Steps to health – walking and physical activity in an urban context

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Handout at www.panh.ch (-> presentations)

Steps to health
• Why do we need to be physically active?
• What are the health effects of physical activity?
• How active should we be?
• What is the health potential of walking?
• What are population based approaches to physical activity promotion?
### Scientifically proven health effects of physical activity

**Health impact of physical activity in children and adolescents**

<table>
<thead>
<tr>
<th>Action</th>
<th>Health Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular endurance</td>
<td>● Risk profile for cardiovascular diseases</td>
</tr>
<tr>
<td>Muscle power</td>
<td>● Risk profile for metabolic disorders</td>
</tr>
<tr>
<td>Healthy body weight</td>
<td>● Anxiety-related symptoms</td>
</tr>
<tr>
<td>Bone health</td>
<td>● Depressive symptoms</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>● Cardiovascular disease</td>
</tr>
<tr>
<td>Fitness</td>
<td>● Stroke</td>
</tr>
<tr>
<td>Healthy body weight</td>
<td>● High blood pressure</td>
</tr>
<tr>
<td>Bone health</td>
<td>● Type 2 diabetes</td>
</tr>
<tr>
<td>Psychological well-being</td>
<td>● Colon cancer</td>
</tr>
<tr>
<td>Quality of sleep</td>
<td>● Breast cancer</td>
</tr>
<tr>
<td>Health-related quality of life</td>
<td>● Depression</td>
</tr>
</tbody>
</table>

**Additionally in older adults**

<table>
<thead>
<tr>
<th>Action</th>
<th>Health Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence</td>
<td>● Failing accidents</td>
</tr>
<tr>
<td>Mental acuity</td>
<td>●</td>
</tr>
<tr>
<td>Key</td>
<td>● Increase in relation to this health-related aspect</td>
</tr>
<tr>
<td>Improvement in relation to this health-related aspect</td>
<td>● Decrease in risk in relation to this health problem</td>
</tr>
</tbody>
</table>

**Strong evidence**

- Moderate evidence

**Fig. 2**: Overview of scientifically proven health impact of physical activity in different age groups.

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**Scientifically proven health effects of physical activity**

**Health impact of physical activity in adults**

<table>
<thead>
<tr>
<th>Action</th>
<th>Health Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitness</td>
<td>●</td>
</tr>
<tr>
<td>Musculoskeletal health</td>
<td>●</td>
</tr>
<tr>
<td>Body weight control</td>
<td>●</td>
</tr>
<tr>
<td>Risk of non-communicable diseases</td>
<td>●</td>
</tr>
<tr>
<td>Mental health</td>
<td>●</td>
</tr>
<tr>
<td>Cognitive function</td>
<td>●</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>●</td>
</tr>
<tr>
<td>Quality of life</td>
<td>●</td>
</tr>
<tr>
<td>Autonomy</td>
<td>●</td>
</tr>
</tbody>
</table>

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**Recommended Levels of Physical Activity for Health**

**18–64 years old**

For adults of this age group, physical activity includes recreational or leisure-time physical activity, transportation (e.g. walking or cycling), occupational (i.e. work), household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities.

In order to improve cardiorespiratory and muscular fitness, bone health and reduce the risk of NCDs and depression the following are recommended:

1. Adults aged 18–64 years should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week, or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity.
2. Aerobic activity should be performed in bouts of at least 10 minutes duration.
3. 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, or an equivalent combination of moderate- and vigorous-intensity activity.
4. Muscle-strengthening activities should be done involving major muscle groups on 2 or more days a week.

**Fig. 2**: Overview of scientifically proven health impact of physical activity in different age groups.

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2. Aerobic activity should be performed in bouts of at least 10 minutes duration.
3. For additional health benefits, (…) increase moderate-intensity aerobic physical activity to 300 minutes per week (…) or an equivalent combination (…).
4. Muscle-strengthening activities should be done involving major muscle groups on 2 or more days a week.

www.who.int/dietphysicalactivity

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**Mortality reduction dose-response curve in Taiwanese cohort study with n=416’175**


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**Basic recommendations as an orientation point in Taiwanese cohort study with n=416’175**

Figure 2: Daily physical activity duration and all-cause mortality reduction


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**Basic recommendations not as a threshold in Taiwanese cohort study with n=416’175**

Figure 2: Daily physical activity duration and all-cause mortality reduction

30 minutes of moderate intensity activities per day
~ 10'000 steps/day (limited comparability of devices!)

Doubling of effects with high intensity activities
in Taiwanese cohort study with n=416’175

Walking and Cycling by age groups in minutes/day
across four countries

What if England and Wales adopted
other countries’ active transport patterns...

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

HEAT Health Economic Assessment Tool for Cycling and for Walking
www.euro.who.int/HEAT

Effect of school-based interventions on physical activity and fitness in children and adolescents: a review of reviews and systematic update
S Kienne,2 J Moye1, T Martin1, E M van Sluijs1, I B Andersen1,2 B W Martin1,2

Swiss Society for Sports Medicine and Sports Traumatology
Physique du sport Médicine et traumatologie du sport
Medicina e traumatologia dello sport

10th Annual Meeting and 5th Conference of HEPA Europe
www.panh.ch/hepaeurope2014

University of Zurich
"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."

Steps to health

- Why do we need to be physically active? ✓
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- What is the health potential of walking? ✓
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Thank you for your attention!

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