

Objective #3

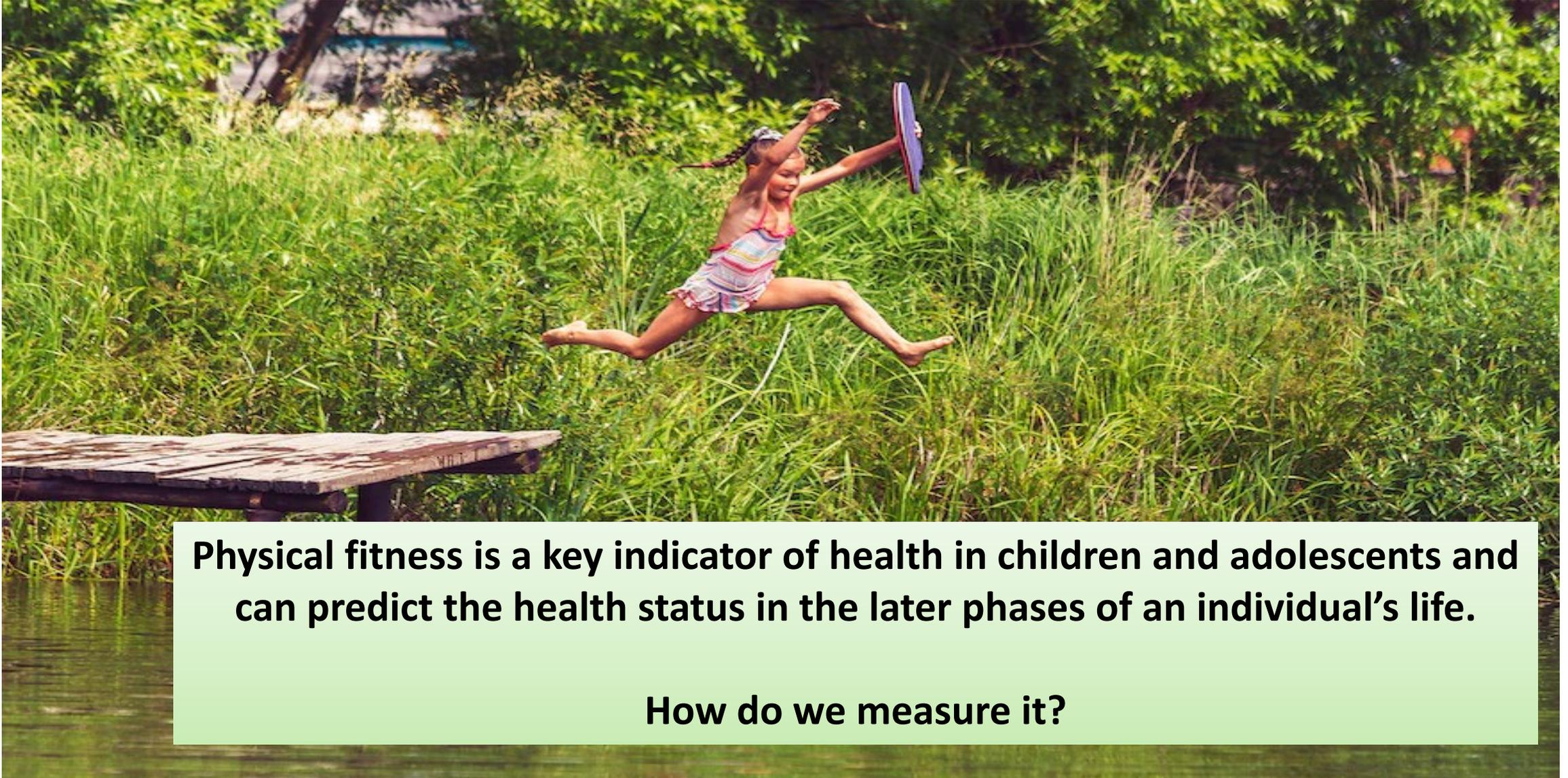
Discuss practical approaches to physical fitness testing and training for children and adolescents.

Physical fitness testing for children and adolescents

Health promotion strategies to promote physical activity

Practical examples from Finland





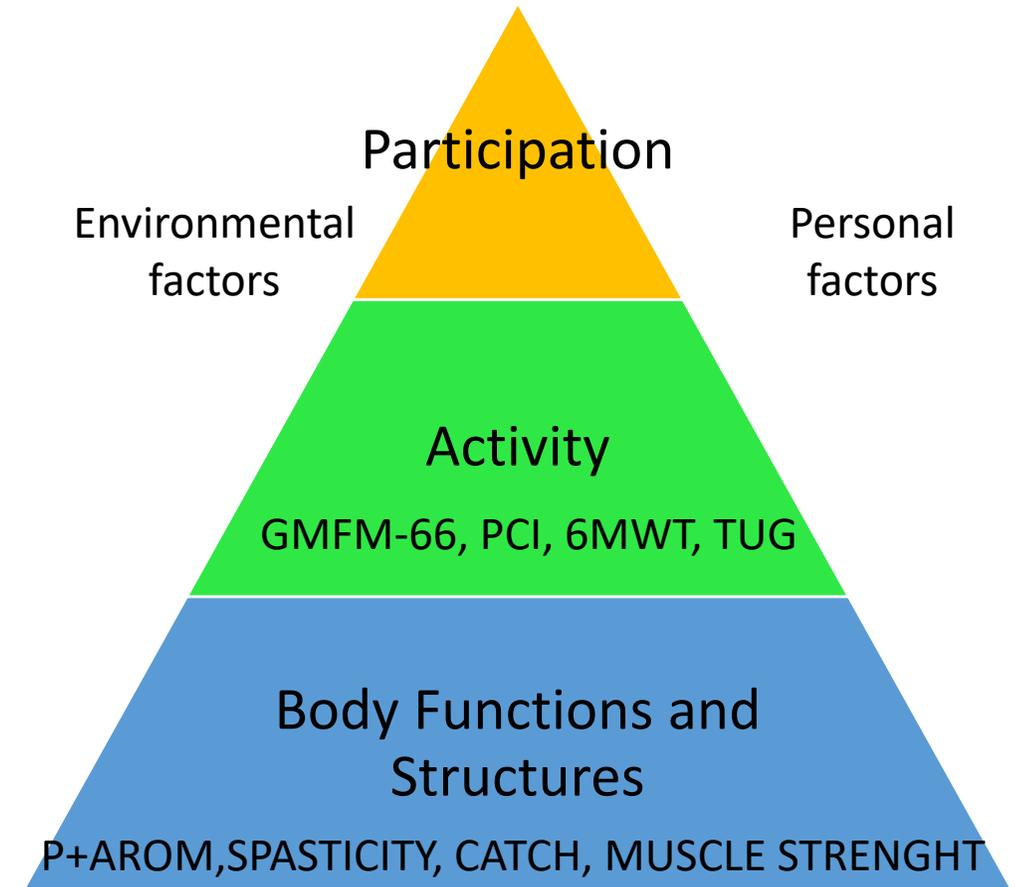
Physical fitness is a key indicator of health in children and adolescents and can predict the health status in the later phases of an individual's life.

How do we measure it?

Fitness testing in PT in Finland⁽¹⁾

Recommendation on the assessment of functional ability of CP (2)

Age (years)	Acronym	Organisation / Test Battery	Region / Year*
3-5	PREFIT*	The PREFIT Battery for assessing FITNESS in PRESchool children (Ortega et al., 2015)	Europe 2015
5-17	FITNESSGRAM	The Cooper Institute	USA 1982
5-17	NYPFP	National Youth Physical Program. The United States Marines Youth Foundation	USA 1967
5-18	HRFT	Health-Related Fitness Test, American Association for Health, Physical Education, and Recreation (AAHPER)	USA 1980
5-18	Physical Best	American Association for Health, Physical Education, and Recreation (AAHPER)	USA 1988
6-12	NZFT	New Zealand Fitness Test. Rusell/Department of Education	New Zealand
6-17	AAUTB	Amateur Athletic Union Test Battery. Chrysler Foundation / Amateur Athletic Union	USA 1988
6-17	PCPF	President's Challenge: Physical Fitness. The President's Council on Physical Fitness and Sports/American Association for Health, Physical Education, and Recreation (AAHPER)	USA 1986
6-17	PFAAT*	Physical Fitness and Athletic Ability Test (Japan) (Shingo and Takeo, 2002)	Japan 1964
6-17	YMCA YFT	YMCA Youth Fitness Test	USA 1989
6-18	ALPHA-FIT*	The ALPHA (Assessing Levels of Physical Activity and Fitness) Project (ALPHA, 2009)	Europe 2009
6-18	EUROFIT	Council of Europe Committee for the Development of Sport	Europe 1983



Physical fitness testing in Finland by Move!

- Move! is a national follow-up and feedback system utilised to measure physical function of fifth and eighth grade students. (3,4)
- It also provides information for the extensive health examinations which are carried out on fifth and eighth grades by school nurses and medical doctors. (3)
- The purpose of the Move! system particularly is to assist a student and his/her parents to understand the relationship between physical function, health, well-being and studying. (3,4)
- The defined daily physical demands were recognized as need to travel the way to school by utilising his/her own muscles (walking or cycling minimum of five kilometres), to lift and carry his/her own school and sport equipment, to prevent the effects of sitting posture lifestyle by maintaining the natural range of motion particularly in the upper body and hip area (3).



Test pattern includes:

20 meter shuttle run test

standing quintuple jump test

curl up test, push-up test

squat test

extension of lumbar spine in legs extended sitting posture

shoulder stretch test

throw and catch test.

If the student is unable to complete the Move! measurement even as applied, a completely alternative measurement can be chosen for him.

For example, a student who moves with a manual wheelchair, instead of a speedless 5-jump, can perform, for example, a forward-backward roll as an alternative measurement.

The manual prepared for the applied measurement options is used.

Move! –process (4)



All teachers educated,
manual and videos
available

Teachers tests
pupils by
Move!

Teacher gives
Individual
feedback based
on results

the results are
recorded in the
national system



Teachers uses the
results in teaching
planning

The health nurse
will refer to a
physiotherapist if
necessary

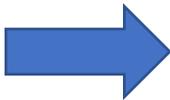
the health nurse
discusses the results with
the child and guardian as
part of a comprehensive
health check

the information is
transferred to the
health care provider
with the guardian's
permission

When pupils get under 9 points (19max)

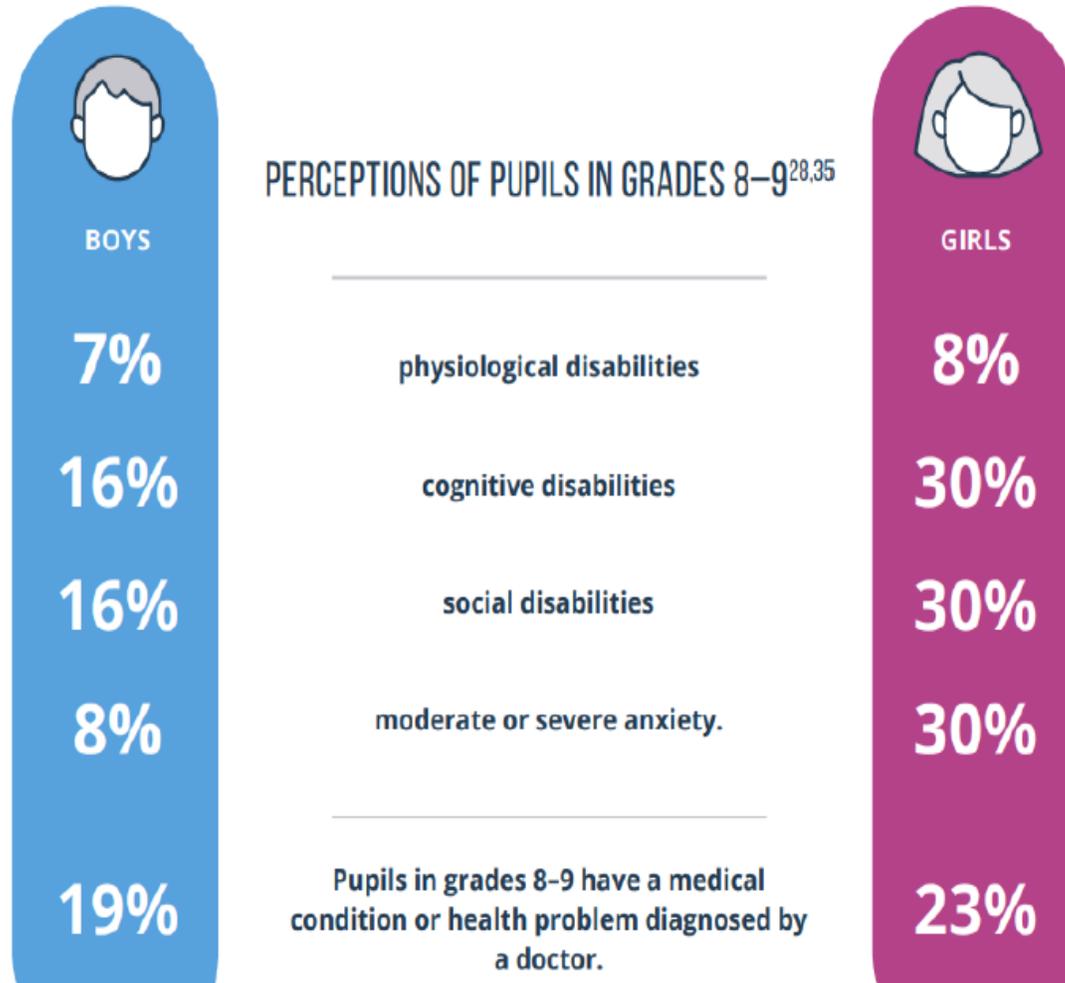


group and school-
specific results are
taken into account
in the school
community



the student gets
ideas for evaluating
and promoting her
own performance

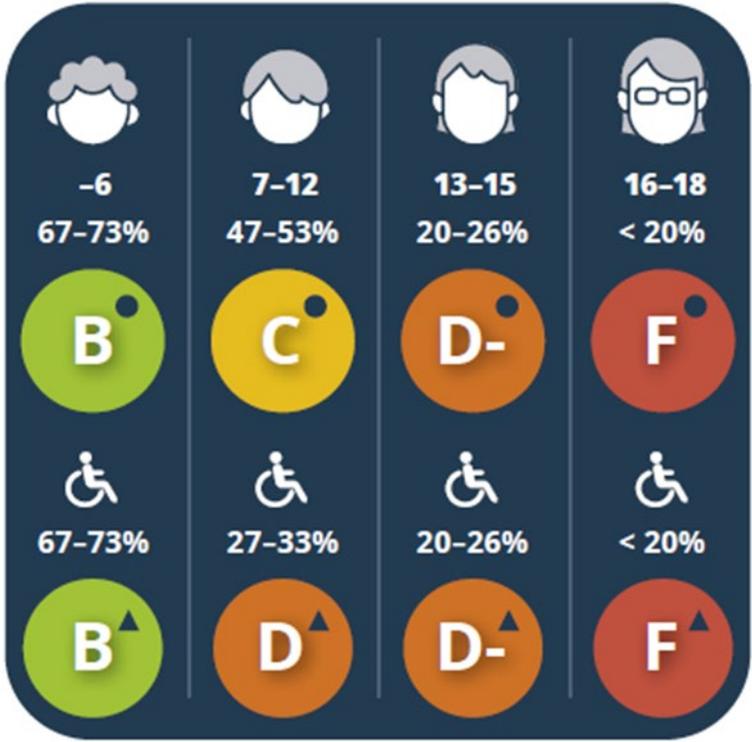
WHAT DO WE KNOW ABOUT FINNISH CHILDREN? (5)



On average 12% of Finnish 10-15-year-olds have functional difficulties that make their everyday lives more difficult.

(SHP 2018,2021; LIITU2018)

OVERALL PHYSICAL ACTIVITY (5)



Overall PA

engage in at least 60 min of moderate-to-vigorous PA at least 4 days a week

Organised PA or sports

at least once a week

Unorganised PA

at least four days per week

Active transportation

among those who live less than 5 km from school



78%



61%

49%

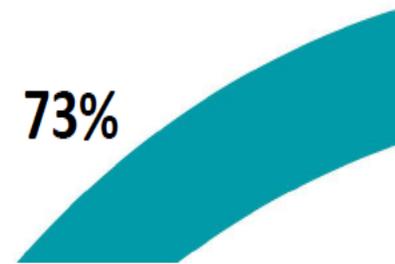
40%

42%

34%

76%

73%



At least 60 MINUTES of moderate to vigorous physical activity A DAY

Recommendation on physical activity for children and adolescents aged 7-17 years



STAY ENERGETIC
Take breaks during prolonged sedentary periods.

IMPROVE ENDURANCE
Increase your heart rate and frequency of breathing.
3 times a week

STRENGTHEN YOUR MUSCLES AND BONES
Remember flexibility, balance and agility.
3 times a week

INCREASE WELLNESS
Move whenever you can. Supplement your sports activities with everyday physical activity.

RECOVER FROM THE DAY
Get enough sleep. Give time for your brain to structure thoughts and form new ones.

PHYSICAL THERAPY (PT) SERVICES IN SCHOOLS

School-based physical therapists (PTs) are **movement experts** who have the skills to be integral members of school teams that promote participation in educational activities including access to the educational environment, prevention of impairment, and promotion of the health and well-being of students.



SCHOOL-BASED PTs SUPPORT THE HEALTH AND WELL-BEING OF ALL SCHOOL CHILDREN

- Physical activity is vital for children's physical and mental health and well-being, and their learning
- Implementing health promotion activities can prevent obesity and chronic health conditions, and support mental health, cognitive function and academic performance

SCHOOL-BASED PTs ENABLE EARLY IDENTIFICATION AND INTERVENTION FOR CHILDREN WITH HEALTH CONDITIONS AND PHYSICAL IMPAIRMENTS

- Identify health conditions and physical impairments that affect function and access to educational settings, including playgrounds and gymnasiums
- Ensure inclusion of students in all aspects of school life (e.g. access to environment, resources)
- Support independence of students in physical care routines, school routines (e.g. training of staff in transfer training), and address equipment needs (e.g. walkers, gait trainers, mechanical lifts)



SCHOOL-BASED PTs ARE INTEGRAL MEMBERS OF GENERAL EDUCATION SCHOOL TEAMS WITH A CONSTANT PRESENCE IN SCHOOLS, TO ENSURE CHILDREN CAN ACCESS EDUCATIONAL OPPORTUNITIES

- Support school teams in decision making
- Use a variety of collaborative practices and a diversity of tiered intervention strategies as part of workload or whole school approach service delivery models
 - consultative services
 - small-group activities
 - individual direct services

ADDITIONAL RESOURCES FOR PTs:

- [The International Organisation of Physiotherapists in Paediatrics](#)
- [APTA Pediatric Physical Therapy](#)
- [Role of the School Based Physical Therapist](#)
- [APTA Pediatrics Fact Sheets](#)

Health promotion strategies to promote physical activity (8,9,10)

Awareness of various services that increase physical activity offered in the community is important. Directing children and families to these services is part of the physiotherapy (9)

Sports Stars is effective for improving sports-specific participation and physical competence for children with CP. Following participation in Sports Stars, participants demonstrated clinically significant improvements on self-identified sports-focused participation and activity level goals (10)



PAPAI –programme in Finland (11,12)

PAPAI-programme (Personal Adapted Physical Activity Instructor) on physical activity (PA) and sport participation in children and adolescents with disabilities. All participants in programme have their own PAPAI who helped a participant to find suitable sport hobbies, made a hobby try-out plan and acted as a support person during the try-outs. The PAPAI-programme was organized by Finnish Sports Association of Persons with Disabilities (VAU).

PAPAI-programme have increased the knowledge about PA and suitable sport options.

Collaboration between instructors and therapists have been seen essential.



[\(310\) Spark your child's physical activities PAPAI programme – for families - YouTube](#)

OPEN ENDED QUESTION:

How can you promote physical activity of children with disabilities? How can you support them to be more active in their daily lives?

References

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