Staying physically active is easy: Climbing stairs

Every physical activity counts!

Incorporating physical activity into your daily life by walking, cycling, climbing stairs, or doing housework or gardening – is good for your physical and mental health. The rule of thumb is: any activity is better than none and increases health and well-being at every age.

Climbing stairs...

- enhances well-being
- · promotes good health
- saves electricity
- · protects the environment



Whether at home, at work, in public spaces and buildings such as train stations, shopping centres, hospitals, administrative offices, universities, etc., stairs are everywhere and provide an **ideal opportunity for all age groups to improve their health by incorporating physical activity into their daily lives easily and efficiently**.

Climbing stairs is a **medium-intensity everyday activity** that trains the cardiovascular system, works the muscles of the buttocks, calves and thighs, and increases physical fitness through brief but intense exertion. Studies have shown that the health-promoting effect kicks in quickly due to the high intensity of stair climbing. The intensity can also be adjusted by changing pace.



Chart 1: Medium-intensity area with examples. Physical activity recommendations Switzerland (Source: hepa.ch. Magglingen, FOSPO, 2022).

The energy expended when climbing stairs is: (Source: Compendium of the US American College of Sports Medicine, more 9 nine metabolic units (MET) for stair climbing)

- ⇒ 8x higher than standing in a lift or on an escalator
- ⇒ 3x higher than walking on even ground

Bone-strengthening physical activity: Walking down stairs is also a bone-strengthening exercise due to the weight and impact load placed on the musculoskeletal system. It does, however, use about three times less energy than that needed to climb stairs.

Choosing the stairs on a regular basis trains the cardiovascular system and the muscles of the buttocks, calves and thighs, boosts endurance, improves metabolism, increases well-being and concentration, and lowers blood pressure!.

Sounds simple and effective, but why do most people still take the lift or escalator on a regular basis? Possible obstacles:

- · Lack of awareness of the positive effects of climbing stairs on health.
- Using the lift or escalator is a habit that is not questioned.
- Using the lift or escalator is more convenient, for instance when carrying a heavy bag.
- Using the lift or escalator is more attractive from the users' point of view because it is safer and faster.
- The lift or escalator is often located in a more visible position in buildings and is more easily accessible than the stairs. In contrast, stairs are often located peripherally in buildings, difficult to find and poorly lit, which does not encourage people to use them.
- Escalators are often in direct competition with stairs, e.g. in railway stations.

What can professionals, for example from the fields of health, spatial planning and architecture, do to ensure that stairs are used more often?

Stairs are used more often when they:

- are placed more prominently than lifts and escalators,
- are visible, allowing users to intuitively grasp where the staircase leads to,
- · lead as directly as possible to the destination and the important areas,
- · are well lit by daylight or artificial lighting,
- are inviting and spacious,
- have a normal rise to tread ratio and are sufficiently wide.

Interdisciplinary collaboration between professionals from the fields of health promotion, architecture, landscape architecture and urban planning can have a positive impact on stair usage: If stairs are placed in visible locations and are inviting, and if they come before the lift in the spatial sequence, they will be used more frequently and more intuitively. The ideal rise to tread ratio of the stairs also plays an important role. Design elements such as sufficiently wide stair treads that allow people to stop and catch their breath without being in the way of others are also conducive.

For health promotion and prevention professionals who want to raise awareness of the health benefits of stair climbing, "point of decision prompts" are an effective and low-cost way to motivate large segments of the population to climb stairs. Ideally, these eye-catching, attractively designed point of decision prompts are placed directly by lifts or escalators and combined with signage, such as arrows or "footprints" on the floor that guide people to the stairs and, if desired, up them.

- Take the stairs and save time
- Take the stairs and save electricity
- Take the stairs and burn 8x more calories
- Take the stairs and keep fit

Sources

Federal Office of Sport FOSPO, Federal Office of Public Health FOPH, Health Promotion Switzerland, Swiss Council for Accident Prevention BFU, Swiss Health and Physical Activity Network hepa. Bewegungsempfehlungen Schweiz. Grundlagen. [Physical activity recommendations for Switzerland.Principles]. Magglingen: FOSPO 2022. https://backend.hepa.admin.ch/fileservice/sdweb-docs-prod-hepach-files/files/2023/12/19/4cc9a5b5-5aac-4561-99d8-779a5476396d.pdf

Stair Climbing Fact Sheet [in German], State Centre for Health, North Rhine-Westphalia, 2019

https://www.lzg.nrw.de/ php/login/dl.php?u=/ media/pdf/ges foerd/bewegungsfoerderung/faktenblaetter/treppensteigen faktenblatt lzg-nrw.pdf

W. Seiferlein, C. Kohlert (eds.), *Die vernetzten gesundheitsrelevanten Faktoren für Bürogebäude* [The interconnected health determinants of office buildings], 2018. https://doi.org/10.1007/978-3-658-20852-3 7

CH Bewegungsempfehlungen [hysical activity recommendations for Switzerland], draft, 2022 Bewegung, bitte! [Physical activity, please!] Special edition by Hochparterre in collaboration with the Federal Office of Public Health, 2021

Webb, O. J., Eves, F. & Kerr, J. (2011). A statistical summary of mall-based stair-climbing interventions. Journal of Physical Activity and Health, 8, 558-565.

Nocon, M., Muller-Riemenschneider, F., Nitzschke, K. & Willich, S. N. (2010). Increasing physical activity with point-of-choice prompts – a systematic review. Scandinavian Journal of Public Health, 38, 633-638.

Acknowledgements

Expert input: Patrick Fust, head of the 'Stägestadt St.Gallen' project group (https://www.staegestadt.ch)

These recommendations for daily physical activity were developed by the FOPH as part of the implementation of the NCD strategy (with the support of the Federal Office of Public Health, Health Promotion Switzerland and the Swiss Conference of Health Directors).

Federal Office of Public Health FOPH

Prevention of Non-communicable diseases Division

November 2024