Physical Activity Promotion in the Context of Overall Health Policy

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Including links to additional material on the last two slides, added after the discussion

Scientific Publications on Physical Activity in the Pubmed Database
MeSH terms: „physical activity“ OR „exercise“ OR „sport“ OR „sports“

In 60 years increase from 95 to 14'849 publications/year

PA Promotion in the Context of Overall Health Policy
• What do we know about physical activity and health?
• What do we know about physical activity promotion?
• Physical activity in health policy
• Physical activity in overall health
• PA promotion in the context of overall health policy
Panel 1: Health benefits of physical activity in adults

- Strong evidence of reduced rates of:
  - All-cause mortality
  - Coronary heart disease
  - High blood pressure
  - Stroke
  - Metabolic syndrome
  - Type 2 diabetes
  - Breast cancer
  - Colon cancer
  - Depression
  - Falling

Strong evidence of:
- Increased cardiorespiratory and muscular fitness
- Healthier body mass and composition
- Improved bone health
- Increased functional health
- Improved cognitive function

Recommendations
- USA 2008
- WHO 2010

Conservative assumptions
- Calculation of burden of disease
- Physical inactivity

- 6% to 10% of cases for these diseases worldwide
- 9% of premature mortality worldwide (5.3 million deaths)
- Comparable to worldwide effects of smoking or obesity

Based on data from 142 countries, representing 93.2% of the world’s population, we conservatively estimated that in 2013 the effect of physical inactivity on five major NCDs and all-cause mortality cost the world economy more than $67.5 billion through health-care expenditure and productivity losses. This is equivalent to the total GDP of Costa Rica (ranked around 80th out of all 193 countries with data) in the same year. Further, sensitivity analysis using less conservative assumptions led to much higher estimates. (…)

High levels of moderate intensity physical activity (i.e., about 60–75 min per day) seem to eliminate the increased risk of death associated with high sitting time. However, this high activity level attenuates, but does not eliminate the increased risk associated with high TV-viewing time.

1. "Whole-of-school" programmes

2. Transport policies and systems

3. Urban design regulations and infrastructure

4. Primary health care systems

5. Public education

6. Integrated community-wide programmes

7. "Sport for all" systems and programmes

GAPA, a council of the International Society for Physical Activity and Health ISPAH
www.globalpa.org.uk

London Congestion Charge

Figure 2.1  Traffic entering the central London charging zone during charging hours (07.00-10.30).
**Comparison of inhabitants’ physical activity behaviour in Zermatt (Community 1), Crans-Montana und Verbier**

![Graph showing comparison of physical activity levels](image)

Thommen Dombois O, Braun-Fahrländer Ch, Martin-Diener E. Comparison of adult physical activity levels in three Swiss alpine communities with varying access to motorized transportation. Health & Place, 2007; 13(3): 757-66

**PA promotion in primary care**

- Since 1990s development of interventions based on international experiences, but adapted to local situation
  - Good acceptance in patients, GPs and other primary care staff
  - Indications for effectiveness


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- Since 1990s development of interventions based on international experiences, but adapted to local situation
  - Good acceptance in patients, GPs and other primary care staff
  - Indications for effectiveness
  - But: difficulty to recruit primary care partners


PA promotion in primary care

- Development of professional communication materials and procedures for large scale implementation
- Joint project with Swiss College of Primary Care Medicine
- Testing in 19 primary care practices in French speaking and 6 in German speaking Switzerland
- Adaptation of final materials and procedures


Martin et al. Swiss Medical Forum 2016. www.medicalforum.ch


 Continuation education
 Motivational interviewing
 Local and regional health promotion structures
 Local physical activity offers and opportunities
 Behavioural change towards more physical activity

Physician's manual
Patients' brochure

www.panh.ch/paprica

Martin et al. Swiss Medical Forum 2016.

www.medicalforum.ch

“Dr. Luci Fehr’s Illness Tip No 2:

Carefully avoid all forms of sports and physical activity. Never walk. Never use your bicycle. Never ever breathe harder – unless you are inhaling tobacco smoke.”
The programme Allez Hop

- Weekly lessons during ten week courses, qualified instructors
- National programme
- At the beginning in collaboration with sports clubs and associations; later also with independent instructors


Population impact of a nation-wide physical activity programme with 200'000 participants

<1 „sweat episodes“ during leisure time reported in the Swiss Health Survey (1997: n=12'999; 2002: n=19'698; 2007: n=18'745)

Scaled up PA interventions in GAPA's 7 investments

![Diagram showing the number of scaled up physical activity interventions in different categories.]

**Total = 70**

n = 18

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"Drawing on input from researchers and stakeholders across the world, more than 50 unique physical activity interventions were identified that have been scaled up but not reported in the peer-reviewed literature. Not every intervention implemented at scale is effective in increasing population physical activity levels, and not every effective, researcher-led intervention is scalable (…)."

Large-scale problems require large-scale solutions, and we need the committed and joint efforts of all sectors of government and society to tackle the global public health challenge of inactivity."
Tackling Physical Inactivity

Other recommended interventions from WHO guidance (CAI not available)

- Ensure that macro-level urban design incorporates the core elements of residential density, connected street networks that include sidewalks, easy access to a diversity of destinations and access to public transport.
- Implement whole-school programme that includes quality physical education, availability of adequate facilities and programs to support physical activity for all children.
- Provide convenient and safe access to quality public open space and adequate infrastructure to support walking and cycling.
- Implement multi-component workplace physical activity programmes.
- Promotion of physical activity through organized sport groups and clubs, programmes and events.

Emergence of National PA Policies in Different World Regions


VOluntary Global Targets

- 2.5% relative reduction in risk of premature mortality from cardiovascular diseases, cancers, diabetes, or chronic respiratory diseases.
- At least 30% relative reduction in the harmful use of alcohol, as appropriate, within the national context.
- 3.0% relative reduction in prevalence of insufficient physical activity.
- 3.0% relative reduction in mean population intake of salt/sodium.
- 3.0% relative reduction in prevalence of current tobacco use in persons aged 15+ years.
- 2.5% relative reduction in the prevalence of raised blood pressure or at least the prevalence of raised blood pressure, according to national circumstances.
- Halt the rise in diabetes and obesity.
- At least 50% of eligible people receive drug therapy and counseling (including glycaemic control) to prevent heart attacks and strokes.
- An 80% availability of the affordable basic technologies and essential medicines (including vaccines) required to treat major non-communicable diseases in both public and private sectors.

HEPA promotion in international public health

HEPA promotion in European public health

"9. We urge the WHO Regional Committee for Europe to mandate the development of a physical activity strategy, alongside the new food and nutrition action plan."

"On 26 November [2013] the [EU] Council adopted the first ever Council Recommendation in sport, notably on promoting health-enhancing physical activity (HEPA). [...] There was a shared understanding that more can be done together to address the high rates of physical inactivity in the EU and the economic and social costs related to it."
Priority areas

- Priority area 1 – Providing leadership and coordination for the promotion of physical activity
- Priority area 2 – Supporting the development of children and adolescents
- Priority area 3 – Promoting physical activity for all adults as part of daily life, including during transport, leisure time, at the workplace and through the health-care system
- Priority area 4 – Promoting physical activity among older people
- Priority area 5 – Supporting action through monitoring, surveillance, the provision of tools, enabling platforms, evaluation and research

Les maladies non transmissibles: un défi

Stratégie nationale d’action contre les maladies non transmissibles (2000-2020)

1. Mesures principales

- Promotion de la santé et prévention des maladies non transmissibles
- Promotion dans la population
- Promotion dans l’économie et le monde du travail
The Risk Transition

Figure 2: The risk transition. Over time, major risks to health shift from traditional risks (e.g., inadequate nutrition or unsafe water and sanitation) to modern risks (e.g., overweight and obesity). Modern risks may take different trajectories in different countries, depending on the risk and the context.

Global Health Risks
WHO 2009

The Risk Transition

Population

<table>
<thead>
<tr>
<th>Country</th>
<th>Population</th>
<th>Years of Life Lost by causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sierra Leone</td>
<td>6.0 million</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>8.0 million</td>
<td></td>
</tr>
</tbody>
</table>

Life expectancy

<table>
<thead>
<tr>
<th>Country</th>
<th>Life expectancy</th>
<th>Healthy life expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sierra Leone</td>
<td>46 years</td>
<td>39 years</td>
</tr>
<tr>
<td>Switzerland</td>
<td>83 years</td>
<td>73 years</td>
</tr>
</tbody>
</table>

Communicable diseases
Non-communicable diseases
Injuries
Communicable diseases
Switzerland
Sierra Leone

2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases

4 main risk factors

Tobacco use
Cardiovascular diseases
Harmful use of alcohol
Diabetes
Chronic respiratory disease
Physical inactivity
Cancers
Unhealthy diets
Research aims
• Quantifying combined effects of the four behavioural risk factors for NCD on mortality
• Developing respective risk charts for communication

Methods
• Record linkage study: MONICA Study & Swiss National Research Programme 1A with Swiss National Cohort
• 16,721 Participants (16-90 years)
• Up to 32 years of mortality follow-up

Analyses
• (Mortality risks: Cox proportional Hazard Models)
• 10-year survival probabilities: Weibull Regression Models


Project funded by Swiss Heart Foundation and Swiss Cancer League and supported by Swiss National Science Foundation.

10 year survival probabilities at 65 and 75 years of age in the Swiss National Cohort – risk charts


Project funded by Swiss Heart Foundation and Swiss Cancer League and supported by Swiss National Science Foundation.
Conclusions

• The independent and combined impact of WHO’s four behavioural risk factors for NCD could clearly be shown in a Swiss population sample, i.e. in a population with a well developed health care system.
• The combined impact of healthy behaviour on mortality is stronger than the differences between men and women.
• Healthy behaviour keeps you young for ten years longer!

PA Promotion in the Context of Overall Health Policy

• There is excellent evidence for the health effects of physical activity and for the impact of inactivity at the population level.
• There is evidence for effective interventions, but need for more large scale approaches at the population level.
• Physical activity has become a part of official health policy.
• Integration in existing structures and establishment of funding mechanisms now are the challenges, following the rules and criteria of the sectors involved.

Links added after the discussion at IUMSP Lausanne (1/2)

• HEPA Europe, European network for the promoting of health-enhancing physical activity at WHO Europe
  • www.euro.who.int/hepaeurope
• GAPA (Global Advocacy for Physical Activity) Advocacy Council of the International Society for Physical Activity and Health ISPAH.
  • http://www.ispah.org/gapa/
• WHO Europe’s HEAT Health economic assessment tool for cycling and walking
  • http://www.heatwalkingcycling.org

Links added after the discussion at IUMSP Lausanne (2/2)

  • https://www.bfu.ch/fr/recherche-et-statistique/recherche/articles-publications#1 (listed as “Promotion de l’activité physique et prévention des accidents”)
  • https://www.bfu.ch/fr/recherche-et-statistique/recherche/articles-publications#10