Spain Report Card 2021 on Physical Activity for Children and Youth

Informe 2021
Actividad Física en niños
y adolescentes en España

PAFS UCLM
Grupo de investigación de Promoción
de la Actividad Física para la Salud

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Indicators

1. Global Physical Activity
2. Organized Sport and Physical Activity
3. Active Play
4. Active Transportation
5. Sedentary Behaviors
6. Physical Fitness
7. School
8. Family and peers
9. Community and Environment
10. Government
11. Obesity

Assigned Score and Interpretation

A

Most children and adolescents meet the recommendations (80-100%):

A+ (94-100%)
A (87-93%)
A- (80-86%)

B

More than half of children and adolescents meet the recommendations (60-79%):

B+ (74-79%)
B (67-73%)
B- (60-66%)

C

Around half of children and adolescents meet the recommendations (40-59%):

C+ (54-59%)
C (47-53%)
C- (40-46%)

D

Less than half of children and adolescents meet the recommendations (20-39%):

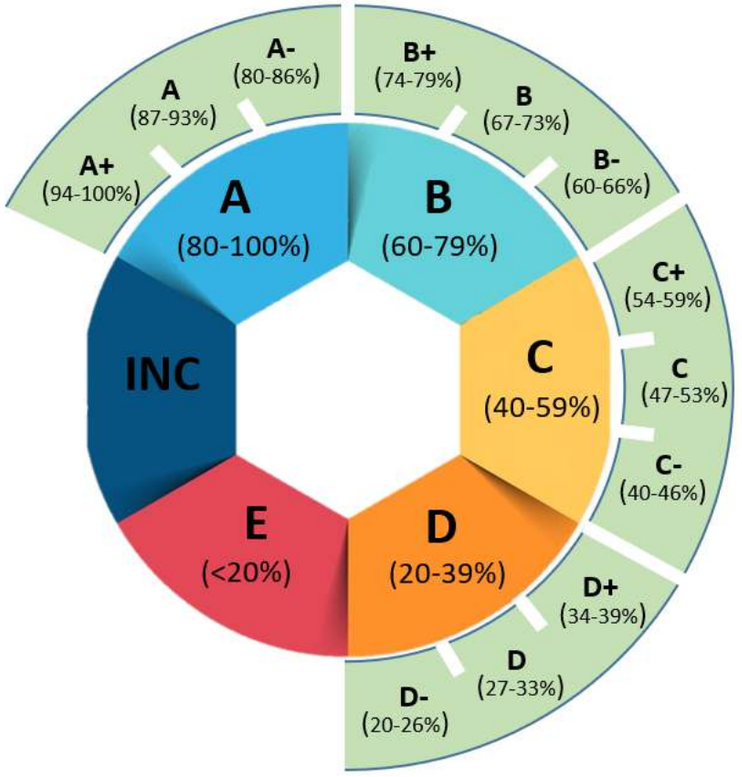
D+ (34-39%)
D (27-33%)
D- (20-26%)

E

Very few children and adolescents meet the recommendations (<20%).

INC

Incomplete.
No information available.



B-

1 Overall physical activity

Overall Score **B-**

The PASOS 2019 study (Gasol Foundation)[1] and the ALADINO 2019 study (AESAN) [2], present relevant data on children and adolescents' overall physical activity levels in Spain.

The PASOS 2019 study, focusing on children and adolescents aged 8 to 16, reports a prevalence of physical inactivity at 23.7%. This figure indicates that nearly one-quarter of the population studied does not meet the World Health Organisation's recommended levels of physical activity.

Regarding the time dedicated to physical activity, there is an average decline of 98.2 minutes per day from ages 8 to 16. This data highlights a progressive reduction in physical activity habits as children grow older. The difference in time allocated to physical activity between males and females is minimal.

The PASOS 2019 study also examines the relationship between physical activity and screen time. A critical turning point is identified in Year 5 of primary school (age 10), where the time spent on screens surpasses the time spent on physical activity. From this point onwards, the gap widens considerably. This finding underscores the importance of promoting physical activity and limiting screen time before the age of 10 to prevent sedentary behaviours.

The ALADINO 2019 study, targeting schoolchildren aged 6 to 9, also provides data on physical activity. Notably, 99.2% of participating schools report incorporating physical education within their curricula. However, the time dedicated to physical education varies across the Autonomous Communities, ranging from 105.8 minutes to 144.1 minutes per week.

ALADINO 2019 also investigates participation in extracurricular activities, finding that 76% of schoolchildren are enrolled in some form of extracurricular activity, with sports being the most popular. Participation in sports activities is higher among boys (81.8%) compared to girls (70.3%).

The PASOS 2019 and ALADINO 2019 studies both emphasise the importance of physical activity within the paediatric population. They highlight the need to promote active lifestyle early on and implement strategies to counteract sedentary behaviors associated with screen use.

Top three priorities for improving the grades in Spain

1. Promote the measure of improvement of Curricular Physical Education proposed in the A+D Plan, increasing the quality and time dedicated to the subject of Physical Education, both during Primary and Secondary Education. Include the mandatory Physical Education class in the second year Baccalaureate curriculum.

2. Promote the development of skills and motor skills at an early age, both in the subject of physical education and in extracurricular activities, as an activity prior to sports specialization programs.

3. Improve communication between the Physical Education teacher and the primary care pediatrician and carry out annual evaluations of physical condition and abilities and motor skills, in boys and girls at school by the Physical Education teacher and communicate the parameters of physical condition to the primary care pediatrician.

B+

2 Organized Sport and Physical Activity

Overall Score → B+

The practice of organised physical activity, whether in the form of individual or team sports, is associated with improvements in the mental and physical health of children and adolescents, as well as with enhanced quality of life. Sports participation aids in the development of motor skills that support lifelong engagement in regular physical activity.

The World Health Organization (WHO)[3] recommends that individuals aged 5 to 17 engage in high-intensity aerobic activity and exercises that strengthen muscles and bones at least three times a week. Organised sports and structured physical activities generally facilitate adherence to this recommendation.

The indicator analysed here refers to the percentage of children participating in organised sports or scheduled physical activity outside of school hours. The following data reflect the proportion of children and adolescents enrolled in structured sports or physical activities, as well as the proportion engaging in such activities at least three times per week, or alternatively, for a minimum of three hours per week.

According to the most recent ALADINO study conducted in 20192, which assesses schoolchildren aged 6 to 9, 76% of boys and 72% of girls are enrolled in physical activity or sports outside school hours. These data represent an increase from previous years, particularly among girls. In the 2011 ALADINO study, 63% of girls participated in sports or physical activities outside of school hours, rising to 66% in the 2015 ALADINO study. Additionally, the percentage of children engaging in these activities for at least three hours per week has also increased. In 2019, 40% of girls and 50% of boys engaged in at least three hours of physical activity per week (in the 2015 edition, the figures were 27% for girls and 46% for boys).

The PASOS study[1] reports that 84% of boys and 78% of girls aged 8 to 11 engage in some form of sport or physical activity at least three days a week. In the 12 to 16 age group, 78% of boys and 63% of girls meet the same frequency. These rates are higher than those observed in the ALADINO 2019 study, likely due to differences in the methodologies used in each study. According to PASOS data, this frequency includes weekend activities, such as matches or competitions associated with federated or school sports.

An additional notable finding in the PASOS study concerns socioeconomic status, which influences physical activity levels; a high socioeconomic status is associated with greater participation in various sports.

Data from the 2020 Survey on Sports Habits in Spain indicates that 74% of individuals aged 15 to 24 participate in some form of sport at least once a week.

Compliance

Ages 6 to 9

Compliance with sports practice (YES/NO)

Boys: B+
Girls: B

Compliance with 3 hours per week:

Girls: 40% (C-)
Boys: 50% (C)

Ages 8 to 11

Compliance with 3 days per week

Girls: 78% (B+)
Boys: 84% (A-)

Ages 12 to 16

Compliance with 3 days per week

Girls: 63% (B-)
Boys: 78% (B+)

Top three priorities for improving the grades in Spain

1. Ensure the acquisition of adequate motor skills in the school physical education curriculum and providing after-school activities (Multisport programs) at early ages to facilitate adherence to physical activity and sports participation at later ages.
2. To expand the sport offer. I.e. include more dance activities, activities in the nature: Climbing, cycling and BTT, trekking, etc. at school and within the community.
3. Offer a wide range of sports appropriate to the interests, characteristics and motivations of all children and adolescents, especially for girls and schoolchildren with less abilities.

3 Active play

Overall Score **B-**

Beyond physical activity undertaken in school or through extracurricular activities, free time presents another opportunity for children to be physically active in a spontaneous and enjoyable way. For young children, active play in parks, plazas, streets, rural areas, or even inside the home not only increases their daily physical activity but also fosters the development of motor and cognitive skills, social relationships, and emotional health. Current recommendations suggest that children should spend more than two hours daily engaged in free play, whether outdoors or in environments that facilitate active play.

According to data from the PASOS study[1], 71% of boys and 66% of girls aged 8 to 11 engage in activities such as playing, running, skating, cycling, or other movement-based activities outside of school every day. However, this participation rate declines among those aged 12 to 16, with 66% of boys and 53% of girls reporting this habit.

Compliance

Ages 8 to 11

Boys: B
Girls: B-

Ages 12 to 16

Boys: B-
Girls: C

Top three priorities for improving the grades in Spain

1. To analyse parents' perceived safety of urban and rural environments to promote children and adolescents' active play outdoors.
2. Integrate outdoor play as a social activity within the group of friends and family. Generate a habitat that facilitates the active life of the people who live in it, and how physical activity and sport can improve the habitat in which they develop.
3. To have safe recreation areas, preferably dynamized, in good condition and accessible in all neighborhoods and towns.

4 Active transportation

Overall Score **B-**

Studies indicate that the majority of Spanish children and adolescents commute actively to school, with estimates ranging between 60% and 70%[4,5]. Walking is the most common form of active transport, accounting for 78.5% of trips to school and 81.7% of trips home. The ALADINO 2019 study[2] also confirms the high prevalence of active transport, with 70% of children walking to and from school[5].

Factors influencing active commuting include:

Gender
Research shows a relationship between gender and the choice of active transport mode. In Huesca, girls tend to walk more, while boys are more likely to cycle[5].

School Year
Academic year appears to impact the type of active transport chosen. In Huesca, Year 10 students (15-16 years old) walk more frequently, whereas Year 11 students are more likely to cycle[5].

Distance to School
Distance to school is a key factor in transport choices. As distance increases, the use of private vehicles becomes more common.

Perceived Safety
Road safety is a significant concern for parents and can limit the use of active transport, especially cycling. Cities with good pedestrian and cycling infrastructure may improve safety perceptions and encourage active commuting. The ALADINO 2019 study confirms that perceived route safety influences transport mode choice.

Socioeconomic Status
The study by Abarca et al.[4] found an association between parental socioeconomic status and physical activity in adolescents using active transport. However, no direct relationship was observed between transport type and total physical activity.

Active commuting not only benefits the physical health of children and adolescents but also contributes to urban sustainability and the achievement of Sustainable Development Goals. Despite the high prevalence of active commuting in Spain, further efforts are needed to encourage bicycle use, particularly among girls and secondary school students. Measures to enhance road safety, promote sustainable mobility education, and implement school programmes to encourage active commuting are essential to increase its uptake and maximise its benefits.

Active Commuting Compliance

Ages 6-8

55% (C+) active commute to school

Ages 11-18

68.1% overall
Boys: 68.8% (B)
Girls: 67.4% (B)
[n=1,618]

Ages 12-17

76.4% overall (B+)
Boys: 76.4% (B+)
Girls: 79.4% (B+)
[n=1,709]

Ages 11-12

42.3% (C-)
[n=611]

Top three priorities for improving the grades in Spain

1. To increase safe walking routes and bike paths to school, as well as safe parking spaces for bikes, to increase active commuting.
2. To limit road traffic around school specially at opening and closing times.
3. Include in Physical Education classes content related to the use of active means of transportation (bicycle, scooters, etc.) to increase the level of skill, promote safety and road education and thus encourage their use among schoolchildren.

D

5 Sedentary behaviors

Overall Score **D**

The PASOS 2019 study[1] also analyses screen time, a key indicator of sedentary behaviour. The findings reveal that Spanish children and adolescents spend significantly more time on screens than recommended, both on weekdays and weekends. On weekdays, screen time exceeds the WHO recommendation (120 minutes/day) by nearly an hour, with an average of 178.7 minutes/day. During weekends, screen use increases substantially, exceeding recommendations by more than two hours and forty minutes, averaging 282.3 minutes/day.

A total of 54.4% of children and adolescents do not meet the WHO screen time recommendation, and non-compliance rises to 79.2% on weekends. Boys are more likely than girls to exceed recommended screen times both during the week and on weekends.

Non-compliance with screen time recommendations also increases with age, being significantly higher in adolescence than in childhood. Screen time progressively rises with age, from Year 3 in primary school through to Year 10 in secondary school. In Year 5, screen time on weekdays surpasses time spent on physical activity.

Excessive screen use contributes to increased sedentary behaviour, reduced cognitive stimulation, fewer hours of sleep, and poorer social interactions. Preventive policies and interventions should focus on preventing the rise in screen time before the age of 10.

Screen Time Compliance

Children (Ages 8-11)

Weekdays: 45.1% compliance (C-)
Weekend: 20.5% compliance (D-)

Boys — Weekdays: 42.9% (C-),
Weekend: 14.5% (F);

Girls — Weekdays: 73.6% (B),
Weekend: 26.2% (D-)

Age Group Analysis

Children

Weekdays: 65.1% compliance (B-)
Weekend: 34.7% (D+)

Boys — Weekdays: 59.3% (C+),
Weekend: 23.4% (D-);
Girls — Weekdays: 54.2% (C+),
Weekend: 45.7% (C-)

Adolescents

Weekdays: 28.5% compliance (D)
Weekend: 8.9% compliance (F)

Boys — Weekdays: 29% (D),
Weekend: 6.9% (F);
Girls — Weekdays: 28.5% (D),
Weekend: 10.7% (F)

Top three priorities for improving the grades in Spain

1. To provide awareness and consciousness about the sedentary guidelines for all: school teachers, medical doctors, family and children and adolescents.
2. To offer attractive and enjoyable physical activities as alternative to sedentary behaviour and to use active breaks within school to reduce long time of sitting.
3. To educate children and adolescents about the importance of having an adequate screen hygene increasing self-control techniques and awarness of the time with and withourt screens.

C-

6 Physical Fitness

Overall Score **C-**

Physical fitness is an individual's physical capability to engage in physical activity and encompasses a range of attributes, including aerobic capacity, muscular strength and endurance, agility, speed, coordination, and balance. Certain components of physical fitness, such as aerobic capacity and muscular strength, are associated with cardiovascular and bone health parameters.

This indicator evaluates the physical fitness attributes of aerobic capacity, muscular strength, and speed.

Aerobic Capacity

Data from a 2020 study in Extremadura6 with a sample of 1,177 children aged 10 to 16 years assessed aerobic capacity through the Course Navette test and calculated oxygen consumption The mean oxygen consumption of participants with European population data used as a reference[7], oxygenon values are considered low, approaching the 30th percentile (for both genders) relative to European benchmarks.

Similarly, data from the DAFIS project in Galicia[8], which evaluated 15.000 school children between 2012 and 2020, indicates low cardiorespiratory fitness levels compared to European data. The DAFIS project compares the 50th percentile values for each fitness test with European population reference percentiles. For Galician boys aged 10 to 14, the 50th percentile Course Navette results align with the 30th percentile for European peers, while for boys aged 15 to 17, the 50th percentile value approaches or slightly exceeds the European 50th percentile (with boys aged 17 slightly above this level). For girls, the 50th percentile of the Course Navette test generally falls between the 30th and 40th percentiles of European values, except for girls aged 16 and 17, whose 50th percentile values range between the 40th and 50th percentiles.

Lower Limb Strength – Standing Long Jump

A study conducted in Jaén during the 2016-2017 academic year, involving 163 participants (average age of 14 years)[9], reported mean standing values at approximately the 40th percentile of the European population for both boys and girls. DAFIS project data[8], further indicates that for boys aged 9 to 13, the 50th percentile jump distances align with the 30th percentile of European peers, while for boys aged 14 to 17, the 50th percentile values range between the 30th and 40th percentiles. For girls aged 9 to 17, the 50th percentile values consistently fall between the 30th and 40th percentiles of European standards.

Flexibility

The Jaén study[9] also assessed flexibility (using the sit and reach test) . The average flexibility score forhis sample falls between the 30th and 40th percentiles of European values, while for girls, the mean value aligns with the 20th percentile of the European population.

Top three priorities for improving the grades in Spain

1. To share data on children's physical condition with the pediatrician.
2. To monitor the physical fitness of children in schools regularly and track the results.
3. To design intervention programs to keep children's healthy physical fitness levels.

B-

7 Family and Peers

Overall Score **B-**

This indicator draws from data from the *Castilla-La Mancha Más Activa* study, conducted on a population aged 7 to 18 within this autonomous community, and from the PASOS study[1], which surveyed a representative sample of the Spanish population.

The *Castilla-La Mancha Más Activa* study reveals a clear influence of family and friends in encouraging physical activity among primary school children, an influence that diminishes during secondary education and further in the Baccalaureate stage. For primary school students, family (43%) and friends (13%) are the main motivators for beginning physical activity. Among secondary and Baccalaureate students, however, "self-motivation" becomes the leading driver (41% and 42%, respectively), followed by "family influence" (31% and 26%) and then "peer influence" (16% and 18%).

The study also highlights that 62% of surveyed fathers report participating in sports, with 65% of them engaging in physical activity with their children. Among mothers, 53% engage in sports, with 57% participating alongside their children. For siblings, 77% are involved in sports, and 64% of these engage in activity together. *(Source: PAFS Group, Castilla-La Mancha Más Activa Study, University of Castilla-La Mancha).*

From the PASOS study

The indicator "percentage of fathers and mothers who engage in physical activity with their children" scores:

C- for fathers
D for mothers

The indicator "percentage of families that support and encourage their children's physical activity" scores :

C- in primary education
D in secondary education
D- in the Baccalaureate stage

Top three priorities for improving the grades in Spain

1. To increase parental consciousness about the need for and importance of physical activity for their children's health growth.
2. To make parents aware that they are an important role model for their children (i.e. they can exercise with them or exercise alone), an important social influence (the value they give to physical activity practice within the family is important) and can provide tangible support (i.e. they can transport their children to physical activities practices, etc.)
3. To educate about the need for and importance of physical activity practice to make children and adolescents the physical activity promoters within their families

C-

8 School

Overall Score **C-**

The school environment provides another setting where students can engage in physical activity. In addition to the mandatory physical education class, students have opportunities to be active during breaks and while commuting to and from school. Schools can help increase students' physical activity levels by allowing access to facilities outside of school hours, offering extracurricular activities, organizing activities during recess, participating in school pathway networks, and hosting family activity events, among other initiatives.

This indicator evaluates various aspects of the school's role in promoting physical activity. It includes compliance with physical education (PE) class time requirements, access to facilities and equipment for physical activity outside of school hours, and initiatives that encourage physical activity.

According to the ALADINO 2019 study[2]:

Access to facilities

77% of schools make outdoor recreational areas available to students outside school hours, while only 34% allow access to indoor facilities during non-school hours.

Extracurricular activities

65% of schools organize some form of sport or physical activity at least once per week outside of regular school hours.

Physical education hours

The Spanish educational system mandates two hours of PE per week, with some regions increasing this to three hours. In grades 1-4 of primary education, between 48-53% of schools report offering 2-3 hours of PE per week, while approximately 36% provide between 1-2 hours weekly. Only about 13% of schools dedicate more than three hours per week to PE in the first three grades, dropping to 6% by grade four.

Indicator Scores

Schools providing access to facilities outside of school hours:
B+ for outdoor facilities
D- for indoor facilities

Schools offering extracurricular sports or physical activities: B-

Schools providing between 2 and 3 hours of weekly physical education: C

Schools providing a minimum of 3 hours of weekly physical education: F

Top three priorities for improving the grades in Spain

1. To promote physical activity during recess time and active breaks, particularly for girls and older groups and to use school physical activity facilities outside school timetable.
2. To work on physical motor skills from an early age to provide a good motor development and ability for different sports.
3. Offer as an extracurricular activity a wide range of physical activities and sports appropriate to the interests, characteristics and motivations of all children and adolescents, especially girls and those schoolchildren with less abilities, and to have these activities coordinated with coaches and the PE teacher.

B

9 Community and Environment

Overall Score **B**

Community and environment play a crucial role in determining physical activity levels. Access to facilities such as sports centers, green spaces, pedestrian-friendly areas, enjoyable and accessible walking routes, and bike paths all increase opportunities to be active. Moreover, the perception of these spaces as safe and risk-free, both socially and physically, further encourages their use.

This indicator evaluates aspects like neighborhood safety perception, access to and availability of sports facilities, parents' perceptions of local government efforts to promote physical activity, and the presence of safe routes for active commuting. Data for this indicator comes from the ALADINO 20192 and PASOS studies[1], along with other publications assessing perceived barriers to active transportation.

Key findings

School Commutes

Distance and time constraints affect active transportation. According to ALADINO 2019, 43% of families cite distance as a reason for not walking or cycling to school. Around 80% of students who live less than one kilometer from school commute on foot (or bike, though this is less common). For distances greater than one kilometer, the primary mode of transport shifts to vehicles. Additionally, 35% of families report lack of time as a barrier to active commuting, and 13% feel the routes to school are unsafe.

Environmental Influences

The PASOS study highlights how community environments impact family physical activity. Families residing in low-traffic areas with wide sidewalks, pleasant surroundings, and a safe environment report higher daily walking minutes and more outdoor playtime.

Safety Barriers in Active Transportation

The PACO (Pedalea y Anda al Cole) study 10, analyzing data from families in Granada, Jaén, Valencia, and Toledo, identifies perceived barriers like distance, neighborhood safety (e.g., narrow or poorly maintained sidewalks, lack of crossing guards, high traffic volume and speed), and convenience factors (e.g., parents' commute modes and children's extracurricular schedules).

Top three priorities for improving the grades in Spain

1. To provide walkable and cyclable environments with the community to make walking and biking an easy and safe option.
2. To have playgrounds and parks safe and in good state within the community for children and adolescents to play outdoors.
3. Carry out an analysis of the perceived safety of the urban and rural environment by the parents of the child and youth population targeted by the interventions to promote the use of public space as a playground and physical activity practice.

10 Goverment

Overall Score **C**

The Ministry of Health's Health Promotion and Education Information System is a platform for exchanging information and best practices, including programs focused on promoting physical activity and reducing sedentary behaviorio[11]. Together with the Spanish Federation of Municipalities and Provinces, the Ministry annually funds local projects to encourage physical activity. This support includes creating healthy exercise routes based on the Ministry's "Hacia rutas saludables"[12] ("Towards Healthy Routes") guide, which aids local entities in designing, promoting, and evaluating such routes. The guide was created by professionals in physical education, sports, and health promotion and is a joint publication of the Ministry of Health and the Spanish Federation of Municipalities and Provinces.

"Active Teaching Units" are materials developed by educators tailored to align with each course and stage of the school curriculum. These resources aim to increase moderate-to-vigorous physical activity to at least 50% of physical education class time in primary and secondary schools, aligning with international activity recommendations for children and adolescents. Additionally, these materials encourage the development of competencies required by current educational legislation.

Top three priorities for improving the grades in Spain

1. To keep monitoring physical activity levels in children and adolescents (PASOS and ALADINO studies).
2. To promote physical activity strategies within the community including education and health environments as well as social, family and worksite environments.
3. To establish a muldisciplinary work with all agents included in physical activity promotion: educators, medical doctors, physical education teachers, school deputies, public health promoters, families, from central government to autonomic communities, associations, etc. joining efforts and resources to improve all indicators.

C+

11 Obesity

Overall Score **C+**

Data are from the PASOS and ALADINO 2019 studies [1,2] , so that information is available from representative samples of the Spanish population aged 6-18 years. The data are presented according to the methodology proposed by the WHO.

According to the ALADINO 2019 study, the percentage of the Spanish population aged 6 to 9 years with a weight within normal values is 58% in boys and 60% in girls. The values decrease with increasing age as shown in the following data:

Prevalence of normal weight:

- At the age of 6 years, the prevalence of normal weight is 64% (in both boys and girls)
- At 7 years 59.6% (the same value in boys and girls)
- At 8 years 57% in both boys and girls
- At 9 years 50.7% of boys and 57.5% of girls

As for the prevalence of overweight and obesity, the values are as follows:

- At age 6 years 22% are overweight (20.6% in boys, 23.3% in girls) and 13% obese (14.6% in boys, 12.3% in girls)
- At age 7 years the figure for overweight is 22.7% (20.2% in boys, 25.3% in girls) and for obesity 17% (19.1% and 14.3% in boys and girls respectively)
- At age 8, 23% of the population is overweight (21.2% in boys and 24.5% in girls) and 19% obese (21.2% in boys and 17.4% in girls)
- At age 9, 26% of the population is overweight (25.5% in boys and 25.7% in girls) and 19% obese (22.4% in boys and 15.8% in girls)

At all ages, the prevalence of overweight is higher in girls and the prevalence of obesity is higher in boys.

Socioeconomic status is a determinant of the weight status of the population. 65% of children in families with a high socio-economic status weigh within the normal range; in families with a low socio-economic status, this percentage is 52%.

The PASOS study shows that in the population aged 8 to 11 years, 58% have a normal weight (54.8% of boys and 61.4% of girls).

In the population aged 12 to 16 years, the figures are 62.5% of adolescents and 69.3% of adolescent girls. 25.4% and 15.5% of boys are overweight and obese respectively.

In girls, the prevalence is 24.6% and 11.2% respectively. In the adolescent group, 23.8% and 10.4% of adolescents are overweight and obese respectively, in adolescent girls, the percentages are 21.8% and 6.7%.

Compliance

6 years
total (B-)
boys (B-)
girls (B-)

7 years
total (C+)
boys (C+)
girls (C+)

8 years
total (C+)
boys (C+)
girls (C+)

9 years
total (C+)
boys (C)
girls (C+)

8 to 11 years
total (C+)
boys (C+)
girls (B-)

12 to 16 years
total (B-)
boys (B-)
girls (B)

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