Physical Activity and Health – The Role of Primary Care

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SMSC Zürich 2017 – Let’s get moving!
Swiss Medical Students Convention, Zürich, 08./09.04.2017

Handout at www.panh.ch (→ presentations)

Physical Activity and Health – The Role of Primary Care

- Changes in health risks at the population level
- Non-communicable diseases
- Physical inactivity and other dimensions of health behaviour
- Effectiveness of PA interventions at the population level
- The role of Primary Health Care
- PAPRICA

The Risk Transition

Global Health Risks
WHO 2009

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
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The Risk Transition

Population

<table>
<thead>
<tr>
<th>Country</th>
<th>Population</th>
<th>Years of Life Lost by causes</th>
<th>Life expectancy</th>
<th>Healthy life expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sierra Leone</td>
<td>6.0 million</td>
<td></td>
<td>46 years</td>
<td>39 years</td>
</tr>
<tr>
<td>Switzerland</td>
<td>8.0 million</td>
<td></td>
<td>83 years</td>
<td>73 years</td>
</tr>
</tbody>
</table>

4 main groups of non-communicable diseases

- Cardiovascular diseases
- Chronic respiratory disease
- Cancers
- Diabetes

4 (+3) main groups of non-communicable diseases

- Mental health disorders
- Cardiovascular diseases
- Dementia
- Chronic respiratory disease
- Musculoskeletal disease
- Cancers
Costs of NCDs in Switzerland

7 main groups of NCDs
51.1% of direct costs in 2011

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

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


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


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


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

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

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!

Models controlled for survey, education, marital status and nationality.

Men: N=8132 (of which 1967 cases)
Women: N=8589 (of which 1566 cases)


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

The impact of communicating genetic risks of disease on risk-reducing health behaviour: systematic review with meta-analysis

Gareth J Hollands,1 David P French,2 Simon J Griffin,3 A Toby Prevost,4 Stephen Sutton,5 Sarah King,5 Theresa M Marieau1

thebmj | BJM2016;352:i1102 | doi: 10.1136/bmj.j1102

"Study selection
Randomised and quasi-randomised controlled trials involving adults in which one group received personalised DNA based estimates of disease risk for conditions where risk could be reduced by behaviour change (…).

Results
We examined 10 515 abstracts and included 18 studies that reported on seven behavioural outcomes (…)."

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“Results
(…) Meta-analysis revealed no significant effects of communicating DNA based risk estimates on smoking cessation (…), diet (…), or physical activity (…). There were also no effects on any other behaviours (…).”
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

London Congestion Charge

Figure 2.1 Traffic entering the central London charging zone during charging hours (07:00-10:30)

Pedal cycles
Comparison of inhabitants’ physical activity behaviour in Zermatt (Community 1), Crans-Montana und Verbier

Thommen Dombois O, Braun-Fahrlander 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


Physical Fitness Research Center, CEFET/SP, São Caetano, BRAZIL, and Federal University of Pelotas, Pelotas, BRAZIL

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


"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."

Dr. Luci Fehr’s Illness Tip No 2:

Swimming, Walking the dog, Gardening, Dancing

Get your 30 mins a day, any way.


Course development 1997-2008

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)

Overview of intervention approaches

www.hepa.ch  www.panh.ch/documents

Tackling of unhealthy diets and physical inactivity - expected effects on DALYs over time

Tackling of unhealthy diets and physical inactivity - expected effects on health expenditure over time


www.panr.ch/paprica

Martin et al. Swiss Medical Forum 2016.

www.medicalforum.ch
Motivational Interviewing as the key communication technique of behaviour change interventions


Martin et al. Swiss Medical Forum 2016.

www.medicalforum.ch

Key tools of Motivational Interviewing

<table>
<thead>
<tr>
<th>Tabelle 1: Werkzeuge der motivierenden Gesprächsführung nach [7].</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Öffne Fragen stellen</strong></td>
</tr>
<tr>
<td><strong>Aktiv zulässen / reflektieren</strong></td>
</tr>
<tr>
<td><strong>Zusammenfassen</strong></td>
</tr>
<tr>
<td><strong>Bestätigen</strong></td>
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</tbody>
</table>

Tableau 1: Outils de l’entretien motivantiel (d’après [7]).

- Poser des questions ouvertes: Afin d’encourager le patient à parler, le médecin formule des questions qui commencent par « comment », « pourquoi », « quand » ou « où ». 
- Écouter activement / refléchir: Le médecin élabore une hypothèse quant à la signification probable des propres entendus ou sentiments exprimés.
- Résumer: Le médecin résume avec ses propres mots ce qu’il vient d’entendre afin d’exprimer sa reconnaissance et sa compréhension.
- Valoriser: Le médecin approuve et valorise un propos ou un acte du patient.

Martin et al. Swiss Medical Forum 2016.

www.medicalforum.ch

PAPRICA Material

www.paprica.ch