Welcome to our 20th issue! The Preschooler Focus first published an issue about health-related fitness in 2011. Health-related fitness is a popular topic, so we are providing our readers with some more information on this topic and new research. When we talk about fitness in preschoolers, we don't mean “hitting the gym” or running a 5k. We're more interested in health-related fitness. These are characteristics that affect someone's health. We can use special tests to measure fitness to see how well the heart and lungs and muscles all work together. Studying fitness in preschoolers helps researchers understand how healthy they are. We can also check if fitness is changing in the expected way as kids grow.

Physical activity helps kids develop fitness

Fit kids are healthy kids, so how do we help kids improve their fitness? Several research studies have added more physical activity to preschool or kindergarten classes to see. For example, a preschool program in Switzerland added four, 45-minute physical education classes per week for 10 months. The kids who did the program improved more on a running test and obstacle course than kids not in the program.

Four hundred preschoolers participated in our Health Outcomes and Physical activity in Preschoolers (HOPP) Study. Each year, we measured fitness with a bike sprint test and a running test on a treadmill. As the kids got older, they ran longer and performed better on the bike test. When we looked at how kids scored relative to others over time, some changed a little and some kids changed a lot. It's important that all preschoolers, no matter how fast or strong they are, be encouraged to be active every day.
How do you measure fitness in preschoolers?

There are lots of fitness tests that preschoolers can do. Some of the tests are the same as adults, but most are modified for young kids. We measure different types of fitness with different tests.

**Aerobic fitness**, or endurance, tests help us measure how long kids can exercise before becoming exhausted. For young kids, this is often done with running tests.

- **Treadmill test**: We time how long preschoolers can run on a treadmill before becoming exhausted. This test is done with special safety considerations and it helps if there is lots of cheering and positivity!
- **Shuttle Run or Beep Test**: Kids run back and forth across a room, usually 10 or 20 metres. Each lap is to be completed in less time until the child can’t keep up with the beeps. An adult sometimes runs with preschoolers to help them pace themselves.

**Muscle Power** tests measure how much force your muscles can make in a short period of time. They let us learn about how well the muscles work together. Young kids usually enjoy doing these tests.

- **Bike test**: When kids pedal on an exercise bike, we measure how hard they pedal when we make the bike feel like it’s going uphill. If a preschooler has not learned to pedal a bike yet, this test can be challenging.
- **Sprint**: We can see how fast preschoolers can run a short distance, like 20m. This is easy and can be done in a lab, at school or at home.
- **Jump tests**: We can measure how far or how high preschoolers can jump.

How to help your child develop fitness:

- Be an active role model! Kids learn best by example.
- Go outside! With more space, kids have lots of room to move.
- Encourage your child to try lots of different sports and games.
- When playing, don’t be afraid to encourage your child to run their fastest, jump their furthest or pedal their fastest.
- The bottom line is that whether you’re 2 or a 102 our body gets healthier when we engage in more intense physical activity. The kind that makes us sweaty and out of breath.

The Child Health & Exercise Medicine Program at McMaster University is working to advance child health through excellence in research. To learn about our current studies, visit us online at fhs.mcmaster.ca/chemp

References

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