

## Health and performance benefits of a pulse-based diet for soccer players during regular season play

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SPG Contributions	Duration/Timeline of Project (Year to Year)	Co-funders	Total Project Cost
\$30,607.00	December 2013 – September 2015	Western Grains Research Foundation	\$61,462.00

### Project Description

Foods containing pulses (i.e. lentils, peas, beans, chickpeas) are digested slowly and result in a slow, sustained rise in blood sugar levels, which has the benefit of providing muscle with a prolonged source of energy. Pulse-based foods therefore have potential to improve endurance exercise performance. Pulses are also high in fibre and other “bioactive” ingredients which might improve blood cholesterol levels and therefore promote heart health. Objectives: The purpose of our research was to assess the effect of a one-month diet involving increased pulse food consumption (i.e. two pulse-based meals per day) on performance and health of soccer players during their playing season. In addition to the two pulse-based meals per day, players were given a pulse-based sport nutrition concept bar (the “Megabite”) before their soccer games. Players were assessed during the games by tracking the amount of distance they were able to run using a global positioning system. Results during the pulse-based diet were compared to soccer games played during a month when players were on their regular diet and given a commercially available non-pulse sport nutrition bar before games. Blood was also collected before and after each diet phase for assessment of cholesterol levels.

### Outcome

Players were able to run 7% greater distance for a given time played during games while they were on the pulse-based diet. The pulse-based diet also lowered total cholesterol to high density lipoprotein level (a marker of heart disease risk) by 25%.

Conclusions: A pulse-based diet is a healthy strategy for improving performance in soccer players.

### Research Objective

#### OBJECTIVE 1

To examine performance effects of a pulse-based diet for soccer players compared to their regular diet.

#### OBJECTIVE 2

To determine the health benefits of a pulse-based diet in soccer players.