



Physical activity among children and young people in Norway

ABBREVIATED
VERSION

Results from a survey
among 9 and 15 year old children

Innhold

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This brochure is a summary of the main findings of the report “Physical activity among children and young people in Norway”, published by The Norwegian Directorate of Health in 2008. The main report can be downloaded or ordered from www.helsedirektoratet.no, order number IS-1533.



Not active enough

In 2005 and 2006, a total of 2299 children and young people took part in a major survey of physical activity among Norwegian 9 and 15 year olds. This brochure sums up the main results.

The health authorities recommend that schoolchildren should be physically active for at least 60 minutes every day. Activities should be varied and include both moderate and high levels of intensity.

ACTIVITY AMONG 9-YEAR-OLDS

The survey among 9 year olds found that 75 per cent of girls and 91 per cent of boys meet the recommendations.

ACTIVITY AMONG 15 YEAR OLDS

The survey among 15 year olds found that only 50 per cent of girls and only 54 per cent of boys meet the recommendations.

Conclusion:
Most 9 year olds in Norway are sufficiently physically active, but only half of 15 year olds are getting enough physical activity

About the survey

Commissioned by the Norwegian Directorate of Health, the Norwegian School of Sport Sciences conducted the survey of physical activity among children and young people in Norway.

The objective was to provide knowledge about the overall level of activity and physical fitness among children and young people in Norway. Prior to the survey, the knowledge about the factors (determinants) that cause people to be physically active was insufficient. Therefore a secondary goal was to improve this knowledge.

The survey is part of the work on “Action Plan for Physical Activity (2005-2009) – Working Together for Physical Activity”.

The survey consisted of a nationwide sample of 9 year olds (in fourth school year) and 15 year olds (in tenth school year). A total of 2299 children and young people took part, 1307 9 year olds and 992 15 year olds. A survey team visited the schools that had agreed to take part in the study. Physical activity was registered using an activity monitor (see picture 1).

There was a high degree of participation in the survey, 89% among 9 year olds and 74% among 15 year olds. The exception was 15 year olds in Oslo, who had a participation rate of only 55%.

There are grounds to believe that the study achieved a representative sample of 9 and 15 year olds in Norway.



Picture 1. The activity monitor used in the survey, ActiGraph.

Physical activity

The survey revealed that on average 9 year olds are 43% more active than 15 year olds. The study also showed that boys are 15% more active than girls.

The survey thus showed that the level of activity drops dramatically between the ages of 9 and 15. This can partially be explained by

the fact that a significantly larger proportion of 15 year olds spend a lot of time pursuing sedentary activities.

Table 1. The table shows the proportion of 9 and 15 -year-olds who are physically active at least 60 minutes per day. All figures are in percent.

| | 9 year olds | | 15 year olds | |
|------------------------------|-------------|------|--------------|------|
| | Girls | Boys | Girls | Boys |
| At least 60 minutes per day | 75 | 91 | 50 | 54 |
| Less than 60 minutes per day | 25 | 9 | 50 | 46 |

The survey also shows that the most active individuals are 3–4 times more active than the least active participants. This pattern applies to both age groups and

both sexes. In other words, there are huge differences in level of physical activity within the age groups.

The study did not reveal any notable differences between participants with ethnical Norwegian background and participants with immigrant background.

The study revealed some regional differences in Norway, but these

findings are rather uncertain and may be due in part to the fact that the survey was carried out at different times of year. Small samples in some regions may also have resulted in divergent results.

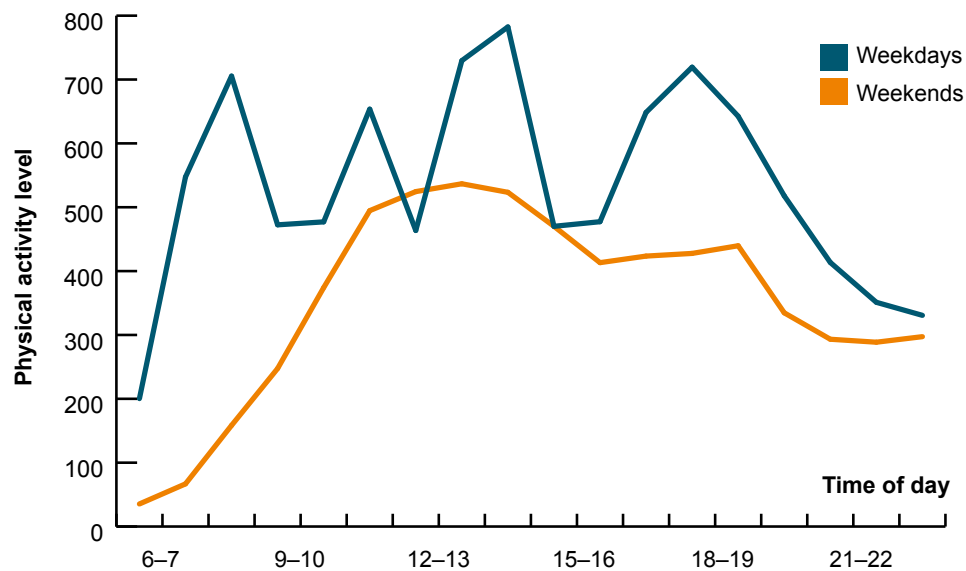


Figure 1. Pattern of physical activity for 15 year old boys. The results are displayed hour by hour for weekdays and weekends respectively.

LESS ACTIVE AT THE WEEKENDS

The survey revealed that Norwegian children and young people are generally more active on weekdays than on weekend days (Figure 1). The same pattern has been found in the other Nordic countries.

The peak in physical activity on weekdays is linked to activities at school and after-school clubs, and organised activities in the afternoon and evening. This pattern applies to both age groups and both sexes.

NO SOCIAL DIFFERENCES

The study also looked at possible social differences in physical activity among children and young people. The educational level of the participant's parents was used to indicate social position.

There were no differences in level of physical activity between social groups. In Oslo the survey detected a difference among 9-year-old

girls linked to the social position of the school they attend. Girls from eastern Oslo have a lower activity level than girls from western Oslo, but this does not apply for 9-year-old boys or 15 year olds.

CHANGES IN OSLO

A similar survey was carried out in Oslo in 2000, which makes it possible to compare data over time.

The activity level among 9 year olds in Oslo has risen over the 5–6 years between the two surveys. For girls, activity level has increased by 10% and for boys by 5%. This is a positive development that may be due to the increased focus on children's needs to be physically active.

No change in level of physical activity was registered among the 15 year olds from 2000 to 2006.

Physical fitness and weight

The survey also assessed children and young people's physical fitness and weight.

What we call the "fitness score" (maximum oxygen uptake, $\text{ml/kg}^{-1}/\text{min}^{-1}$) was found to be 43 for the 9-year-old girls and 49 for the 9-year-old boys. Among 15 year olds, the fitness score was 41 for girls and 52 for boys. The results indicate that the gap in fitness score between sexes increases between the ages of 9 and 15.

The findings of this Norwegian study coincide with the findings of a survey among 15 year olds in Denmark.

REGIONAL DIFFERENCES

The survey detected regional differences in fitness among children and young people in Norway.

Among the 9 year olds, the fittest girls were in the counties Buskerud, Østfold and Telemark, and the fittest boys were in Hedmark and Oppland. The lowest fitness levels among 9 year olds were found among girls and boys in Oslo.

Among the 15 year olds, girls and boys in Akershus were found to be the fittest. The least fit girls are in Møre og Romsdal, Sogn og Fjordane and Hordaland. Among boys, the lowest fitness levels were found in Buskerud, Østfold and Telemark.



Picture 2. *Cardiorespiratory fitness was measured using a maximal cycle test.*

SOCIAL DIFFERENCES

The survey shows that children whose parents have higher education are generally fitter than children whose parents have a lower educational level. There is a roughly 5% difference between children whose parents only completed compulsory schooling and children whose parents have a degree.

The survey also showed that 9 year olds and 15 year olds from areas with low social status in Oslo have a lower fitness score than 9 year olds and 15 year olds from areas with high social status.

As already mentioned, the level of physical activity among 9 year olds in Oslo has risen since 2000. But if we measure fitness per kilo of body weight in the same group, we find that this has dropped by 5% among both boys and girls. This reduction can be explained by a general increase in weight among children in the same period.

WEIGHT

The survey also looked at the body mass index (BMI) of children and young people. International age and gender specific limits for BMI, designed especially to define overweight and obesity among children and young people were used (the International Obesity Task Force).

Between 13% and 19% of the participants in the survey were classified as overweight or obese. The distribution is shown in table 2.

Table 2. The table shows the proportion of 9 and 15 year olds who can be classified as normal weight, overweight or obese. All figures in percent.

| | 9 years old | | 15 years old | |
|---------------|-------------|--------|--------------|--------|
| | Jenter | Gutter | Jenter | Gutter |
| Normal weight | 80.6 | 84.4 | 87.1 | 86.4 |
| Overweight | 14.7 | 12.8 | 11.6 | 9.2 |
| Obese | 4.7 | 2.8 | 1.3 | 4.4 |

There was no correlation between overweight and obesity and parents' education.

CHANGES IN OSLO

Comparing the new data for body mass index with the Oslo survey conducted in 2000, the figures reveal a slight increase in BMI among children in Oslo.

9 year olds from areas with high social status in Oslo have a lower BMI than children from areas with low social status. No corresponding differences were found among 15 year olds in Oslo. However, participation among 15 year olds in Oslo was low, and this may have affected the results.

What determines physical activity?

Psychological, social and physical factors all affect children and young people's level of physical activity. Below is a brief summary of the main differences between active and inactive children and young people.

The survey found that regularly active 9 and 15 year olds feel a sense of achievement in physical activity and they enjoy being physically active to a higher degree than their inactive counterparts.

The most active 9 and 15 year olds have stronger social support from their friends, compared with the least active respondents. 9 and 15 year olds who are not physically active and do not see this as a goal have far less support from friends and parents than the children who say they are regularly physically active and have been for some time.

The survey also shows that inactive 15 year olds, more than teenagers who have been active for some time, think you need to have talent and ability to do physical activities

and sports – an innate talent that cannot be affected through practice and effort.

Regularly active 15 year olds tend to see proficiency as a skill that can be worked on – it is a matter of practising and making an effort.

The Directorate of Health has published the brochure "Ways of promoting physical activity among children and young people", which contains

advice on effective ways of increasing physical activity. Copies can be ordered (please quote number IS-1595), or downloaded from the website www.helsedirektoratet.no.



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