



**Growing Up  
in Ireland**  
National Longitudinal  
Study of Children

**Cohort '08**  
Nov. 2018

# GROWING UP IN IRELAND

KEY FINDINGS: COHORT '08 AT 9 YEARS OLD

## NO. 3

### HEALTH AND PHYSICAL DEVELOPMENT

#### INTRODUCTION

*Growing Up in Ireland* is the national longitudinal study of children designed to inform policy affecting children and their families. The study follows two cohorts of children, born roughly a decade apart. The families of **Cohort '08** (the **Infant Cohort**) were first interviewed in 2008/2009, when the child was 9 months old. They were re-interviewed when the child was 3 years, 5 years, and 7/8 years (the latter by postal survey) and between July 2017 and March 2018 when the child was 9 years old. The other cohort is **Cohort '98** (the **Child Cohort**) that includes children born in 1998 and recruited into the study when they were 9 years old in 2007/8.

This series of *Key Findings* draws on information provided by the **Cohort '08** 9-year-old and his or her Primary Caregiver (usually the mother, and henceforth in this report referred to as the mother). The series is based on the 7,563 9-year-olds whose families participated in the study at ages 9 months, 3 years, 5 years and 9 years old.

This *Key Findings* report is the third in the series from the latest round of data collection from **Cohort '08** and is the first report on the health and physical development of these children. It covers key health indicators as reported by the mother, such as general health, longstanding conditions and diet. It examines the children's own reports of their physical activity as well as their measured weight status. In addition, it looks at how the health of the 9-year-olds varies by family circumstances and by the children's health status at ages 3 and 5.

For some outcomes, findings on the 9-year-olds of **Cohort '08** are contrasted with those of the earlier **Cohort '98**. There are important differences between the two cohorts at 9 years old, apart from being born a decade apart. The main difference is that the children in the '08 cohort at 9 years old have been living in Ireland since they were 9 months old. The cohort does not include children who had moved to Ireland when they were older than 9 months; or children whose families had dropped out of the study since they were 9 months old. Cohort '98, on the other hand, was recruited at 9 years old and represents all 9-year-olds living in Ireland at the time they were recruited in 2007/08.

Many useful comparisons can be made between the cohorts, but, for the reasons noted here, comparisons between them cannot be used to draw firm conclusions about differences between *all* 9-year-olds in 2017 and *all* 9-year-olds in 2007.

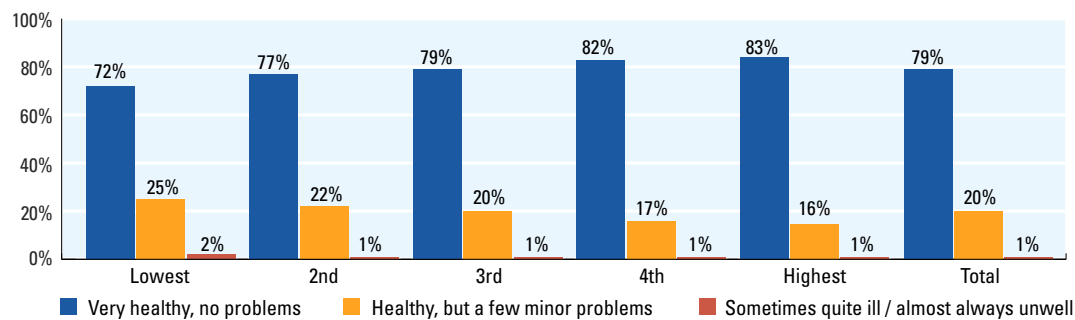
*Growing Up in Ireland* is funded by the Department of Children and Youth Affairs (DCYA), with a contribution from The Atlantic Philanthropies in Phase 2; and managed and overseen by the DCYA in association with the Central Statistics Office.



## GENERAL HEALTH OF 9-YEAR-OLDS

Good health is an important condition for the well-being and development of children. A total of 79% of mothers stated that their 9-year-old was *very healthy*. Another 20% reported the child as being *healthy with a few minor problems* and just 1% said their child was either *sometimes quite ill* or *almost always unwell* (Figure 1). There was no significant difference in mothers' reports of children's general health between boys and girls. However, there was a significant difference by income group: 83% of children in the highest income fifth were *very healthy* compared to 72% in the lowest income fifth.

Figure 1: Mothers' reports of 9-year-olds' general health in 2017 by income fifths



Nearly 4 out of 5 children in 2017 were *very healthy*, but there were noticeable inequalities by income.

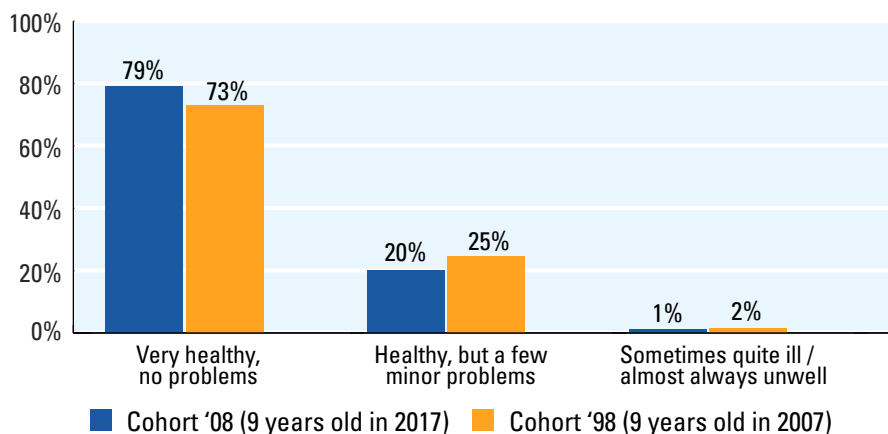
Note: The income fifths divide the 9-year-olds into five equally-sized groups based on family income (adjusted for household size and composition, i.e. 'equivalised').

79% of 9-year-olds were very healthy – slightly more than at age 5 (76%) but slightly fewer than at 9 months (83%).

## Comparing the general health of 9-year-olds in 2007 (Cohort '98) and 2017 (Cohort '08)

Ten years earlier mothers were asked the same question on the general health of the children in Cohort '98 at 9 years old. Just 73% of these mothers reported their children as *very healthy, no problems* (compared to 79% among Cohort '08 in 2017) and 25% reported their children as *healthy, with a few minor problems* (compared to 20% in 2017). For the reasons noted earlier, however, direct comparisons between the two cohorts cannot be used to draw firm conclusions about differences between all 9-year-olds in 2017 and all 9-year-olds in 2007.

Figure 2: Mothers' reports of 9-year-olds' general health for Cohort '08 in 2017 compared to Cohort '98 in 2007

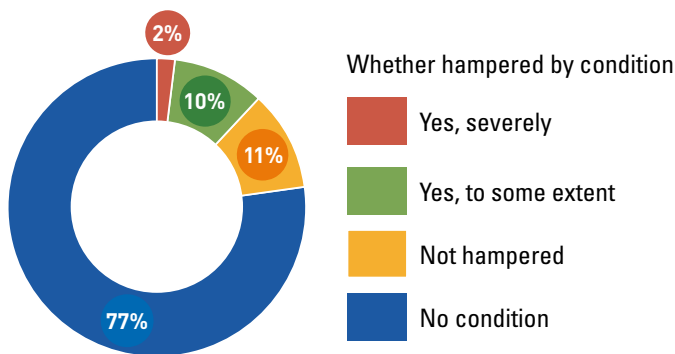


Compared to the earlier Cohort '98, more 9-year-olds in 2017 were reported to be *very healthy* (79% vs. 73%) There was no significant difference in general health between boys and girls in either cohort.

## LONGSTANDING ILLNESS, CONDITION OR DISABILITY AMONG 9-YEAR-OLDS

A slightly different perspective on health status is provided by looking at mothers' reports of the presence of a longstanding illness, condition or disability among the 9-year-olds and whether the child was hampered (*severely* or *to some extent*) by the condition (Figure 3). About 23% of children were reported to have such a condition - 11% had a condition but were not hampered by it; 10% had a condition and were considered to be hampered *to some extent* and 2% had a condition and were hampered *severely*.

Figure 3: Percentage of 9-year-olds in Cohort '08 in 2017 reported to have a longstanding health condition, illness or disability and whether they were hampered by this condition



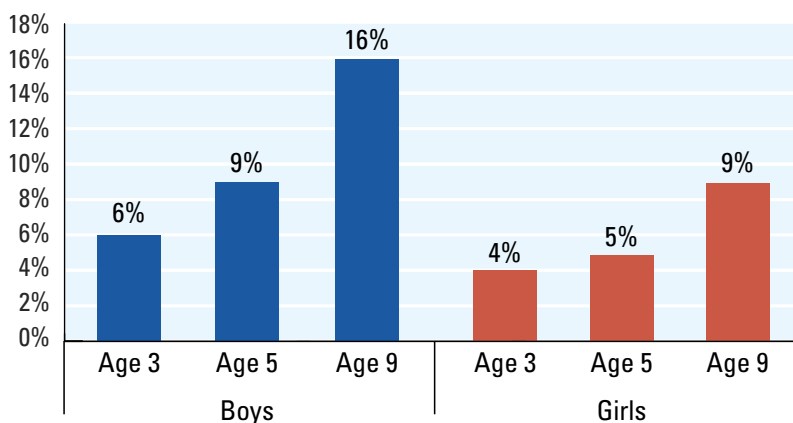
The most common conditions, as reported by the mothers, were respiratory (e.g. asthma, 13% of all 9-year-olds), behavioural or mental conditions (e.g. ADHD, 6%) and skin conditions (3%).

Looking back at the earlier interviews with these Cohort '08 mothers, the reported prevalence of longstanding conditions (whether or not the child was hampered) has increased with age and has been higher for boys than girls at each age. The prevalence has increased from 19% to 28% for boys and from 13% to 20% for girls between the ages of 3 and 9. This increase with age may partly reflect an increase in diagnosis.

As they grew older, the percentage of children hampered by such a condition also increased and, at all ages, boys were more likely than girls to be hampered (6% to 16% for boys and 4% to 9% for girls between the ages of 3 and 9, Figure 4). The increase in the percentage hampered may be due to a combination of several factors: an increase in the prevalence of conditions (or in their diagnosis, as noted above), an increase in impact (where a condition is progressive) and/or to children's participation in a wider range of activities with their peers at age 9 than at age 3 or 5.



Figure 4: Percentage of boys and girls reported to be hampered (to some extent or severely) by a longstanding condition at age 3, age 5 and age 9

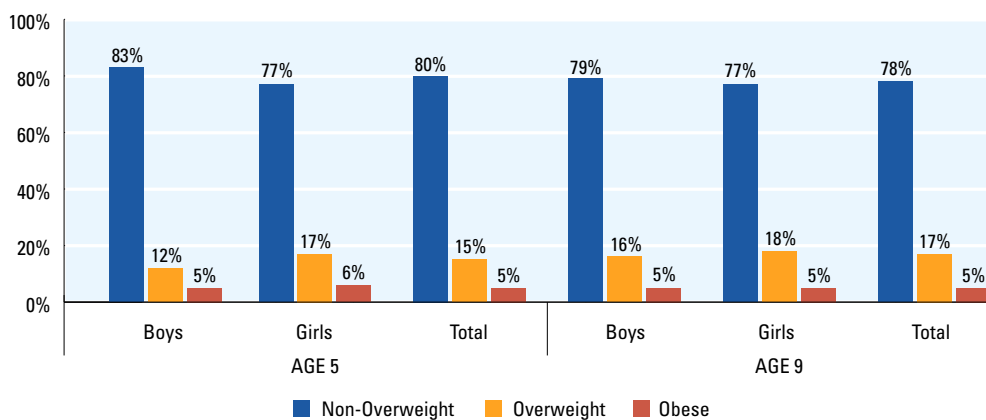


Children were more likely to be hampered by a longstanding condition or illness at age 9 than at age 3 or age 5. Boys were more likely than girls to be hampered at all ages and the gender gap increased with age.

## WEIGHT STATUS OF 9-YEAR-OLDS IN COHORT '08

Overweight and obesity affect the health of children in both the short and long term. Interviewers measured the height and weight of the Cohort '08 children at each interview. The measurements were used to determine if a child was non-overweight (which includes underweight), overweight or obese.<sup>1</sup> Overall, 78% of 9-year-olds were non-overweight, 17% were overweight and 5% were obese (Figure 5). Since the children were 5 years old, there was a small but significant increase in the percentage overweight/obese (from 20% to 22%). Although girls continued to be at greater risk of being overweight/obese at age 9, the gap between the genders had narrowed since age 5 years - mainly due to an increase in overweight/obesity among boys (from 17% at age 5 to 21% by age 9, Figure 5).

Figure 5: Weight status of boys and girls at age 9 and at age 5 based on recorded measurements



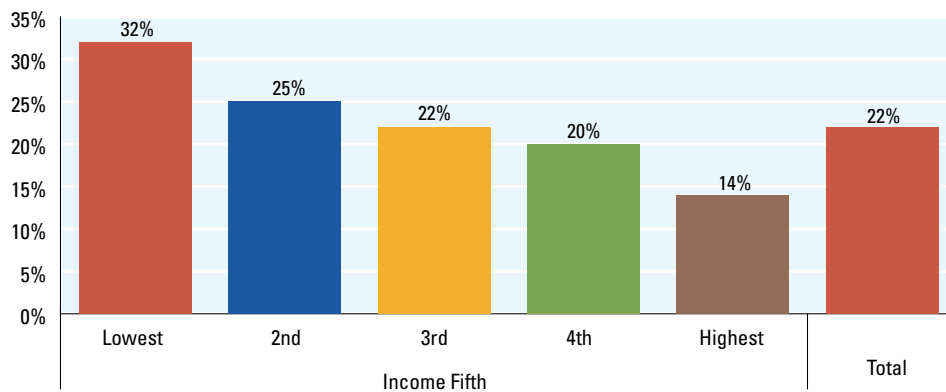
At age 9 (as at age 5), girls were more likely than boys to be overweight/obese (23% and 21%, respectively).

More than one in five 9-year-olds was overweight or obese, slightly higher than at age 5.

### Children in low-income families were more likely to be overweight/obese

There was a clear inequality in the prevalence of overweight and obesity according to family income: 32% of children in the lowest income fifth were overweight/obese, compared with 22% in the middle fifth and 14% in the highest fifth (Figure 6).

Figure 6: Percentage of 9-year-olds in Cohort '08 who were overweight or obese classified by family income



9-year-olds in the highest-income families were less than half as likely as those in the lowest-income families to be overweight/obese.

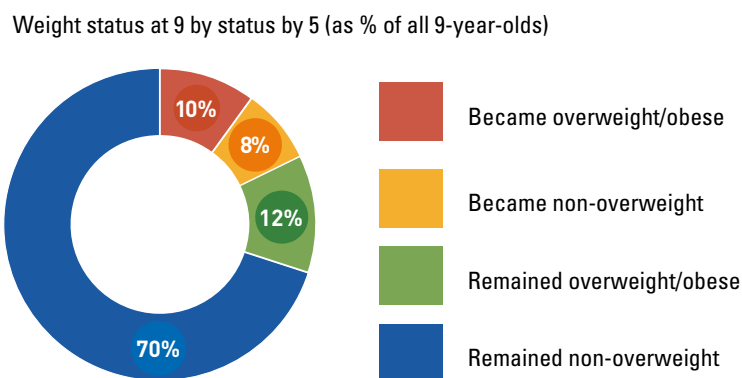


<sup>1</sup> Body Mass Index (BMI) age-specific thresholds of the World Obesity Federation (formerly IOTF) were used.

**Between the ages of 5 and 9 years, 10% of children became overweight/obese and 8% became non-overweight**

Between the ages of 5 and 9 years, the vast majority of children (82%) remained in the same BMI category at both ages; 70% of children were non-overweight at both 5 and 9 years of age while 12% were overweight/obese at both ages. Amongst the remaining children whose BMI status changed between the ages of 5 and 9 years, more children became overweight/obese than became non-overweight; 10% became overweight or obese, whilst 8% moved in the opposite direction from overweight/obesity to non-overweight.

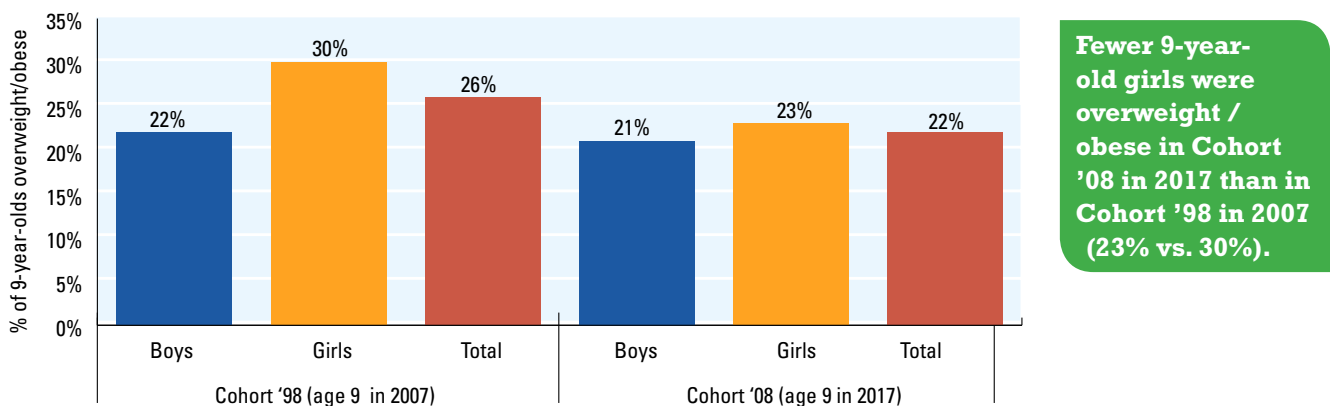
Figure 7: Summary of individual changes in weight status between the ages of 5 and 9 years old



**Overweight and obesity at age 9 years in 2017 (Cohort '08) and 2007 (Cohort '98)**

Figure 8 compares the weight status of the 9-year-olds of Cohort '08 in 2017 to Cohort '98 in 2007. There was no significant difference between the two cohorts in the percentage of boys who were overweight or obese. However, the overweight/obesity rate was significantly lower for the later Cohort '08 girls in 2017 (23%) than it had been for the earlier Cohort '98 girls in 2007 (30%). As noted earlier, these differences need to be interpreted with care, and not assumed to reflect a change that occurred for all 9-year-olds.

Figure 8: Percentage of 9-year-old boys and girls who were overweight or obese in Cohort '08 (2017) and Cohort '98 (2007)



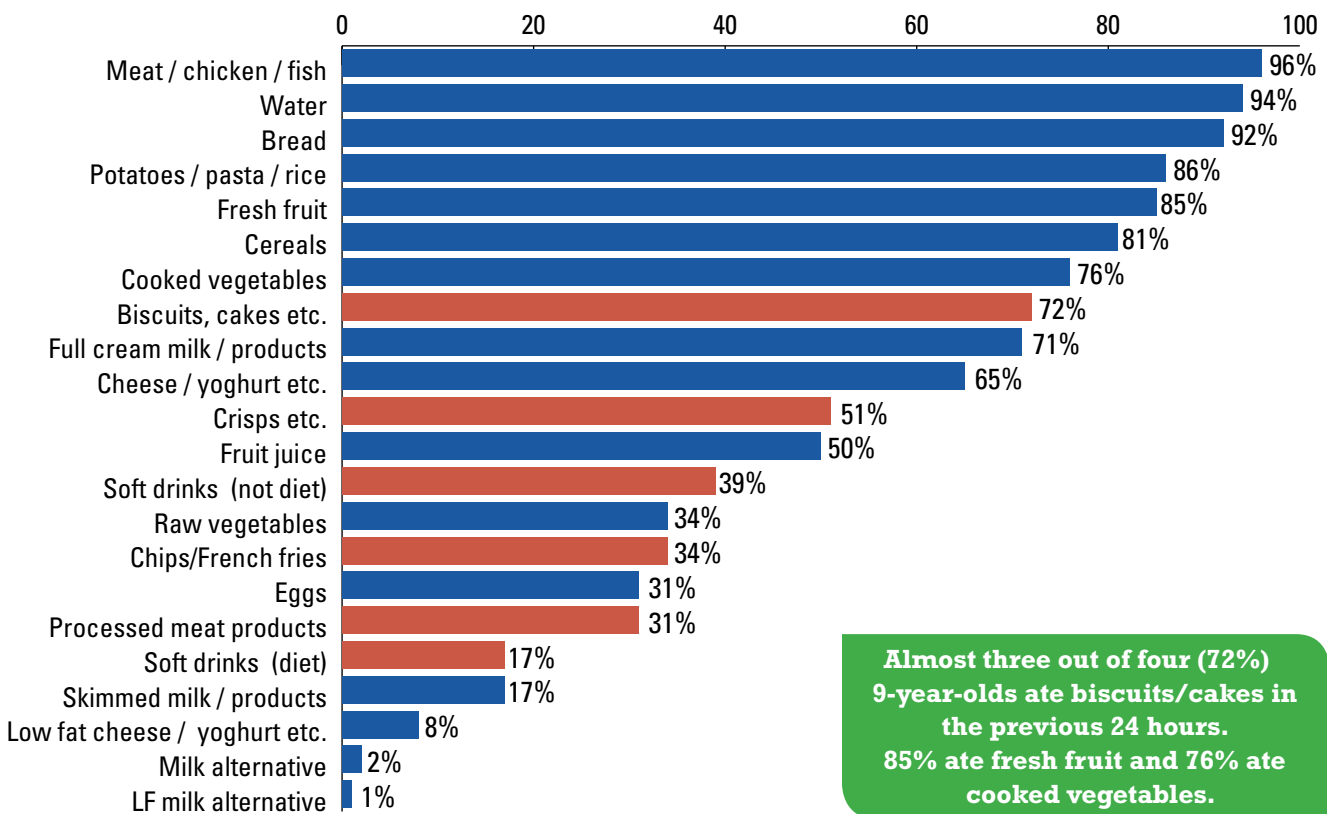
## DIET OF 9-YEAR-OLDS IN 2017

A healthy diet is important to ensure that children get all the nutrients required for their growth and development. As part of the survey, a checklist of food and drink items was used to give a snapshot of each child's diet in the previous 24 hours.

Over three-quarters of 9-year-olds were reported by mothers to have consumed each of the following in the previous 24 hours: Meat/chicken/fish, water, bread, potatoes/pasta/rice, fresh fruit, cereals and cooked vegetables. Among the 'treat' foods generally recommended to be eaten "at most twice a week,"<sup>2</sup> the most frequently consumed in the previous 24 hours were biscuits/cake (72%), crisps or savoury snacks (51%), sugared soft drinks (39%) and chips/fries (34%). Processed meat products (the consumption of which should also be limited) were consumed by 31% of children in the previous 24 hours.



Figure 9: Percentage of 9-year-olds in 2017 consuming specific foods or drinks in the last 24 hours



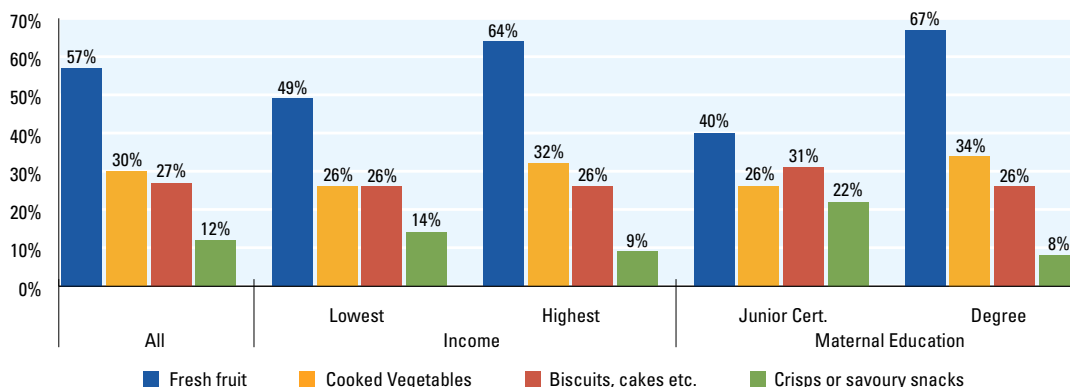
Almost three out of four (72%) 9-year-olds ate biscuits/cakes in the previous 24 hours. 85% ate fresh fruit and 76% ate cooked vegetables.

Note: Red bars indicate "treat foods".

<sup>2</sup>Department of Health, Healthy Food for Life – the Healthy Eating Guidelines and Food Pyramid, Department of Health, 2016. <http://www.healthyireland.ie/health-initiatives/heg/> [downloaded 28/08/2018].

Over half of mothers reported that the 9-year-olds consumed fruit at least twice in the last 24 hours (57%, Figure 10). The rate was lower for families in the lowest income group (49%) or where mother's education was at Junior Certificate level or less (40%).

*Figure 10: Percentage of 9-year-olds in Cohort '08 consuming certain food items 'more than once' in the previous day by income and maternal education.*



**Where there were socio-economic trends in the consumption of individual food items, these tended to favour children in families with higher levels of income and maternal education.**

In addition, lower income and lower maternal education were associated with an increased likelihood of consuming crisps or savoury snacks. The consumption of biscuits/cakes did not vary by socio-economic background (on average 27% of 9-year-olds consumed these at least twice in the last 24 hours).

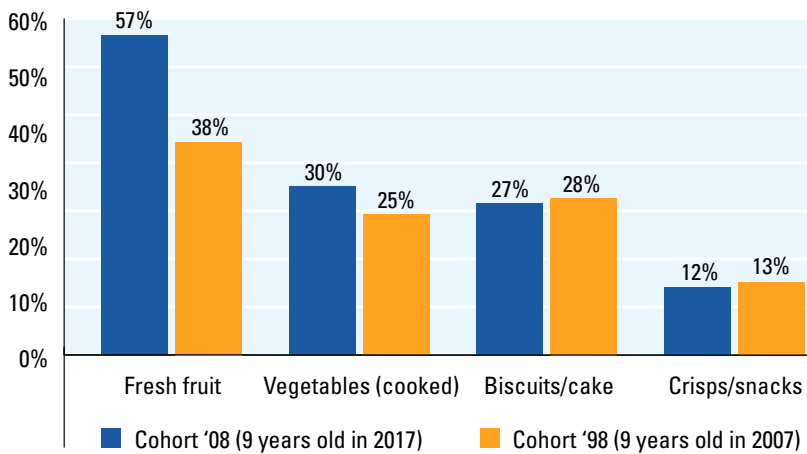
Virtually all children had something to eat before going to school (98%), but this was somewhat lower in the lowest-income families (95% compared to 99% in the highest-income families).



### Comparing the diets of 9-year-olds in 2017 (Cohort '08) and 2007 (Cohort '98)

Cohort '08 9-year-olds in 2017 were reported by mothers to eat certain foods more often than the 9-year-olds of Cohort '98 in 2007. Mothers in the later Cohort '08 were much more likely to report that their children consumed fresh fruit at least twice in the previous 24 hours (57% vs. 38%, Figure 11) and also more likely to report consumption of cooked vegetables (30% vs. 25%). The two cohorts were similar in reported consumption of biscuits/cake or crisps/savoury snacks.

Figure 11: Percentage of 9-year-olds consuming certain individual food items 'more than once' in the previous 24 hours by cohort



Compared to the earlier cohort of 9-year-olds, mothers of Cohort '08 in 2017 were much more likely to report that their children had eaten fresh fruit more than once in the last 24 hours (57% vs. 38%).





## PHYSICAL ACTIVITY OF 9-YEAR-OLDS IN 2017

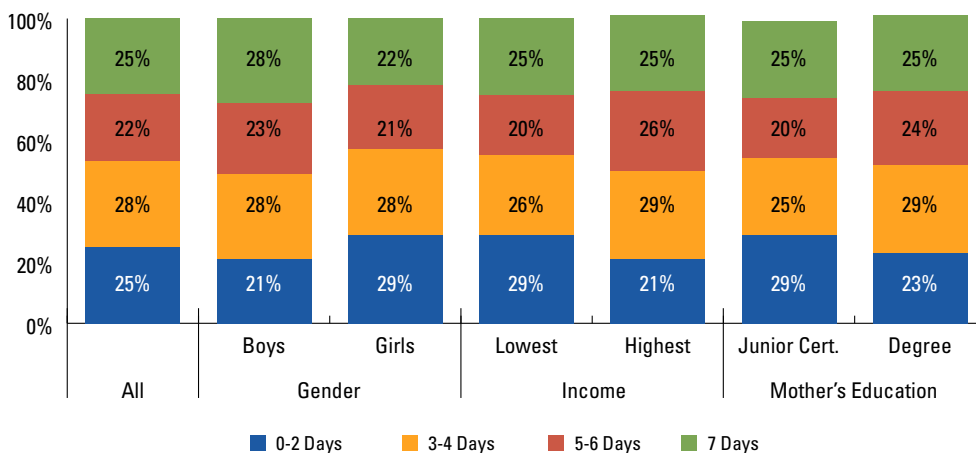
Physical activity is considered essential to the health and well-being of children. This is recognised in the primary school curriculum in Ireland, according to which children should receive 1 hour of Physical Education in school each week; in addition to the physical activity undertaken at break times in schools and also extra-curricular activities organised by the schools.

The World Health Organisation recommends 60 minutes of moderate to vigorous physical activity every day for children. Children themselves were asked the number of days in the last seven they were physically active for at least 60 minutes: that is, any activity that increases your heart rate and makes you get out of breath some of the time.

About three-quarters of 9-year-olds were physically active on at least three of the last seven days but only 25% were physically active every day (Figure 12). The percentage meeting this recommended level of physical activity was even lower for girls (22% compared to 28% of boys). There was little difference by family income or mother's education in meeting the target, but those from families with lower incomes and lower levels of maternal education were more likely to be active on only 2 days or fewer. For instance, 29% of those in the lowest income category and 29% of those in the lowest maternal education category were physically active on fewer than three days per week, compared to 25% overall.



Figure 12: Percentage of 9-year-olds in Cohort '08 who reported being physically active for at least 60 minutes on different numbers of days in last week by gender, household income and mother's education



Only one-quarter of 9-year-olds met the recommended level of physical activity – 60+ minutes every day.

Children who were overweight/obese were less likely to have met the recommended target of 60+ minutes of physical activity every day (20% vs. 27% of non-overweight children).

Most 9-year-olds spent at least an hour watching TV/videos on a typical weekend day and almost half spent an hour or more on other screen-based activities such as computer games or using social media (see *Key Findings* No. 4). Increased time spent on screen-based activities can potentially impact on a child's ability to meet physical activity targets.

Playing sports can contribute to achieving the recommended activity levels. Figure 13 shows the responses of 9-year-olds to a question on how often they played sport. Most 9-year-olds played at least some sports – only 7% did not play at all (6% of boys and 9% of girls); 34% played *once or twice a week*; 25% played *three to four times a week* and 34% played *almost every day*.

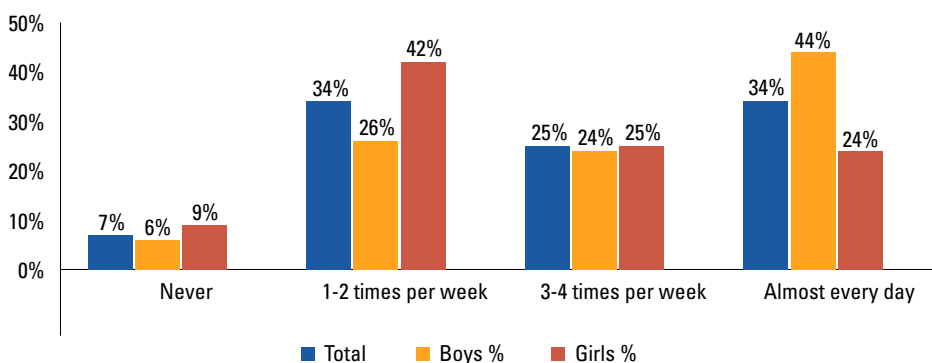
Boys were more likely than girls to play *almost every day* (44% vs. 24%), while girls were more likely to play just *once or twice a week* (42% vs. 26%).

There was a relationship between playing sport frequently and meeting the recommended physical activity levels of at least 60 minutes daily, but it did not guarantee that this target was met. Of those who played sports *almost every day*, 39% met the recommended physical activity level. The rate of meeting this target was lower (15% to 20%) among 9-year-olds who played sport less often.

Comparing 9-year olds in Cohort '08 in 2017 to their counterparts in Cohort '98 ten years earlier, there was virtually no difference in the percentage meeting the recommended physical activity levels.



Figure 13: Number of days boys and girls reported playing sport



**MOST POPULAR SPORTS**

**BOYS:**

soccer (70%),  
Gaelic football (52%),  
swimming (33%) &  
hurling (32%).

**GIRLS:**

swimming (50%),  
Gaelic football (39%)  
& dance (37%).

## DISCUSSION POINTS

Children were more likely to be hampered by a longstanding condition, illness or disability at age 9 than when they were aged 3 or 5. Boys were more likely than girls to be hampered at all ages and the gender gap increased with age (from 6% to 16% for boys and 4% to 9% for girls between the ages of 3 and 9).



Health inequalities were apparent across a range of outcomes. Compared to children in the lowest-income families, children from the highest-income families were more likely to be very healthy (83% vs. 72%), non-overweight (86% vs. 68%), to have eaten fresh fruit more than once in the previous 24 hours (64% vs. 49%) and to have engaged in at least an hour of physical activity on five or more days in the last week (51% vs. 45%).

Compared to the 9-year-olds of Cohort '98 in 2007, the 9-year-olds in Cohort '08 in 2017 were reported to be healthier and to eat more fruit and vegetables, but there was no difference in the percentage engaging in the recommended level of physical activity. Physical measurements indicated that the 9-year-old girls in the later Cohort '08 were less likely to be overweight / obese (30% vs. 23%), but there was no difference for boys.



# BACKGROUND

*Growing Up in Ireland* is the national longitudinal study of children and young people. The study is funded by the Department of Children and Youth Affairs (DCYA), with a contribution from The Atlantic Philanthropies, and is managed by the DCYA in association with the Central Statistics Office. It is being carried out by a consortium of researchers led by the Economic and Social Research Institute (ESRI) and Trinity College Dublin (TCD).



The study tracks the development of two nationally representative cohorts of children over time. **Cohort '08 (Infant Cohort)** families were first interviewed on a face-to-face basis when the Study Child was 9 months and subsequently at 3 years, 5 years, and most recently at age 9. The families were surveyed by post at 7/8 years. **Cohort '98 (Child Cohort)** families were interviewed at 9 years (in 2007/08), at 13 and at 17/18 years and at age 20 in 2018/19.

There were just over 11,100 9-month-olds in the first round of interviews with the families of Cohort '08 between September 2008 and March 2009. The response rate was 65%. The second round of interviews (at 3 years of age) took place between January and August 2011; the third round of interviews (at 5 years of age) was completed between March and September 2013. The response rate (as a percentage of those who had participated in the previous wave) was 90% at both the second and third rounds. The fourth round of data collection (at 7/8 years old) was conducted on a postal basis (from March to October 2016), with a 55% response rate. The fifth round at age 9 was conducted on a face-to-face basis (from June

2017 to April 2018), with a response rate of 88.1% of those who had participated at age 5. These *Key Findings* reports analyse the 7,563 children whose families participated in the rounds at 9 months, 3 years, 5 years and 9 years (i.e. excluding children who missed the 3 year or 5 year interview).

The questionnaires can be found at: <https://www.growingup.ie>.

In any study that follows people over time, some will drop out. To account for non-response, information collected in the surveys was statistically adjusted on the basis of mother's education, family income and family social class. This ensures that the data are representative of the population as a whole - all 9-year-olds who had lived in Ireland since they were 9 months old. All figures presented in this *Key Findings* report are based on the statistically adjusted data. While the researchers have made every effort to adjust for any differences between those who left the study and those who continued to participate, it is possible that this adjustment is imperfect.

The figures presented here are purely descriptive and do not control for potential interactions or confounding effects.

*All figures are preliminary and may be subject to change.*

**Access to Growing Up in Ireland data:** Anonymised versions of all data collected in *Growing Up in Ireland* are available for research through the Irish Social Science Data Archive (ISSDA, <https://www.ucd.ie/issda/>) for quantitative data; and the Irish Qualitative Data Archive (IQDA, <https://www.maynoothuniversity.ie/iqda>) for qualitative data.

## THANK YOU TO ALL PARTICIPANTS

The success of *Growing Up in Ireland* is the result of contributions from a large number of individuals, schools, organisations and groups, many of whom helped to recruit the sample and collect the data. The Study Team is particularly grateful to the thousands of families from every part of the country who gave so generously of their time on numerous occasions to make this study possible. A very big 'thank you' to all the children and their families.

For further information about *Growing Up in Ireland* visit [www.growingup.ie](http://www.growingup.ie) or email [growingup@esri.ie](mailto:growingup@esri.ie) or Freephone 1800 200 434.