**About COSI**

Overweight and obesity among children remains one of the major public health challenges facing the WHO European Region. As well as affecting a child’s immediate physical and mental health, educational attainment and quality of life, unhealthy bodyweight in early life can increase the risk of obesity and noncommunicable diseases later in life.

In order to generate reliable and valid country-level data on the prevalence of overweight and obesity among primary school-aged children, the WHO Childhood Obesity Surveillance Initiative (COSI) was established in 2007. The initiative established a common protocol which enables systematic collection of data on children’s bodyweight and height of children aged 6–9 years.

Fig. 1. Expansion of COSI, 2007–2020

Additional data on dietary intake, physical activity, sedentary behaviour, family background and school environments are also collected in many countries.

COSI is now the largest childhood obesity surveillance initiative in the world, with participation having increased from 13 countries in 2007 to 45 countries in 2020 (Fig. 1). In total, the first five rounds of data collection have yielded measured anthropometric data on over 1.3 million children.

The fifth round of COSI data collection took place between 2018 and 2020 in 33 countries. In total, almost 411 000 children aged 6–9 years were measured. The full details of the fifth round of data collection are described in a report.1,2
The graphs show the latest available data in each country, including data from previous COSI rounds for countries that did not participate in the fifth round. Data relate to: (i) 7-year-olds in Armenia, Belgium (only Flanders), Bulgaria, Czechia, Moscow and Yekaterinburg), Serbia, Slovakia, Slovenia, Spain, Tajikistan, Türkiye and Turkmenistan; (ii) 8-year-olds in Albania, Austria, Croatia, France, Italy, Norway, Poland, San Marino and Sweden; and (iii) 9-year-olds in Cyprus and Netherlands.

Prevalence was calculated based on WHO definitions. R3

The prevalence of overweight and obesity for both genders was lowest in Tajikistan, Kyrgyzstan and Turkmenistan. Of 42 countries (43 study locations), there are only six where the proportion of children aged 7–9 years affected by overweight or obesity is less than one in five.

Fig. 2. Overweight and obesity prevalence estimates according to data from COSI round 3 (2012–2013), COSI round 4 (2015–2017) and COSI round 5 (2018–2020)
OVERWEIGHT among children aged 7–9 years in the WHO European Region – COSI round 5 (2018–2020)

Overall, 29% of children aged 7–9 years in the participating countries were living with overweight (including obesity) according to WHO definitions (Fig. 3). Prevalence was higher among boys (31%) than girls (28%) (Fig. 4). There continue to be large differences between countries, with country-specific prevalence of overweight (including obesity) among children aged 7–9 years ranging from 6% in Tajikistan to 43% in Cyprus. Among boys, prevalence ranged from 7% to 48%; among girls, from 5% to 40%.

Highest prevalence of overweight among children (both genders combined) was observed in Cyprus, Greece, Spain and Italy. Prevalence was lowest in Tajikistan, Denmark, Israel and Kazakhstan. These results appear in line with the north-south gradient previously reported and analysis of data from the previous round of data collection which found that, on average, the children of Northern Europe were the tallest, those of Southern Europe had the highest weight and the children living in Central Asia had the lowest weight and were the shortest.

Fig. 3. Prevalence of overweight (including obesity) in children aged 7–9 years (%); COSI round 5 (2018–2020)

Fig. 4. Prevalence of overweight (including obesity) in boys and girls aged 7–9 years (%), and difference between genders (boys minus girls, percentage points on horizontal axis); COSI round 5 (2018–2020)
Overall, prevalence of obesity among children aged 7–9 years in the participating countries was 12% (Fig. 5). Prevalence among boys in this age group was 14%, compared to 10% among girls (Fig. 6). Country-specific prevalence of obesity among children ranged from 1% in Tajikistan to 19% in Cyprus. Among boys, prevalence ranged from 2% to 24%; among girls, from 1% to 15%. The same north-south gradient emerged as the one observed for overweight. Prevalence of obesity was higher in boys than girls in all countries except in Lithuania, Portugal, Slovakia and Tajikistan, where levels were the same or similar in both genders.
EATING HABITS of children aged 6–9 years
in the WHO European Region – COSI round 5 (2018–2020)

Overall, 43% of children aged 6–9 years consumed fresh fruit daily in the 27 study locations providing data (Fig. 7). The proportion of children consuming fruit daily was highest in Portugal, Ireland and Denmark (around 60%), and lowest in Georgia and Latvia (around 25%).

Only 34% of children ate vegetables daily (Fig. 8). The percentage of children eating vegetables every day varied widely between countries, ranging from 57% to only 13%.

Fig. 7. Fresh fruit eaten every day (%)

Fig. 8. Vegetables eaten every day (%)

Fig. 9. Soft drinks consumed more than 3 days/week (%)

Overall, 75% of children ate breakfast every day (Fig. 10). Levels of daily breakfast consumption ranged from 94% in Portugal and Denmark to only 44% in Armenia and 49% in Greece.

Fig. 10. Breakfast eaten every day (%)

Fig. 9 shows that 22% of children aged 6–9 years consumed soft drinks on more than 3 days per week. There was a wide variation between countries, from 2% in Greece to 41% in Czechia.
PHYSICAL ACTIVITY and SCREEN TIME of children aged 6–9 years in the WHO European Region – COSI round 5 (2018–2020)

Only 41% of children aged 6–9 years travelled to and from school actively (on foot, by bike, by nonmotorized scooter or on skates) in the 28 study locations that provided data (Fig. 11). The percentage ranged from 6% in San Marino to 98% in Tajikistan.

Overall, 53% of children spent at least 2 hours per week doing sports or dancing in the 27 study locations providing data (Fig. 12). Country-specific values ranged from 27% to 86%.

Fig. 13 shows that 87% of children aged 6–9 years in the 27 study locations providing data spent at least 1 hour a day in active or vigorous play. There was considerable variation between countries, from 65% to 96%. In all but three countries, the percentage was 75% or more.

Overall, 43% of children spent at least 2 hours a day watching TV or using electronic devices (Fig. 14). There was a wide variation between countries, ranging from 18% to 74%.
Conclusions and next steps

Ending childhood obesity will require a comprehensive approach that includes the promotion of healthy diets and plentiful physical activity in both early childhood and among school aged children, as well as preconception and pregnancy care, and weight management programmes where needed.

The WHO European Office for Prevention and Control of Noncommunicable Diseases is committed to supporting countries to take comprehensive, integrated, multi-sectoral action to halt the rise of childhood obesity in the WHO European Region.

Data from the COSI project play a key role in helping to define the problem of obesity, informing action, drawing comparisons between countries and tracking progress over time.