

Size and fitness levels of NHL players have improved, study shows

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Imagine taking a picture of your favourite sports team every year for a generation. Looking back over a quarter of century, the changes you'd see are significant.

Researchers in the University of Alberta Faculty of Physical Education and Recreation looked at an NHL team over a 26-year cycle and discovered players have become bigger and fitter.

The research team studied 703 players from a Canadian-based NHL team from 1979 to 2005. The physiological profile derived from their research shows that over the 26 seasons, defencemen became taller and heavier as body mass increased; forwards got younger and had higher peak aerobic power outputs for cardio-respiratory endurance, while goalies were shorter and more flexible and had lower peak aerobic power outputs. All players combined (defence, forwards and goaltenders) increased body mass, height and anaerobic power over the 26 years.

The physiological changes the research uncovered aren't surprising, says Art Quinney, lead researcher and a professor emeritus of exercise physiology at the U of A.

"It's common in many sports that have a power component that the larger, stronger, faster players develop greater power and they're more successful based on performance. The game has changed over the years and those who are bigger and have additional strength and power are

more successful. With changes in rules, however, smaller and faster players also have a place in the NHL."

Researchers also looked at players' fitness levels in successful and non-successful years—defined as those in which the team did or did not win a Stanley Cup or were in the playoffs—and found that fitness levels were not related to team performance.

"One of the things that was clear to me was that fitness is very important, but highly skilled players coming together at particular times of the year is far more important," said Quinney. "There are many factors at play when it comes to the success of a team that aren't measured in a fitness appraisal."

The research was published recently in the journal *Applied Physiology, Nutrition and Metabolism*.

Source: University of Alberta

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