

First Canadian drum corps project shows health benefits for teens
Preliminary research results show BMI index improvement in 90 percent of corps members

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Ontario— A new study of adolescents by researchers from Wilfrid Laurier University and the University of Waterloo is demonstrating the health benefits of participating in musical sport.

The research initiative is in partnership with an Ontario Drum and Bugle Corps, which competed in the Division III category at the 2005 Drum Corps International World Championships.

The project is the first Canadian study to research the health effects of drum corps involvement, which combines complex musical performance with vigorous physical activity.

“The preliminary results are very impressive,” said Paula Fletcher, a kinesiology professor at Laurier and the study’s principal investigator. “The kids in the drum corps have shown significant improvements in several areas, including noticeable reductions in body fat.”

The study began this past June, as the corps prepared for a six-week tour of 12 North American cities. Before the tour left, four Laurier undergraduate students gathered data from the participants on body composition, fitness, cardio-respiratory function, psychosocial well-being and subjective health. The participants were tested again shortly after their final performance. Three months after the initial assessment, 90 percent of the corps members showed improvements in their body mass index (BMI), which is a measure of obesity.

The preliminary results indicate an average reduction of about five pounds in weight, as well as lower heart rates with exertion and better fitness levels.

“The knowledge that we gained from this study will help us to continue improving our program to make drum corps an all around positive experience for kids,” says Deb Schertzer, the corps interim director.

Corps members begin training for the new season in September. In addition to participating in parades across Ontario, the corps practice about four hours a week in schools, with an intensive two-day “camp” every month. By spring, the corps prepare for the tour season with full-day practices on weekends. While touring in July and August, corps members are outdoors practicing or performing for up to 12 hours a day.

“In light of the high rate of obesity and low fitness levels of Canadian youth, drum corps might be an interesting alternative to increasing physical activity among kids who are not attracted to conventional sports,” said John Hirdes, a UW professor in the department of health studies and gerontology and a member of the research team.

Hirdes became involved with drum corps through his son Daniel, 13, who plays third bass in the

drum line. After reading a 10-year-old U.S. study of a Division I corps (an older division class) that found the physical demands on a tenor drummer during a performance are comparable to those experienced by marathon runners, he wondered if similar health effects could be found in younger individuals.

A typical Division III corps may have up to 79 members in four main sections: horn line, drum line, pit (stationary percussion section) and colour guard. In addition to performing a musical ensemble, members of all sections except the pit march in intricate patterns intended to provide a visual representation of the music.

The average age of the members is 14.8 years and about 50 percent are under 15, making it one of the youngest corps at the world championships.

“We worked very hard all year to put in our best performances at the world championships,” said Adam Billings, a drum major entering his final season who was instrumental in helping the researchers collect data. Members are required to “age out” at 21.

The study involves collaborations with Laurier researchers Mark Babcock, Dawn Dalby and Margaret Schneider from the department of kinesiology and physical education, as well as Kevin Swinden from the faculty of music. The multidisciplinary team has expertise in exercise physiology, health behaviour, epidemiology, recreation, music and social sciences.

After initially being funded by interRAI, an international research group, the research team plans to pursue additional funding to conduct more detailed physiological testing and to develop programs to sustain and improve fitness levels among corps members year round.