



# Polygon for Physical Activity of School Children

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OPERATIONAL PROGRAM

# Efficient human resources

2014. - 2020.

EMPLOYMENT

SOCIAL INCLUSION

EDUCATION

BETTER ADMINISTRATION



[www.esf.hr](http://www.esf.hr)



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dr. Andrija Štampar (1888. – 1958.)

*„Health is a state of complete physical  
mental and social welfare, and not merely  
the absence of disease “*

*„It is easier to maintain a healthy person  
healthy, than to treat an ill one!“*



## Global Recommendations on Physical Activity for Health

### 5–17 years old



The scientific evidence available for the age group leads to the conclusion that physical activity provides fundamental health benefits for children and youth. Appropriate levels of physical activity

- healthy musculoskeletal tissues (i.e. bones, muscles, ligaments, tendons)
- healthy cardiovascular system (i.e. heart and lungs)
- neuromuscular awareness (i.e. coordination and balance)
- It also facilitates maintenance of a healthy body weight

Moreover, physical activity has been associated with improved mental health in people by: improving their control over symptoms of depression and anxiety; assisting in social development by providing opportunities for social interaction and building self-confidence, social interaction and

#### Recommendations:

For children and young people, physical activity should include play, games, sports, transportation, chores, recreation, physical education, or planned exercise, in the context of family, school, and community activities. The recommendations to improve cardiorespiratory and muscular fitness, bone health, and cardiovascular and metabolic health biomarkers are:

1. Children and youth aged 5-17 should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily.
2. Amounts of physical activity greater than 60 minutes provide additional health benefits.
3. Most of the daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week.

These recommendations are relevant to all health conditions. However, specific medical conditions indicate to the contrary. Considerations of ethnicity, or income level. Whenever possible, children should meet these recommendations. However, health care provider to understand the types and amounts of physical activity for them considering their disability.

If children are currently doing no physical activity, the recommended levels will bring more benefits than starting with small amounts of physical activity. Start with small amounts of physical activity and increase frequency and intensity over time.

The concept of accumulation refers to meeting the recommended levels by performing activities in multiple shorter bouts (e.g. 10-15 minutes bouts of 30 minutes), then adding together the time spent during each of these bouts.

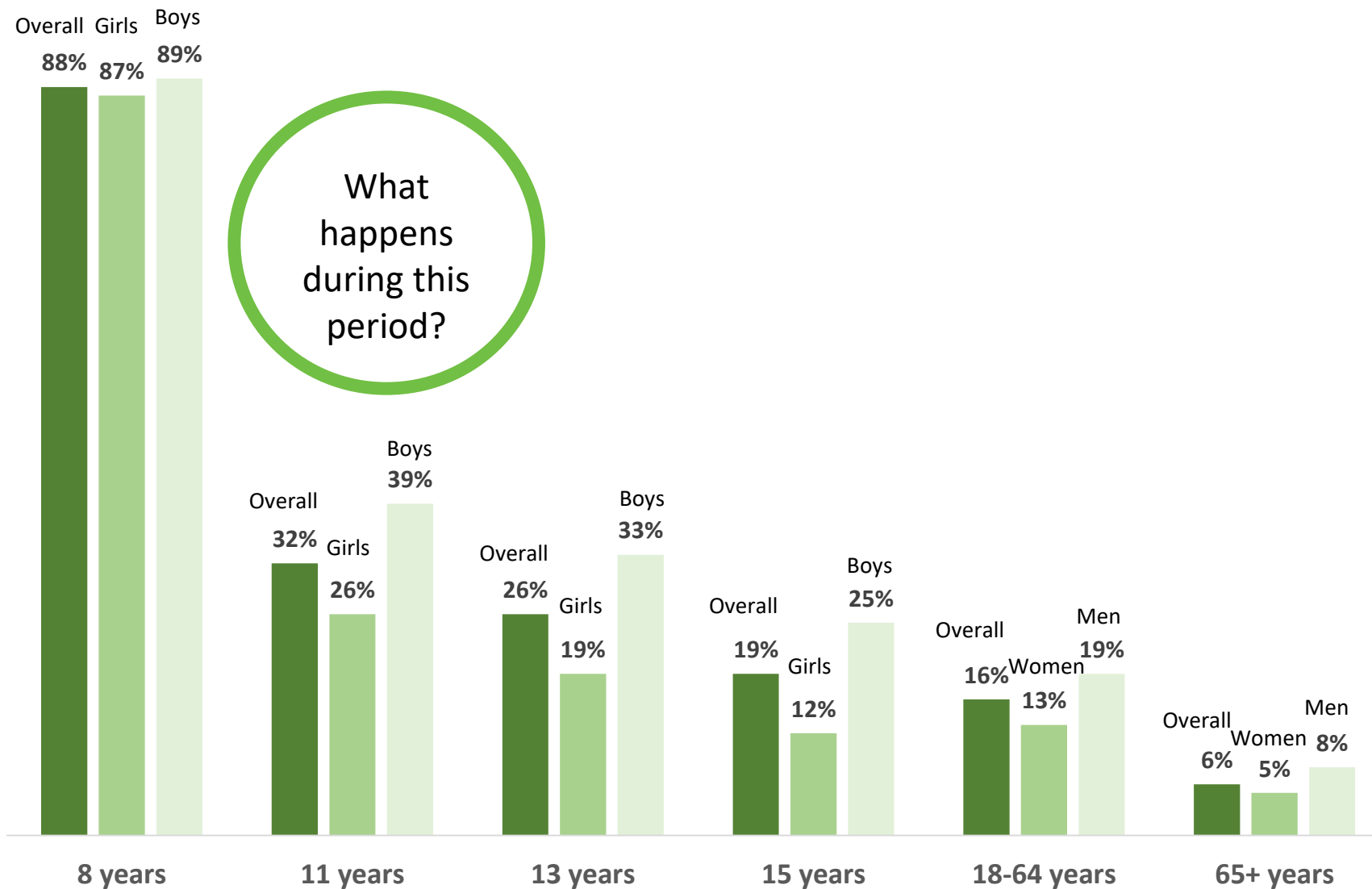
For further information see: <http://www.who.int/dietphysicalactivity/pa/en/index.html> or contact WHO on [dietandhealth@who.int](mailto:dietandhealth@who.int)

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# Prevalence of Sufficient Physical Activity Levels

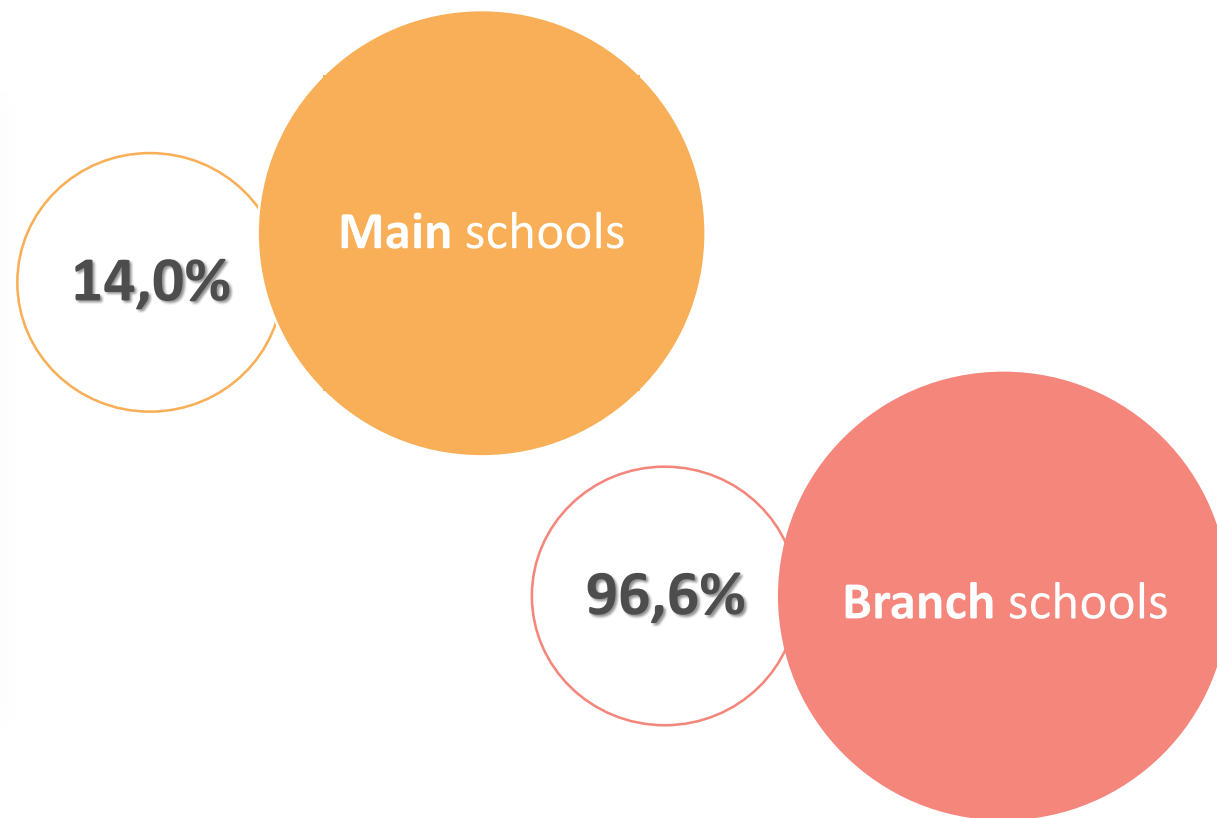


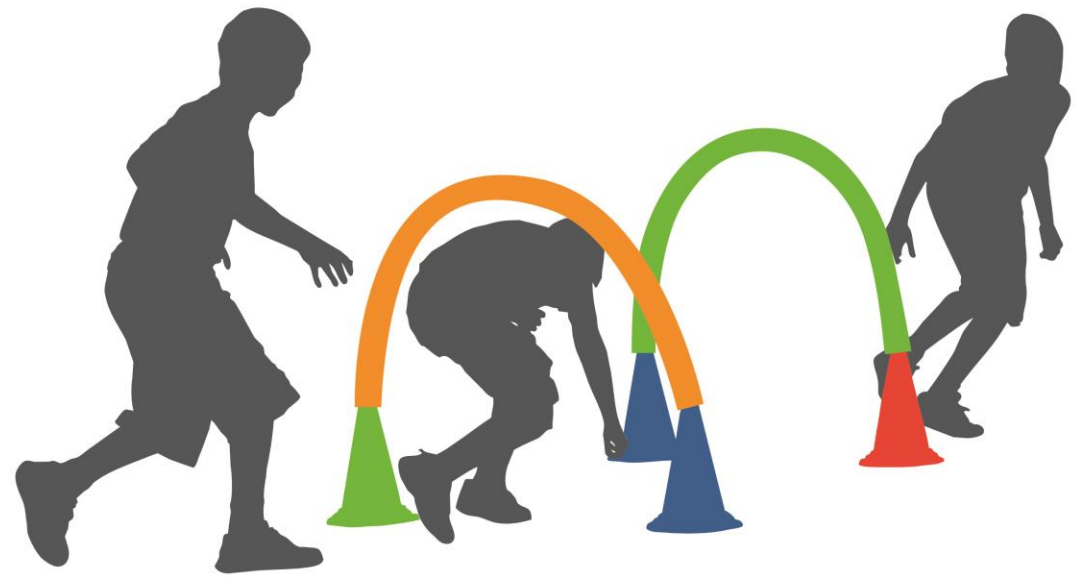
„Students who participated in Physical Education one to four days per week were 1.44 times more likely to achieve the highest level of MVPA, compared with those who did not take Physical Education (*Gordon-Larsen et al., 2000*)”

„Physical Education displayed a positive contribution to increasing daily moderate to vigorous physical activity and decreasing daily sedentary time among youth. Active participation in Physical Education classes increases the chance to be more active and less sedentary beyond Physical Education among youth.” (*Chen, 2014*)

„Attending Physical Education classes is associated with a higher level of physical activity and a lower level of sedentary behavior in and out of school during weekdays in children from countries at various levels of development.” (*Silva, 2018*)

## Elementary schools without school gyms, Croatia in 2014/2015





# Polygon for Physical Activity of School Children







## OVERALL GOAL

To provide an opportunity for regular physical activity to children attending schools without physical education facilities.

## SPECIFIC GOALS

To enable implementation of Physical Education classes in schools without sports gyms

To provide equipment for physical activity to schools without sports gyms

To enable children to be physically active in schools in an innovative way



**Polygon for Physical Activity**  
of School Children



**ORGANIZERS:**

**MINISTRY OF HEALTH**

**CROATIAN INSTITUTE OF PUBLIC  
HEALTH**

**IMPLEMENTATORS:**

**CROATIAN INSTITUTE OF PUBLIC  
HEALTH**

**STAKEHOLDERS:**

MINISTRY OF SCIENCE AND EDUCATION

CROATIAN EDUCATION AND TEACHER TRAINING AGENCY

MEDICAL SCHOOL IN ZAGREB

KYNESIOLOGY FACULTY IN ZAGREB

COUNTY PUBLIC HEALTH INSTITUTES

ELEMENTARY SCHOOLS

**TARGET POPULATION**

School-aged children and teachers

# METHODS

Identification of school without school gyms

- collaboration with educational sector

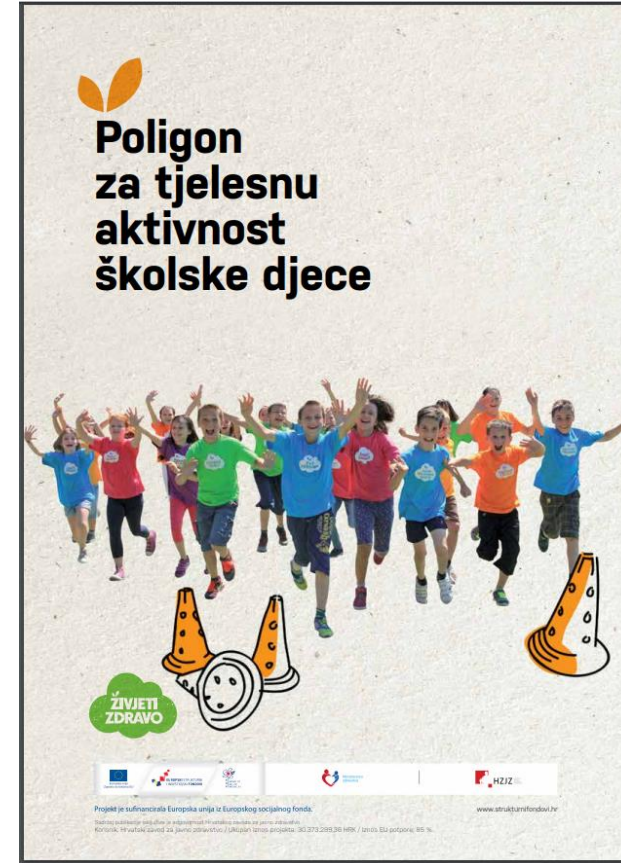
Polygon equipment procurement

- Equipment set - 25 moveable elements + Manual

Education of school teams

- Three-member teams: teachers and kinesiologists

Implementation, Evaluation, Supervision and Support





Polygon for Physical Activity  
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# MAIN OUTCOMES

Students will be able to regularly engage in physical activity in schools

Students will be able to participate in Physical Education class in school regardless of weather conditions

Teachers will be able to implement a full curriculum of Physical Education course

Teachers will be able to rise quality of the Physical Education class implementation

By using multifunctional sets of kinesiological aids in a creative and innovative way





Polygon for Physical Activity  
of School Children

# EVALUATION

PILOT  
PROJECT  
2012

PROCESS  
EVALUATION  
2017

EFFECTIVENESS  
AND  
EFFICIENCY  
EVALUATION  
...



# SUSTAINABILITY



# European Union

European  
Social Fund

## BARRIERS

Teachers' motivation  
Control of use  
Insufficient funding sources

## ENABLERS

Multiple stakeholders  
Innovative approach  
Easy implementation  
Minor financial requirements  
Government support





## LESSONS LEARNED

- The Polygon project is likely to help school-aged children in reaching the recommended level of physical activity by minimizing the problem of implementing full-time compulsory PE in primary schools without sports facilities

The Polygon equipment set can be used in teaching PE both indoors (classroom, lobby, hallway or another area) and outdoors



Polygon for Physical Activity  
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## LINKS TO ONLINE SOURCES

<https://www.hzjz.hr/wp-content/uploads/2016/10/POLIGON-ZA-TJELESNU-AKTIVNOST-%C5%A0KOLSKE-DJECE.pdf>

<https://www.hzjz.hr/sluzba-promicanje-zdravlja/poligon-za-tjelesnu-aktivnost-skolske-djece/>

[https://dnevnik.hr/showbuzz/mladi\\_i\\_neizbjezni/kinezioloski-fakultet-iz-zagreba-predstavio-suradnju-s-udrugom-ljubav-na-djelu---335446.html](https://dnevnik.hr/showbuzz/mladi_i_neizbjezni/kinezioloski-fakultet-iz-zagreba-predstavio-suradnju-s-udrugom-ljubav-na-djelu---335446.html)

<https://www.vecernji.hr/showbiz/poznati-sportasi-odusevili-i-darivali-oboljele-malisane-910914>



