

# We Need More Health Literacy

*Wir brauchen mehr Gesundheitskompetenz*

**In today's society, the majority of children and adults are insufficiently physically active and sedentary activities have become part of everyday life. Germans are too inactive and spend too much time sitting or display sedentary behavior, not only at work but also in their spare time. Physical inactivity means that the minimum recommendations for physical activity (i.e. 150-300 minutes per week at medium to vigorous intensity (1)) are not being met.**

Sedentary behavior, on the other hand, is defined as sedentary or recumbent activity while awake with low energy expenditure ( $\leq 1.5$  MET) (18) and accounts for a large proportion of waking time in a variety of settings (e.g., home, work, school, transportation). Thus, inactivity and sedentary behavior can coexist, and sufficient physical activity does not automatically protect against sedentary behavior. Given the complexity of quantifying sedentary behavior, especially in uncontrolled environments, it is typically operationalized as total daily sitting time, time spent with screen media, or low levels of movement below the threshold that can be detected by measurement devices.

## Consequences of Physical Inactivity and Sedentary Behavior

The increase in physical inactivity and sedentary behavior has also led to an increase in the prevalence of various chronic diseases (such as type 2 diabetes, cardiovascular disease, and obesity) and their associated complications (e.g., sarcopenia, reduced physical function, and frailty). It is estimated that by 2030 (assuming no change in the prevalence of physical inactivity), this will lead to nearly 500 million preventable major non-communicable diseases and mental illnesses, resulting in direct healthcare costs of more than USD 523 billion (13).

The fact that these non-communicable diseases are responsible for 74% of all deaths worldwide (40% of which occur before the age of 70 (19)) highlights the importance of preventing these modifiable behaviors (e.g., physical inactivity) in order to avoid morbidity and premature mortality. In Germany, the current life expectancy of women and men is significantly lower compared to other Western European countries; women are in 14th place out of 16, men even in second last place (7). The main reason for this is cardiovascular disease (7), which is caused by an unhealthy diet, smoking, but also by frequent sitting

and lack of physical activity (11). These behaviors are not only observed in adulthood, but are already established in childhood and adolescence (6).

## Physical Inactivity and Sedentary Activities in Childhood and Adolescence

Even at kindergarten age, less than half of boys and girls are sufficiently physically active. When they start school, this proportion drops to 30% and 23%, respectively and remains at a very low level throughout childhood and adolescence (6). The prevalence of overweight, on the other hand, which is still just under 10% at pre-school age, increases to 15% and 20% for 7- to 10-year-olds and 11- to 13-year-olds, respectively after starting school (17).

Especially at school, as practiced in the German school system, with lots of sitting time, praise for children who can sit still for long periods, more writing and thinking work than actual object experiences and physical work, children accumulate a lot of sedentary time. For example, children and adolescents between the ages of 4 and 20 in Germany spend 71% of their waking hours per week being sedentary (5). This could be partially avoided or should at least be interrupted by significantly more active breaks.

Previous research has shown that there is a link between sedentary behavior and health risk in children (2, 9, 14). A certain amount of sedentary behavior is unavoidable throughout the day (e.g., eating, relaxing, doing homework, at school, etc.); however, it is not currently known how much sedentary time (in childhood) is too much. There are inevitably differences in the amount of time spent sitting and how often this sedentary time is interrupted by (small) activities. Research on adults suggests that it is important to look at the pattern of sedentary time accumulation in terms of health risk.

## Teaching Health Literacy as a Solution

It has long been known that a healthy, active lifestyle must start early in order to be maintained into adulthood. In mid-2023, the Baden-Württemberg Medical Association therefore called for „health“ to be introduced as an independent school subject that all children should take regularly. Research shows that setting-based health promotion (especially in schools) has many advantages, not least because (almost) all children can be reached and included regardless of their origin and family background. >

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Moreover, the basic idea of teaching children health literacy (defined as the ability to find, understand, evaluate and apply health-related information) as early as possible in different settings is certainly the right one.

Studies on health literacy clearly show that low health literacy is associated with poorer physical and mental health. For example, young people with low health literacy have a higher risk of eating less fruit and vegetables, smoking or not being physically active (3). However, in Germany, just over half of young people still have difficulties finding, understanding, evaluating and using health information (3), and almost 60% of the population in Germany have significant difficulties in dealing with health-related information (15).

### Increasing Health Literacy

There is a significant lack of evidence in intervention research on physical inactivity and sedentary behavior and in public health campaigns to tackle this problem. Sustainable health benefits and the main barriers to actual implementation (i.e. translating research findings into practice) cannot currently be clearly identified or named. Therefore, broad, collaborative or 'systems-based' approaches are needed to address the multiple determinants of sedentary behavior and physical inactivity, combining upstream policy approaches (i.e. targeting improvements in social, cultural, economic, and environmental factors conducive to reducing sedentary behavior and physical inactivity) and downstream individual-focused strategies (i.e. education and information).

In Germany, the latter is increasingly being taken on by the health insurance funds, which have been called upon to improve the health literacy of people living in Germany through the National Action Plan on Health Literacy, which has been successively implemented since 2018. However, according to HLS-GER 2, the second study on health literacy of the population in Germany, health literacy in Germany is decreasing rather than increasing. In 2021, 59% of the population had low health literacy, which means that they have considerable difficulties in dealing with health-related information (15). In the first survey six years earlier, around 5% less had problems obtaining and classifying health-related information (16). Compared to other countries, Germany also performs very poorly in this respect (4). To counteract this, one of Germany's largest health insurance companies recently launched an information campaign with the bold, informative and action-oriented headline „Germany has a physical activity and sitting problem“. With small, easy-to-understand messages and action alternatives that can be read everywhere, the campaign attempts to motivate the population to be more physically active („Just 21 minutes of physical activity a day helps“) and sit less („Ways to sit more healthily“) by also addressing obstacles and how to avoid them.

It remains to be seen whether this campaign will actually be successful, but it can be doubted since the transfer of knowledge alone is not enough to change established (everyday) behavior. Imparting knowledge is necessary and important as a first step, but is most likely not enough. Studies from Great Britain show that between eleven and 18% of the population are even aware of the physical activity guidelines (10,8). In Germany, the values are likely to be similarly low, although there is no comprehensive study on this yet. Since knowledge is usually not enough, low-threshold offers are required that are particularly geared towards environmental prevention, are individually adaptable and motivating. Ideally, this behavioral prevention (imparting knowledge) would have to be combined with environmental

prevention (changing the actual living environment, such as kindergartens, schools, workplaces, etc.).

In addition to knowledge transfer, publicity and education, the focus should be on strengthening the individual and their own self-efficacy so that behavior can be changed sustainably. Structural approaches have now emerged in many places; there are many plans and ideas that urgently need to be realized and implemented across the board. In fact, if we could increase population physical activity by 10 minutes per day, over 100,000 deaths per year could be prevented in the United States alone (12). The entire society is therefore called upon to work together to comprehensively promote health literacy; at individual, institutional, local, state and federal levels. This task is certainly not an easy one, but rather a major challenge that we have to face because, on the one hand, there is no alternative and, on the other hand, such a big difference can be achieved individually and socially in quality of life and health. ■

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