport & Exercise Medicine.

Mr Yves LE LOSTECQUE

Mr Le Lostecque is currently Head of the Sport Unit in the European Commission. He studied public, international and European law at the University of Rennes. He started his career in the French Ministry responsible for Youth and Sport. He joined the Commission in 1993, where he worked as a lawyer in DG Internal market. He was then responsible for inter-institutional issues in DG Education and Culture and served as the assistant to two Directors General, Odile Quintin and Jan Truszczyński. He also spent two years as a member of the cabinet of the Romanian Commissioner, Leonard Orban.

Dr Susanna KUGELBERG

Dr Kugelberg is a consultant whose work has included policy analysis related to public health, governance and stakeholder engagement, fundraising and project management, and a larger evaluation of the WHO regional programmes from gender, equity and rights perspectives. She runs a company that provides comprehensive public health analyses, covering data collection, stakeholder engagement and visualisation of results.

She gives lectures on public health policy-making at Karolinska Institutet, Stockholm, and is engaged as an Expert evaluator for the EU’s research program on Health and Wellbeing. She holds an MSc in Political Science from Lund University and a PhD in Medical Sciences from Karolinska Institutet, Sweden. Previous work experience includes technical work in the area of higher education and gender policy at UNESCO/HQ in Paris.
Dr Wendy YARED

Dr Yared is Director of the Association of European Cancer Leagues (ECL), a pan-European alliance of national and regional cancer leagues created in 1980. She leads the ECL Secretariat based in Brussels, whose work is primarily in advocacy at the EU level. This advocacy work is in collaboration with its member leagues at national level, and at the EU level with both member leagues and the European Parliament’s interest group MEPs Against Cancer (MAC), working on a wide spectrum of issues.

At the European Commission level, Dr Yared is part of the Commission’s Expert Group on Cancer Control and represents ECL as an Associated Partner of the current European Commission Joint Action in Cancer Control (CanCon 2014-2017) for awareness raising. She was the leader for the Health Promotion and Prevention work package within the previous Joint Action Partnership for Action Against Cancer 2011-2014, and led ECL to relaunch the European Week Against Cancer to raise awareness on cancer prevention and communicate the WHO IARC’s European Code Against Cancer. Dr Yared is active in the Commission’s Platform on Diet, Physical Activity and Health, as well as being a founding member of the EU Alcohol and Health Forum.

Dr Yared has more than 25 years’ experience in public health. Prior to ECL she was a programme manager in health policy at the World Health Organization’s regional office for Europe. She has also worked with the European Parliament in Luxembourg, the U.S. Public Health Service and the U.S. Government’s Peace Corps programme in sub-Saharan Africa. She holds a BA in psychology, a Master’s degree in Public Health (MPH) from the University of California at Berkeley and a Doctorate of Public Health (DrPH) from the Johns Hopkins Bloomberg School of Public Health.

Mr Jaka JAKOPIČ

Mr Jakopič is a cancer survivor. At age 24 and an active professional soccer player, he was diagnosed with Hodgkin’s lymphoma. Two years later, he became the first athlete in Slovenia to return to professional sports after being diagnosed with cancer. During his long treatment he received 15 cycles of chemotherapy and 32 cycles of irradiation, losing nine kilograms of muscle. During his illness, he began to write short stories about cancer and his new perspective on life. These stories had a huge impact on cancer patients in Slovenia and Mr Jakopič became a role model for many. A few years later, he became a Board member of the biggest oncology-cancer patient coalition in Slovenia. He was a founding leader of two projects: ‘Heads up’ and ‘Cycle of Life’, raising awareness of cancer throughout Slovenia. He remains a Board member of the oncology-cancer patient coalition in Slovenia and is the Ambassador of Slovenia’s Movember Movement. Professionally, he is a Director of Slovenian sports agency, Players Promotion.

Mr Olivier LAPLANCHE

Mr Laplanche followed a sociological research career at the University of Nantes and received a master degree in sports management from Audencia Business School. In the field of varsity and international competitions in France and the UK, he studied the social construction of performance, coached international rowers and contributed to the reorganisation of clubs and federal structures. In the field of sports development, he managed social inclusion projects in public schools and institutions in both Nantes and Glasgow.

As Regional Director, Ile de France at CAMI Sport and Cancer, Olivier Laplanche manages public and private partnerships that facilitate the educators of the leading French federation
in sport and physical activity in working with patients affected by cancer. CAMI was founded in 2000 by Dr. Thierry Bouillet, oncologist, and Mr Jean-Marc Descotes, high performance athlete. Within the Paris region, there are currently more than 1,000 patients who benefit annually from direct treatment support through sport.

**Ms Petra THALLER**

Ms Thaller is the Managing Director of Thaller Media, editor of a magazine and a passionate outdoor enthusiast. She founded Outdoor against Cancer (OAC) after being diagnosed with breast cancer. OaC is a new initiative to support people through cancer therapy. It is recognised that outdoor sports can benefit people with cancer both physically and psychologically. The European Outdoor Group (EOG), official partner of the European Week of Sport (EWOS), also highlights the positive effects of outdoor activities.
ANNEX 3: PRESENTATIONS
Presentation by Prof. Michael LEITZMANN

The role of physical activity and sports in cancer primary prevention


Michael Leitzmann
Department of Epidemiology and Preventive Medicine
Faculty of Medicine
University of Regensburg, Germany

Definition of Physical Activity

- **Physical Activity**: any bodily movement produced by skeletal muscles that results in energy expenditure

- **Exercise activity**: subset of physical activity that is planned, structured, and repetitive and has as an objective the improvement or maintenance of physical fitness

Casper sen et al., Public Health Reports, 1985: 100: 126-135
Physical activity recommendations

“Significant health benefits can be obtained by including a moderate amount of physical activity (e.g., 30 minutes of brisk walking...) on most, if not all days of the week.”


Prevalence of Reporting No Recreational Activity Participation for 15 EU Countries

IARC Handbooks of Cancer Prevention Vol 6: Weight Control and Physical Activity, 2002
Physical activity and cancer prevention
- Current status -

- Substantial observational epidemiologic evidence regarding physical activity and primary prevention of cancer
- Accumulating data on etiologic pathways linking physical activity to cancer prevention
- Little information on the proportion of cancer occurrences that can be attributed to lack of physical activity

One in ten cancers preventable through physical activity

IARC Monograph on weight control and physical activity, 2002.
Physical activity and colon cancer

- Risk reduction with physical activity (~25%)
  - Proximal and distal colon

- More pronounced risk reductions for:
  - Colon vs. rectum
  - Men vs women

- Clear risk reduction with:
  - Vigorous activity
  - Long-term activity

### Physical activity and colon cancer, by anatomic subsite

<table>
<thead>
<tr>
<th>Subsite</th>
<th>RR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximal</td>
<td>0.73 (0.66–0.81)</td>
</tr>
<tr>
<td>Distal</td>
<td>0.74 (0.68–0.80)</td>
</tr>
</tbody>
</table>

Boyle et al., JNCI 2012:104:1548–1561
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

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Physical activity and breast cancer

- Risk reduction with physical activity (~ 20%)

- More pronounced risk reduction with:
  - Recreational activity
  - Recent past activity

- Stronger relations seen for:
  - Normal weight vs. obese women
  - Postmenopausal vs. premenopausal women

---

Wu et al., Breast Can Res Treat 2013;137:869-882
Physical activity and endometrial cancer

- Risk reduction with physical activity (~ 25%)
- Risk reductions seen with both vigorous and moderate intensity activity
- Preliminary evidence for more pronounced inverse relation with recent past than distant past physical activity

The Fight Against Cancer is a Team Sport: The Role of Education and Sport

**Physical activity and pancreatic cancer**

<table>
<thead>
<tr>
<th>Study ID</th>
<th>Total Physical Activity</th>
<th>RR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dallmann et al. (2002)</td>
<td>Sedentary vs. Active</td>
<td>0.67 (0.22, 1.93)</td>
</tr>
<tr>
<td>Dallmann et al. (2002)</td>
<td>Sedentary vs. Secondary</td>
<td>0.62 (0.30, 1.30)</td>
</tr>
<tr>
<td>Nochild et al. (2007)</td>
<td>MET/Day Q1 vs. Q2</td>
<td>1.00 (0.68, 1.52)</td>
</tr>
<tr>
<td>Callan et al. (2009)</td>
<td>MET/Day Q1 vs. Q2</td>
<td>0.92 (0.50, 1.69)</td>
</tr>
<tr>
<td>Iacone et al. (2008)</td>
<td>MET/Day Q1 vs. Q2</td>
<td>0.92 (0.36, 1.48)</td>
</tr>
<tr>
<td>Overall*</td>
<td>*RR: 95% CI [0.32, 2.16] *I-squared 31% *P-heterogeneity = 0.185</td>
<td>RR = 0.72 (0.52-0.99)</td>
</tr>
</tbody>
</table>

Adjustment for key confounders (BMI, smoking (CIG))

- Yes vs. No (n=54 vs. n=83)
- Smoking (CIG): smoking (CIG) + smoking (CIG) + smoking (CIG)

O’Rorke et al., Int J Cancer 2010; 126:2957-2968.

**Physical activity and lung cancer**

### Intermediate physical activity level

<table>
<thead>
<tr>
<th>Study ID</th>
<th>RR (95% CI)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coburn LH 2002</td>
<td>0.97 (0.87, 1.07)</td>
<td>16.52</td>
</tr>
<tr>
<td>Lee RM 1998</td>
<td>0.73 (0.54, 0.98)</td>
<td>2.32</td>
</tr>
<tr>
<td>Lee RM 1999</td>
<td>0.78 (0.62, 0.99)</td>
<td>1.25</td>
</tr>
<tr>
<td>Lefebvre MA 2009</td>
<td>0.94 (0.81, 1.10)</td>
<td>37.90</td>
</tr>
<tr>
<td>Lobel D 2001</td>
<td>0.82 (0.67, 1.00)</td>
<td>0.41</td>
</tr>
<tr>
<td>Severson RK 1999</td>
<td>1.06 (0.76, 1.48)</td>
<td>1.94</td>
</tr>
<tr>
<td>Stenstrom P 2005</td>
<td>0.94 (0.75, 1.18)</td>
<td>5.98</td>
</tr>
<tr>
<td>Stenstrom P 2006</td>
<td>0.73 (0.47, 1.18)</td>
<td>1.03</td>
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<tr>
<td>Stenstrom P 2006</td>
<td>0.91 (0.78, 1.05)</td>
<td>9.76</td>
</tr>
<tr>
<td>Thun M 1997</td>
<td>0.83 (0.68, 0.98)</td>
<td>9.48</td>
</tr>
<tr>
<td>Wolk S 2001</td>
<td>0.77 (0.67, 0.88)</td>
<td>9.76</td>
</tr>
<tr>
<td>Overall (I-squared = 13.8%, p = 0.376)</td>
<td>RR = 0.87 (0.83-0.90)</td>
<td>4.65</td>
</tr>
</tbody>
</table>

### High physical activity level

<table>
<thead>
<tr>
<th>Study ID</th>
<th>RR (95% CI)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allenberg J 1989</td>
<td>0.60 (0.28, 1.29)</td>
<td>0.20</td>
</tr>
<tr>
<td>Lee RM 1998</td>
<td>0.63 (0.45, 0.89)</td>
<td>2.82</td>
</tr>
<tr>
<td>Lee RM 1999</td>
<td>0.81 (0.61, 1.06)</td>
<td>1.70</td>
</tr>
<tr>
<td>Lefebvre MA 2009</td>
<td>0.77 (0.57, 1.03)</td>
<td>41.65</td>
</tr>
<tr>
<td>Lobel D 2001</td>
<td>0.87 (0.67, 1.13)</td>
<td>4.66</td>
</tr>
<tr>
<td>Severson RK 1999</td>
<td>0.70 (0.48, 1.01)</td>
<td>1.84</td>
</tr>
<tr>
<td>Stenstrom P 2005</td>
<td>0.77 (0.64, 0.94)</td>
<td>6.81</td>
</tr>
<tr>
<td>Stenstrom P 2006</td>
<td>0.98 (0.90, 1.07)</td>
<td>9.10</td>
</tr>
<tr>
<td>Stenstrom P 2006</td>
<td>0.73 (0.54, 0.98)</td>
<td>2.87</td>
</tr>
<tr>
<td>Thun M 1997</td>
<td>0.79 (0.63, 0.99)</td>
<td>0.95</td>
</tr>
<tr>
<td>Wolk S 2001</td>
<td>0.83 (0.74, 0.92)</td>
<td>26.83</td>
</tr>
<tr>
<td>Overall (I-squared = 10.6%, p = 0.337)</td>
<td>RR = 0.77 (0.73-0.81)</td>
<td>4.65</td>
</tr>
</tbody>
</table>

**Physical activity and ovarian cancer**


**Physical activity and gastric cancer**

Singh et al., Can Prev Res 2013.
### Physical activity and renal cell cancer

<table>
<thead>
<tr>
<th>Authors, year (gender)</th>
<th>Relative risk (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chen et al., 2006 (men)</td>
<td>0.40 (0.31-0.50)</td>
</tr>
<tr>
<td>Yang et al., 2007 (men and women)</td>
<td>0.50 (0.31-0.86)</td>
</tr>
<tr>
<td>Chiu et al., 2006 (men)</td>
<td>0.62 (0.45-0.85)</td>
</tr>
<tr>
<td>Chiu et al., 2006 (men and women)</td>
<td>0.62 (0.45-0.85)</td>
</tr>
<tr>
<td>Ho et al., 2009 (men and women)</td>
<td>0.80 (0.41-1.59)</td>
</tr>
<tr>
<td>Tao et al., 2007 (men and women)</td>
<td>1.02 (0.78-1.31)</td>
</tr>
<tr>
<td>Goodwin et al., 1996 (men)</td>
<td>1.01 (0.87-1.17)</td>
</tr>
<tr>
<td>Heald-Cooper et al., 1995 (men)</td>
<td>1.16 (0.80-1.69)</td>
</tr>
<tr>
<td>Parent et al., 2001 (men)</td>
<td>1.10 (0.76-1.54)</td>
</tr>
<tr>
<td>Goodwin et al., 1996 (men)</td>
<td>1.14 (0.84-1.56)</td>
</tr>
<tr>
<td>Heald-Cooper et al., 1995 (men)</td>
<td>1.91 (1.23-2.95)</td>
</tr>
<tr>
<td>Random-effects model for RRs from case-control studies</td>
<td>0.89 (0.74-1.08)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Authors, year (gender)</th>
<th>Relative risk (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bakke et al., 2006 (men and women)</td>
<td>0.67 (0.40-1.12)</td>
</tr>
<tr>
<td>Wu et al., 2006 (men)</td>
<td>0.74 (0.34-1.63)</td>
</tr>
<tr>
<td>Aitken et al., 2006 (men)</td>
<td>0.74 (0.56-0.99)</td>
</tr>
<tr>
<td>Heald-Cooper et al., 1995 (men)</td>
<td>0.80 (0.59-1.07)</td>
</tr>
<tr>
<td>Pihlakaro et al., 1997 (men and women)</td>
<td>0.85 (0.47-1.56)</td>
</tr>
<tr>
<td>Yuan et al., 2006 (men)</td>
<td>1.04 (0.63-1.72)</td>
</tr>
<tr>
<td>Schmiege et al., 2007 (men)</td>
<td>1.09 (0.75-1.55)</td>
</tr>
<tr>
<td>Van et al., 2004 (men)</td>
<td>1.14 (0.89-1.45)</td>
</tr>
<tr>
<td>Berge et al., 2005 (men and women)</td>
<td>1.87 (0.36-0.96)</td>
</tr>
<tr>
<td>Random-effects model for RRs from cohort studies</td>
<td>1.02 (0.79-1.30)</td>
</tr>
</tbody>
</table>

Random-effects model for all studies: 

- RR = 0.88 (0.79-0.97)


### Physical activity and prostate cancer

<table>
<thead>
<tr>
<th>Subgroups (Number of studies)</th>
<th>Pooled RR (95% CI)</th>
<th>P</th>
<th>I² (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TPA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort studies (24)</td>
<td>0.94 (0.91-0.98)</td>
<td>0.002</td>
<td>4.06</td>
</tr>
<tr>
<td>Case-control studies (34)</td>
<td>0.86 (0.75-0.97)</td>
<td>0.02</td>
<td>69.82</td>
</tr>
<tr>
<td>Subtotal (58)</td>
<td><strong>RR = 0.90 (0.84-0.95)</strong></td>
<td>0.001</td>
<td>61.65</td>
</tr>
<tr>
<td><strong>OPA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort studies (9)</td>
<td>0.91 (0.87-0.95)</td>
<td>&lt;0.001</td>
<td>0.00</td>
</tr>
<tr>
<td>Case-control studies (18)</td>
<td>0.73 (0.62-0.87)</td>
<td>&lt;0.001</td>
<td>66.42</td>
</tr>
<tr>
<td>Subtotal (27)</td>
<td>0.81 (0.73-0.91)</td>
<td>&lt;0.001</td>
<td>68.19</td>
</tr>
<tr>
<td><strong>RPA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort studies (19)</td>
<td>0.95 (0.90-1.00)</td>
<td>0.04</td>
<td>15.15</td>
</tr>
<tr>
<td>Case-control studies (15)</td>
<td>0.98 (0.85-1.14)</td>
<td>0.81</td>
<td>62.27</td>
</tr>
<tr>
<td>Subtotal (34)</td>
<td>0.95 (0.89-1.00)</td>
<td>0.07</td>
<td>43.43</td>
</tr>
</tbody>
</table>

Physical activity and cancer prevention
- Potential biologic mechanisms -

Future research needs

- Improve physical activity assessment methods
- Increase knowledge about type, intensity, frequency, and duration of physical activity that counters cancer risk
- Determine etiologically relevant time period of exposure to physical activity
- Clarify underlying biologic mechanisms
- Enhance data on population attributable risk for health policy planning
Thank you for your attention!
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Presentation by Dr Margo MOUNTJOY

Health & Fitness of young people through sport

Consensus Overview

1. Science review:
   - Are children fit & active?
   - Health implications of low levels of PA
   - Options for change evidence from community & school interventions

2. Recommendations of the IOC expert group
Are children fit & active?

Only a very small decline of about 0.1% per decade in mass-related peak VO₂ (mL/kg/min) between 1962 and 1994.

However, there has been a substantial deterioration of about 4.0% per decade in maximal aerobic performance which involves the transport of body mass since 1975.
Health implications of low PA/low fitness

Health Implications of Physical Inactivity

Cardiovascular & Metabolic Health

Bone Health

Obesity

Mental Health

Injury Risk
Cardiovascular & Metabolic Health

Low levels of PA in children are associated with higher levels of:

- Hypertension
- Hypercholesterolemia
- CV risk factors (metabolic syndrome)

Bone Health

Fractures occur in 30-50% of youth and old populations
Bone Health

Youth engaged in weight bearing sports had higher bone mass compared with non-athletic peers

Obesity

Obesity incidence in children is increasing globally

Obese children are less active than their normal-weight peers

Sedentary behaviours in children are increasing
Mental Health

Small-moderate beneficial effects for reduced depression and anxiety and increase in self-esteem from physical activity.

Physical Activity is associated with improved:

- cognitive performance
- classroom behaviour
- academic achievement

Academic performance is not affected by PA time allocation.
Injury Risk

Children with low fitness levels are at increased risk of injury in sport.

Low fitness level is a modifiable risk factor for sports injury in children.

Injury Risk

School based exercise intervention for low activity children (NED) demonstrated a decrease in sports injuries, especially in those with previous low activity levels.
Options for Change: Evidence from community & school interventions

Systematic review (van Sluijs 2011)

Creating safe environments for free play or active travel has the potential to increase population levels of PA

5 studies showed positive effects of interventions on body composition

3 interventions showed significant positive effects on PA
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Options for Change:
Evidence from School Interventions

**Systematic review** (Kriemler 2011):

Positive effect on in-school and out-of-school in overall PA in 9/10 studies

55% showed an increase in fitness

Options for Change:
Recommendations of the IOC Expert Group
Recommendations

Effective change requires a coordinated, collaborative, global effort between many stakeholders.

- **Involve young people** to plan, implement, deliver and evaluate sport and PA programs.

Recommendations: **Sport Organizations**

- ensure that sport programs include youth oriented activities to engage and retain young athletes;
- educate sport coaches to incorporate appropriate health-related fitness training in relation to growth and maturation;
- identify and lower the barriers to participation in sport;
Recommendations: Governments

- develop and implement policy to promote sport and PA in young people;

- enhance funding for youth involvement in sport and PA programs across sectors;

- support multi-sectoral policies and provision of school-wider community (sport, recreation, health agencies) partnerships to improve PA opportunities for young people;

Recommendations: Governments

- ensure that providers of recreational programs for young people limit the time spent in sedentary pursuits such as television watching, video game playing, and computer use;

- foster collaboration with international, regional and national PA promotion networks;

- support research to better understand the role of PA in the health trends of young people.
Recommendations: Education System

- provide effective PE in school delivered by qualified professionals at all levels of the curriculum;

- provide a minimum of three lessons of PE totaling 120 to 180 minutes per week;

- ensure that opportunities for PE/PA are provided in a variety of settings and are embedded within the curriculum;

Recommendations: Education System

- collaborate with community organizations to create accessible and safe PA and sport environments;

- implement adaptable whole of school models that utilize multiple component strategies and routes of entry;

- allocate adequate resources to PE/PA programs.
Recommendations: Health Care System

- provide mandatory education of health care professionals on the benefits and prescription of PA for young people;

- increase collaboration between health care professionals and other providers of PA and sport in the community;

- revise the health care financing system to include reimbursement for individualized life style counseling and follow-up.

Recommendations: Non-Governmental Organizations

- Sport for Development programs be evaluated for efficacy of health outcomes and impact;

- a registry of NGOs, both sport and non-sport, be established to promote PA and sport as a vehicle for health and community development;

- NGOs develop a filter for partnerships to ensure sustainability, equity, allocation of resources, community ownership and buy-in, and to limit unintended consequences of PA and sport programming.
Recommendations: Research

It is recommended that research be conducted with respect to sport and youth physical activity to better inform policy and practice.

Conclusion

“Sport has an important role to play in the current global health crisis of rising morbidity and mortality from non-communicable diseases caused by inactivity in young people”.
"Participation in sport has significant physical benefits, contributing to people's ability to lead long and healthy lives, improving well-being, extending life expectancy and reducing the likelihood of several major non-communicable diseases." United Nations

### PARTICIPANTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margo Mountjoy - Coordinator</td>
<td>IOC Medical Commission, Switzerland</td>
</tr>
<tr>
<td>Lars Bo Anderson</td>
<td>University of Southern Denmark, Odense Denmark</td>
</tr>
<tr>
<td>Neil Armstrong</td>
<td>University of Exeter, Exeter UK</td>
</tr>
<tr>
<td>Stuart Biddle</td>
<td>Loughborough University, Loughborough UK</td>
</tr>
<tr>
<td>Colin Boreham</td>
<td>University College, Dublin Ireland</td>
</tr>
<tr>
<td>Hans-Peter Brandl Bedenbeck</td>
<td>University of Paderborn, Paderborn Germany</td>
</tr>
<tr>
<td>Ulf Ekelund</td>
<td>Medical Research Council Epidemiology Unit, Cambridge UK</td>
</tr>
<tr>
<td>Ken Hardman</td>
<td>University of Worcester, Worcester UK</td>
</tr>
<tr>
<td>Andrew Hills</td>
<td>Queensland University of Technology, Brisbane Australia</td>
</tr>
<tr>
<td>Sonja Kahrmeier</td>
<td>University of Zurich, Zurich Switzerland</td>
</tr>
<tr>
<td>Susi Kriemler</td>
<td>University of Basel, Switzerland</td>
</tr>
<tr>
<td>Estelle Lambert</td>
<td>University of Cape Town, Cape Town, South Africa</td>
</tr>
<tr>
<td>Arne Ljungqvist</td>
<td>IOC Medical Commission, Switzerland</td>
</tr>
<tr>
<td>Victor Matsudo</td>
<td>Physical Fitness Research Laboratory, Sao Paolo, Brazil</td>
</tr>
<tr>
<td>Heather McKay</td>
<td>University of British Columbia, Vancouver Canada</td>
</tr>
<tr>
<td>Lyle Micheli</td>
<td>Harvard Medical School, Boston USA</td>
</tr>
<tr>
<td>Russell Pate</td>
<td>University of South Carolina, Columbia USA</td>
</tr>
<tr>
<td>Chris Riddoch</td>
<td>University of Bath, UK</td>
</tr>
<tr>
<td>Carl Johan Sundberg</td>
<td>Karolinska Institute, Stockholm, Sweden</td>
</tr>
<tr>
<td>Grant Tomkinson</td>
<td>University of South Australia, Adelaide, Australia</td>
</tr>
<tr>
<td>Willel van Mechelen</td>
<td>VU University Medical Center, Amsterdam, The Netherlands</td>
</tr>
<tr>
<td>Esther van Sluijs</td>
<td>Medical Research Council Epidemiology Unit, Cambridge UK</td>
</tr>
</tbody>
</table>
INTERNATIONAL OLYMPIC COMMITTEE
Presentation by Mr Yves LOSTECQUE

Commission initiatives to promote health through physical activity

Workshop European Parliament
"The fight against cancer is a team sport: the role of education and sport"
13 July 2016

Yves Le Lostecque, Head of Unit
Sport Policy and Programme
European Commission – DG EAC

Current initiatives at EU level

1. Implementing the Council Recommendation on HEPA
2. Encouraging physical activity at younger age
3. Financing projects and events
4. Organising the European Week of Sport
5. Building upon the recommendations from the High Level Group on Grassroots Sport
1 Implementing the Council Recommendation on HEPA (Nov 2013)

Facilitating exchange of best practices on HEPA among Member States

Member States

- Develop a cross-sector approach involving policy areas including sport, health, education, environment and transport (national strategies and action plans)

Commission

- Provide targeted support to national HEPA Focal Points for capacity building and training
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Improving the monitoring of national HEPA policies

Monitoring framework established by the Council Recommendation on HEPA across sectors

- 23 indicators
- Network of national physical activity focal points operational
- Cooperation with World Health Organization
- First edition of the physical activity country fact sheets published in Sept 2015

(WHO) http://www.euro.who.int/en/health-topics/disease-prevention/physical-activity/country-work

Some outcomes from the monitoring carried out in 2015

Physical activity surveillance is improving

How to improve comparability?

HEPA coordination is improving
Encouraging physical activity at younger age

- Key role of schools
- Minimum requirements of physical activity (WHO)
- Expert Group recommendations to encourage physical education at school, including motor skills in early childhood, and to create valuable interactions with the sport sector, local authorities and the private sector (EU Work Plan for Sport 2014-2017)
  (http://ec.europa.eu/transparency/transparency/index.cfm?id=groupDetail&groupDetailDoc&j=198608&c=1)
- Council conclusions on the promotion of motor skills, physical and sport activities for children (adopted 24 Nov 2015)
  (http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015XG1215%2807%29)
The Eurydice report on physical education (2013) was a useful source


3 Financing projects and events
Erasmus+, the programme for Education, Training, Youth and Sport (2014-2020)

- Objective: boost skills and employability, as well as modernising Education, Training, and Youth work
- Total budget: 14.7 billion€ (266M€ for Sport)
- Support for
  - Collaborative partnerships / Small Collaborative partnerships
  - Not-for-profit European sport events
  - Actions that strengthen the evidence base for policy-making

Promoting HEPA is a priority

- 2014 & 2015 (out of Week of Sport): 7 major events (3,3M€) and 26 collaborative partnerships (about 10M€)
- 34 projects received under the 2016 call

![Projects per topics - 2015](chart1.png)

![Type of organisations (2015)](chart2.png)
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Organising the European Week of Sport

#BEACTIVE
European Week of Sport
7 - 13 September 2015

The EWoS 2015 was a success

Evaluation report

5 millions – Participants
31 - Participating countries
>7000 - Events
30 - European Partners
Media campaign

✓ Continuity
✓ Start on 10 Sept
✓ Flexibility but convergence towards the same week across the EU
5 Building upon the recommendations from the High Level Group on Grassroots Sport

High Level Group on Grassroots Sport

- Set up by Commissioner Navracsics
- Assess the role of grassroots sport in its societal and economic dimensions + identify future actions
- 15 high level members
- **Recommendations**: June 2016
Further information

- Commission's Sport Policy and Programme Unit website:
  http://ec.europa.eu/sport/

- EACEA (Agency) website:

- Contact:
  FAC-UNITE-C3@ec.europa.eu
  Yves.Le-Lostecque@ec.europa.eu
  @eusport
  @lelosyv
The health benefits of sport and physical activity: strategies and guidance developed by WHO

Susanna Kugelberg, PhD MSci
Consultant, Nutrition, Obesity and Physical Activity Programme,
Division of Noncommunicable Diseases and the Lifecourse
WHO/Europe

13 July, 2016

Physical Activity throughout the Life-course

- Throughout childhood and adolescence
  - Basic motor skills and musculoskeletal development
- Throughout adulthood
  - Maintain muscle strength, increases cardiovascular fitness and bone health
- Among older people
  - Maintain health, agility, functional independence and enhance social participation
What is Physical Activity?

High athletic development
  Sports
  Active Play
  Active transport
  Weight Training
  Gardening
  Leisure activities

WHO Global Recommendations on Physical Activity for Health

- Provide guidance on the dose-response relationship between the:
  - frequency
  - duration
  - Intensity
  - type
  - total amount
- The recommendations target three age-groups
Children and adolescents aged 5-17

Min 60 minutes of moderate- to vigorous-intensity of physical activity daily.

- Physical activity greater than 60 minutes daily will provide additional health benefits
- Most daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week

Adults aged 18 — 64

At least 150 minutes of moderate-intensity aerobic physical activity, or 75 minutes of vigorous-intensity aerobic physical activity per week

- Aerobic activity should be performed in sessions of at least 10 minutes’ duration
- For additional health benefits, adults should increase their moderate-intensity aerobic physical activity to 300 minutes per week, or engage in 150 minutes of vigorous-intensity aerobic physical activity per week
- Muscle-strengthening activities should be carried out, involving major muscle groups, on ≥ 2 days per week.
Adults aged 65+

The same goals as for healthy younger adults. Strength training and balance exercises to prevent falls are of particular importance for this age group

- When older adults cannot achieve the recommended amounts of physical activity owing to health conditions, they should be as physically active as their abilities and conditions allow.

Physical Inactivity as a Major Risk Factor?

- Worldwide, physical inactivity causes 6–10% NCDs (CHD, diabetes, breast and colon cancer)*
- Physical inactivity causes 9% premature mortality*
- In Europe, estimates indicate that more than one third of adults are insufficiently active**

The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Physical Inactivity – Adolescents

Prevalence of physical inactivity (%) among adolescents (11-17 years) in the EU

Physical Activity Strategy for the WHO European Region 2016-2025

Global Policy Frameworks

Guidance on Best Practice

Landmark documents on Intersectoral collaboration

World Health Organization

World Health Organization

World Health Organization

World Health Organization

World Health Organization
Mission

To inspire governments and stakeholders to work towards increasing physical activity for all:

- Promote physical activity
- Enable environment
- Provide equal opportunities
- Remove barriers

Guiding principles

- Reduce inequities
- Promote a life-course approach
- Use evidence-based strategies
- Empower people and communities
- Promote integrated, multisectoral, sustainable and partnership-based approaches
- Ensure contextuality of physical activity programmes
5 Priority areas

- Providing leadership and coordination
- Supporting child and adolescent development
- Promoting physical activity for all adults as part of daily life
- Promoting physical activity among older people
- Monitoring, surveillance, tools, enabling platforms, evaluation and research

Priority Area 2 – Supporting the Development of Children and Adolescents

- Promote PA during pregnancy and for early childhood
  - Training of Health professionals
  - Promote physical activity in preschools and schools
  - Measures to ensure the nationwide implementation of quality physical education classes
- Promote recreational physical activity for children and adolescents
  - Out-of-school physical activity programmes
  - Innovative approaches to promote physical activity
Priority area 3 – Promoting physical activity for all adults as part of daily life

- Reduce car traffic and increase walking and cycling suitability
  - establish a mix of accessible walking and cycling infrastructures
  - improve the availability and attractiveness of public transport
  - congestion charges, tax incentives
- Provide opportunities and counselling for physical activity at the workplace by;
  - Regulations or guidelines with regard to cycle racks, changing rooms and adequate public transport options

Overview of Policies to Promote HEPA in the EU

<table>
<thead>
<tr>
<th>National PA Recommendation</th>
<th>National Sport for All</th>
<th>National awareness campaign PA</th>
<th>Schemes for PA in the workplace</th>
<th>Schemes for PA promotion in older adults</th>
<th>Schemes active travel to work</th>
<th>Schemes for active breaks between school lessons</th>
<th>Schemes active travel to school</th>
<th>Schemes for active breaks during school lessons</th>
<th>Schemes for after-school HEPA promotion programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not implemented</td>
<td>Foreseen within the next 2 years</td>
<td>Implemented</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*1’s data for Bulgaria and Greece*
Barriers and Challenges to Implementation

- Only a few cities have an integrated framework specific for active living
- Frequently perceived barriers included lack of funding and lack of commitment from decision-makers
- Better evaluation methods are needed to improve the evidence base for effective action
- Future challenges include establishing integrated policy, introducing a larger range of actions

Success

A healthy and active city is one that engages its citizens and continually assesses and improves opportunities in the built and social environments, individual capabilities and motivations to be physically active in day-to-day life.
Thank You

Further question: kugelbergs@who.int
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Presentation by Dr Wendy YARED

Healthy lifestyle and fitness messages of the European Code Against Cancer

www.cancercode.eu

Dr Wendy Yared
Director
Association of European Cancer Leagues (ECL)

ENVI Workshop
The fight against cancer is a team sport: the role of education and sport
13 July 2016
European Parliament, Brussels

www.europeancancerleagues.org

About ECL

- Pan-European umbrella organisation created in 1980 based in Brussels, Belgium
- Members are cancer organisations at national level across wider Europe
- Serves as a platform of exchange of best practices, where members learn from each others' experiences.

The Vision of ECL is for a Europe Free of Cancers!

Our goals toward this vision:
- Influence cancer control policies
- Promote cancer prevention
- Encourage access to cancer screening
- Ensure access to treatment and support
- Support the development and implementation of national cancer control programmes and cancer registries.

www.europeancancerleagues.org
An initiative of the European Commission to inform people about actions they can take for themselves to reduce their risk of cancer.

- Consists of twelve recommendations that most people can follow without any special skills or advice. The more recommendations people follow, the lower their risk of cancer will be. **Almost half of all deaths due to cancer in Europe could be avoided if everyone followed the recommendations.**
- The first edition of the Code was published in **1987 (~30 years ago).**
- The fourth edition prepared in 2012–2013 by cancer specialists, scientists, and other experts from across the European Union in a project coordinated by the [International Agency for Research on Cancer](https://www.iarc.fr), with financial support from the [EU Health Programme](https://ec.europa.eu/health).  
- The Association of European Cancer Leagues (ECL) has been entrusted by the European Commission to disseminate the Code 2014-2017, with an Operating Grant as outlined in its Third Health Programme.

www.europeancancerleagues.org
Cancer Leagues and the Code

- Leagues are main and trusted cancer prevention communicators in their countries
- Traditionally, leagues have been main promoters of the Code as during the original Europe Against Cancer programme
  
- Representatives on committees revising Code
- Leagues were most active organisations promoting Code in last Europe Against Cancer Programme and lead actions during European Week Against Cancer each year 25 to 31 May

www.europeancancerleagues.org

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The European Code Against Cancer focuses on actions that individual citizens can take to help prevent cancer.

Successful cancer prevention requires these individual actions to be supported by governmental policies and actions.

1. Do not smoke. Do not use any form of tobacco.
2. Make your home smoke free. Support smoke-free policies in your workplace.
3. Take action to be a healthy body weight.
4. Be physically active in everyday life. Limit the time you spend sitting.
5. Have a healthy diet:
   - Eat plenty of whole grains, pulses, vegetables and fruits.
   - Limit high-calorie foods (foods high in sugar or fat) and avoid sugary drinks.
   - Avoid processed meat; limit red meat and foods high in salt.
6. If you drink alcohol of any type, limit your intake. Not drinking alcohol is better for cancer prevention.

www.cancercode.eu

8. In the **workplace**, protect yourself against cancer-causing substances by following health and safety instructions.

9. Find out if you are **exposed to radiation from naturally high radon levels** in your home. Take action to reduce high radon levels.

10. For women:
   - **Breastfeeding** reduces the mother’s cancer risk. If you can, breastfeed your baby.
   - **Hormone replacement therapy (HRT)** increases the risk of certain cancers. Limit use of HRT.

11. Ensure your children take part in **vaccination programmes** for:
   - **Hepatitis B** (for newborns)
   - **Human papillomavirus (HPV)** (for girls).

12. Take part in **organized cancer screening programmes** for:
   - **Bowel cancer** (men and women)
   - **Breast cancer** (women)
   - **Cervical cancer** (women).


4. **Be physically active in everyday life. Limit the time you spend sitting**

   - People can reduce their risk of cancer by adopting healthy dietary and activity behaviours.

   - Europeans who follow a healthy lifestyle that adheres to the recommendations for [cancer prevention](http://www.cancercode.eu) have an estimated **18% lower risk of cancer**.

   This risk reduction is for a healthy lifestyle that includes:

   - **being a normal body weight** (a body mass index [BMI] between 18.5 and 24.9 kg/m²) and
   - **avoiding foods that promote weight gain**, such as sugary drinks and fast foods;
   - **being moderately active for at least 30 minutes per day**;
   - **breastfeeding** (for women); eating mostly foods of plant origin; limiting intake of red meat; avoiding processed meats; and limiting consumption of alcoholic drinks.
4. Be physically active in everyday life. Limit the time you spend sitting

**Physical activity protects against cancer:**

- Physical activity affects blood sugar levels and insulin and related hormones, sex hormones, inflammation, and immune function, all of which affect cancer risk.
- Physical activity also helps keep you from gaining weight and helps in maintaining a healthy body weight, which has an additional effect on reducing cancer risk.

*Source: IARC*

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4. Be physically active in everyday life. Limit the time you spend sitting

**Risk of cancer is reduced by being physically active:**

- Risk of cancer is about 4% lower in people who are moderately active for at least 30 minutes per day (or at least 150 minutes per week) versus those who are physically active for less than 15 minutes per day.

*Source: IARC*
4. Be physically active in everyday life. Limit the time you spend sitting

*Cancers which may be prevented by physical activity:*

- Reduces the likelihood of cancers of the **large bowel (colorectum)**
- In women of the **breast** and the lining of the **womb (endometrium)**, whatever your body weight.
- Physical activity also helps **keep you from gaining weight** – which will have an additional effect on reducing risks of these and other cancers, including **kidney, pancreas, gullet (oesophageal) and gall bladder cancers**.
- Avoiding sitting for long periods may protect against **endometrial cancer**.

*Source: IARC*

4. Be physically active in everyday life. Limit the time you spend sitting

*Physical activity also decreases the risk of other chronic diseases and conditions, including*

- coronary heart disease
- stroke
- hypertension
- type 2 diabetes
- abnormal cholesterol levels
- osteoporosis
- Depression

*Source: IARC*

*Image: fitness.gov*
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

League Against Cancer Slovakia
Campaign for Physical Activity “Jumping Squats”!

http://www.zabakyzazdravie.sk/galeria

Irish Cancer Society:
Men’s Health Week 13-19 June
The fight against cancer is a team sport: ECL Cancer Prevention Youth Ambassadors are on our team!

European Code Against Cancer Animation on www.cancercode.eu (Copyright-free, for all to use)
Thank you

www.europeancancerleagues.org
info@europeancancerleagues.org
@cancerleagues
@CancerCode
#CancerCode
#CodeAgainstCancer
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Presentation by Mr Jaka JAKOPIC

MY STORY

"The fight against cancer is a team sport: the role of education and sport"

Jaka Jakopič
21 July 2016
European Parliament
Brussels

BEFORE DIAGNOSIS

AGE 23

- 5,000 DAYS OF FOOTBALL TRAINING
- 5 YEARS AS PROFESSIONAL
DURING MY TREATMENT

15 chemotherapy and 32 irradiation

EVERY SECOND COUNTS
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

"HEADS UP" PROJECT

Prezi

HEADS UP
"WHEEL OF LIFE" PROJECT

Not all the winners name Lance Armstrong

Lojze Peterle
(this time without a bike)
The first professional athlete in Slovenia, who is back after cancer surviving.

ANOTHER DAY IN THE OFFICE....
BEFORE FOOTBALL WAS MY LIFE, AFTER WAS JUST MY JOB...

MY FAMILY, MY HAPPINESS
Remember!
THERE IS NO WAY TO HAPPINESS,
HAPPINESS IS THE WAY.

I hope to see you soon again.

MY STORY
“The fight against cancer is a team sport:
the role of education and sport”

Jaka Jakopič
17 July 2018
European Parliament
Brussels
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Presentation by Mr Olivier LAPLANCHE

Physical activity as part of cancer treatment – The French experience: CAMI Sport et Cancer

“The fight against cancer is a team sport: the role of education and sport”
Wednesday 13 July 2016, European Parliament, Brussels

Who are we?
The CAMI in figures

- A National Federation present in 22 departments
- 15 years experience: creation of the association in January 2000 by Dr. Thierry BOUILLET, oncologist and M. Jean-Marc DESCOTES, high performance karateka
- 3 areas of focus: Oncology, Hematology, the pediatric oncology
- For all patients, from early treatment to remission
- A scientific committee composed of experts in oncology, sports medicine, physiology and sport pedagogy
- A training structure: A "Sport and Cancer" University Diploma created in 2009 to train professional instructors, through an innovative method: the Meditéte®
- A research and development structure to produce clinical trials, apply the international standards, improve support for patients.

CAMI SPORT ET CANCER:
Our Objectives
The meeting of three worlds: the patients, the medical world and sports

For three effects:

INCREASE SURVIVAL
(50% reduction of relapse risk in prostate, colon and breast cancer)

INCREASE QUALITY OF LIFE AND REDUCE CHRONIC FATIGUE

PREVENT COMORBIDITIES
(diabetes, cardiovascular and degenerative neurological diseases, osteoporosis...)

HOW DO WE FUNCTION?
The Butterfly Trail
The Butterfly Trail: the “Sport and Cancer” keystone

The Butterfly Trail is a therapeutic path that suits all patients (women, men, children, adolescents, adults, seniors) regardless of the type of cancer, the level of care, the treatments nature, the side effects, the inactivity level and the psychological impact.

72 centers, including 6 in hospital centers and 7 “Sport and Cancer Poles”

“Sport and Cancer Poles” are structures integrated into care services. They provide a direct link with the medical profession and allow more precise care through extensive and regular evaluations.

Patients at the heart of the CAMI’s commitment

- 1600 patients cared for per week
- 5000 hours of classes per year
- 120 sessions per week in class (oncology)
- 80 individual sessions per week (hematology / pediatric oncology)
- 12-15 patients per session

- No time limit during treatment
- Median Supported: 8 months / 2 times per week

- A deliberately minimal financial contribution
  - Low financial contribution from patients for in town session
  - Solidarity Operation for the poor
  - Free programs within the Sport et Cancer Department
All sports and disciplines can be taught by the Méditété®
Karate, running, table tennis, swimming, taï-chi, yoga, canoe, contemporary danse

“Les Cours En Ville”
“In Town Classes”

“Sport and Cancer Poles”
Direct interventions in oncology, hematology and pediatric services
A unique intervention model

Collaboration with the medical profession

Skill Quality security

Public health mission

Therapeutic approach

University Professional Training

A proven device

In treatment or in remission your doctor hands you a certificate of non-cons to the practice of adapted physical activity.

You contact your CAMI Committee to make an appointment with a medical-sports instructor.

The sports medical educator defines with you the program that best fits your needs.

You get access to our Mélée® programs in town or in the hospital.

- Outpatient Program
- Sports after cancer program

Every three months, you get a new interview to assess your progress and redefine your Mélée® program in town or at the hospital.

We consider treatment changes, your general physical condition and your needs. You can leave CAMI at any time. You will be directed to other sports facilities through our exit check-out.
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

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**CAMI: highly qualified instructors**

- All CAMI instructors use the same teaching method the Médiété® ensuring consistency and quality of care nationwide.
- All CAMI instructors are Sport and Cancer University Diploma graduates and are therefore trained in the care of all patients.

Through the training provided within the Sport and Cancer University Diploma, which includes over 160 hours of training and 40 hours of traineeship, CAMI provides:

- welcome and listening for patients and custom made programs
- development of joint mobility to manage pain, fatigue and to maintain physical abilities
- mobilization and strengthening of muscle chains allowing muscle gain and fat loss
- integration of sports practice principles using everyday life with gestures for frequency
- intense and complex training sequences for intensity
- caring, positive attitude, fun and challenge to favor self-confidence, self-esteem and commitment to the program

---

**Significant performance criteria for effectiveness:**

- A treatment/care at early diagnostic
- A sustained intensity on over 50 minutes sessions
- A frequency of 3 times per week
- Programs mixing endurance and resistance exercises
- A period of practice of at least 6 months
- A safe and pleasant practice
Conclusion

A public health issue

Non-pharmacological treatment

Re-build body and body image

All patients from all social backgrounds

Patients need you...
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Fédération Nationale CAMI Sport et Cancer
Organisation à But non lucratif
2 bis rue du Château – 92200 Neuilly sur Seine

www.sportetcancer.com
Outdoor against Cancer (OaC)

- Outdoor against Cancer aims to introduce cancer patients to the **beneficial effects of outdoor activities and sports**.

- It is a **charitable organisation** offering outdoor activities for cancer patients of all ages – because cancer can affect anyone.
Who we are.

- OaC is a charitable umbrella organisation rooted in the outdoor sector, which aims to help cancer patients who require additional support alongside traditional medical treatment.

- We differentiate ourselves from other cancer organisations by encouraging outdoor activities and establishing an OaC quality seal for associated organisations and their products and services.
The Fight Against Cancer is a Team Sport: The Role of Education and Sport

Officially launched in July 2015 at the OutDoor Trade Show in Friedrichshafen, Germany (largest trade exhibition for outdoor and mountain sports worldwide). June 2016

Status Quo

- Officially launched in July 2015 at the OutDoor Trade Show in Friedrichshafen, Germany (largest trade exhibition for outdoor and mountain sports worldwide)

- Founder and director: Petra Thaller, a media specialist from Munich and a cancer patient herself in 2015

- International partnerships with renowned outdoor brands (including Lowa, Hanwag, Klean Kanteen, Buff, Polartec...)

- Close cooperation with the Ludwig Maximilian University (LMU) Medical Clinic in Munich and the Faculty of Sports Science at Munich Technical University (TU)

June 2016
Status Quo

- **Free weekly outdoor training sessions** for cancer patients (and their loved ones) in Munich since December 2015

- **A constantly expanding range of activities**: weekly running training, strength and endurance training, daily stand-up paddling (SUP) courses at Starnberger Lake near Munich, outdoor yoga and hiking trips

- June 2016: received **charitable status**

*First OaC ski trip to Kitzbühel in March 2015 with cancer patients and OaC Ambassador & Freeride Pro Matthias Mayr.*

June 2016
Milestones 2016/17

- 13th July 2016 Speech by Petra Thaller to the Committee on Environment, Public Health and Food Safety (ENVI) of the European Parliament titled ‘The fight against cancer is a team sport: the role of education and sport’
- 14th July 2016 OaC podium discussion at the OutDoor Trade Show in Friedrichshafen
- 1st October 2016 TV appearance of Petra Thaller at Carmen Nebel RTL Cancer Charity Gala in Berlin, 8:50 pm
- 8. Oktober 2016 1. OaC Academy for fitness trainers, mountain guides, etc. at the university clinic in Großhadern; Goal: expanding the OaC network to a national, and eventually international, level (OaC Quality Seal)
- In development: scientific study concerning the positive effects of outdoor activity prior to, during and after cancer treatment
- OaC has substantially increased attention to this field in medical and sports science research

June 2016

Cooperations

OaC chooses its partnerships very selectively and with great care.

Partnership criteria:
- Leadership // Happiness // Satisfaction // Adventure // Drive

Ideally, all partnerships are set to three years for purpose of realising communication ideas sustainably.

June 2016
The fight against cancer is a team sport! Go for it!

June 2016

OaC Quality Seal

- The OaC Quality Seal is a quality assurance for companies that are committed to the values of OaC, including movement, nature, sustainability and social responsibility and where these are reflected in their work.

- The OaC sponsorship ‘seal’ offers companies the opportunity to show their commitment to a healthy/recovering society and highlight their support.

- The OaC Quality Seal warrants the quality standards for products and services associated with OaC and its partners.

- Products and services carrying the OaC Quality Seal have been specifically designed to accommodate the needs of cancer patients and their loved ones.

June 2016
Example project

OaC Village

The fight against cancer is a team sport!

- **Outdoor against Cancer takes responsibility.** The term “outdoor” is diverse – it can mean to be out in the open, beyond closed walls, leave the front door, refusing to hide. “Outdoor” represents outdoor activity, freedom, wind and weather, seasons, new encounters.

- An appealing, inviting environment, outdoor activities, friends, sociable meals, relaxing, rejuvenating, energising, returning to normality by actively shaping your own experience.

- These simple words characterise our planned “OaC Village”. Built in the style of a log house, it will be a meeting place for young and old, similar to multi-generation housing; a natural environment, conversational partners, and the opportunity to support each other, which is very important both during and after illness.
Contact

Outdoor against Cancer

Petra Thaller, Director
Einsteinstrasse 131
81675 Munich
T  +49 89 52307839
M  +49 171 4983311
pt@outdooragainstcancer.de
www.outdooragainstcancer.de
DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT A
ECONOMIC AND SCIENTIFIC POLICY

Role

Policy departments are research units that provide specialised advice to committees, inter-parliamentary delegations and other parliamentary bodies.

Policy Areas

- Economic and Monetary Affairs
- Employment and Social Affairs
- Environment, Public Health and Food Safety
- Industry, Research and Energy
- Internal Market and Consumer Protection

Documents

Visit the European Parliament website:
http://www.europarl.europa.eu/supporting-analyses