

Article

Health Fact Sheet

Aerobic fitness of Canadians, 2009 to 2011

Health Statistics Division

September 2012



Statistics
Canada

Statistique
Canada

Canada

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website, www.statcan.gc.ca, email us at infostats@statcan.gc.ca, or telephone us, Monday to Friday from 8:30 a.m. to 4:30 p.m., at the following numbers:

Statistics Canada's National Contact Centre

Toll-free telephone (Canada and United States):

Inquiries line	1-800-263-1136
National telecommunications device for the hearing impaired	1-800-363-7629
Fax line	1-877-287-4369

Local or international calls:

Inquiries line	1-613-951-8116
Fax line	1-613-951-0581

Depository Services Program

Inquiries line	1-800-635-7943
Fax line	1-800-565-7757

To access this product

This product, Catalogue no. 82-625-X, is available free in electronic format. To obtain a single issue, visit our website, www.statcan.gc.ca, and browse by "Key resource" > "Publications."

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under "About us" > "The agency" > "Providing services to Canadians."

Published by authority of the Minister responsible for
Statistics Canada

© Minister of Industry, 2012

All rights reserved. Use of this publication is governed by the
Statistics Canada Open Licence Agreement ([http://www.
statcan.gc.ca/reference/copyright-droit-auteur-eng.htm](http://www.statcan.gc.ca/reference/copyright-droit-auteur-eng.htm)).

Cette publication est aussi disponible en français.

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and goodwill.

Standard symbols

The following symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0 ^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^p	preliminary
^r	revised
x	suppressed to meet the confidentiality requirements of the <i>Statistics Act</i>
^E	use with caution
F	too unreliable to be published
*	significantly different from reference category (p < 0.05)



Aerobic fitness of Canadians, 2009 to 2011

Among Canadians aged 15 to 69, 47% are categorized as having a "Fair" or "Needs improvement" health benefit rating based on their aerobic fitness, with even higher numbers for Canadians aged 40 and over.

The health benefits of physical fitness are widely acknowledged. Higher levels of aerobic fitness are associated with a reduced risk of cardiovascular disease, some types of cancer, osteoporosis, diabetes, obesity, high blood pressure, depression, stress and anxiety.^{1, 2} Aerobic fitness, or cardiorespiratory fitness, refers to endurance or the ability to sustain physical activity. It includes the ability to take in oxygen during prolonged physical activity, as well as the body's ability to transport oxygen to the muscles.

The Canadian Health Measures Survey (CHMS) measured aerobic fitness using the modified Canadian Aerobic Fitness Test (mCAFT).³ The results of the mCAFT are used to determine a health benefit rating, which indicates the level of health benefit or risk associated with an individual's aerobic fitness. The ratings range from "Excellent" (optimal health benefits) to "Needs improvement" (considerable health risks).

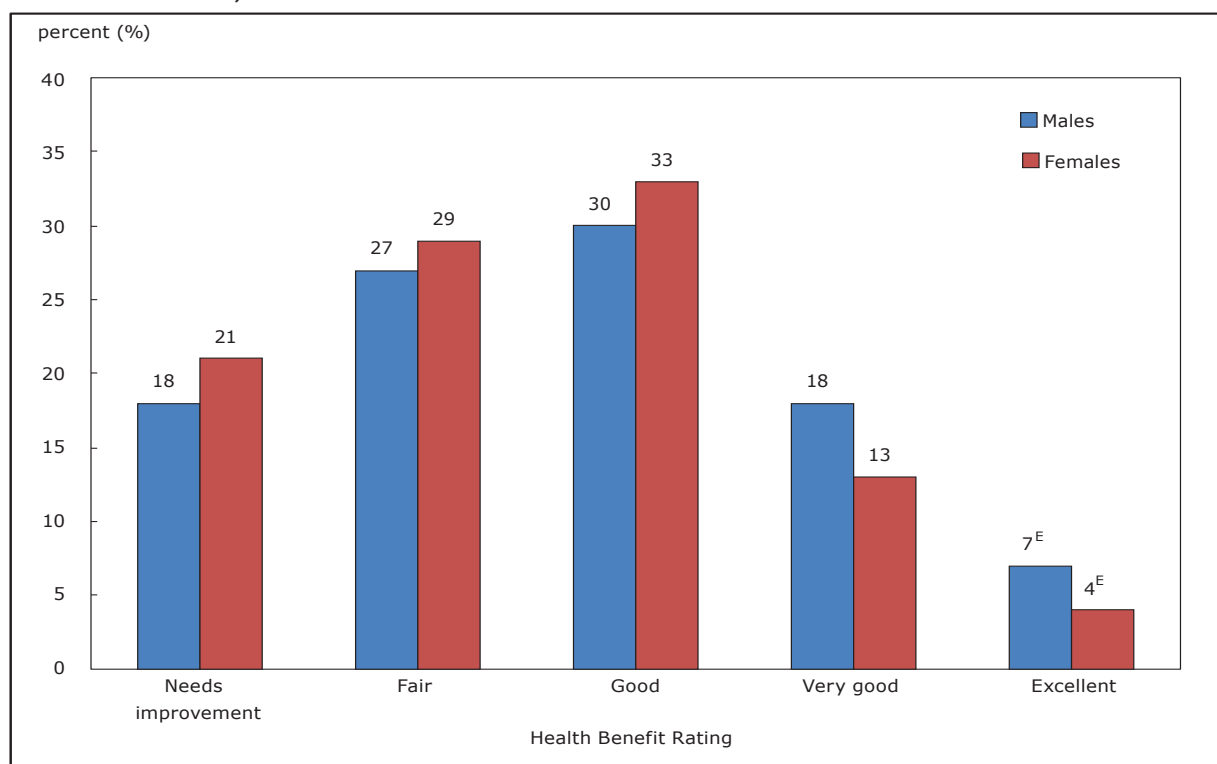
Health benefit ratings

In Canada, 45% of males and 50% of females aged 15 to 69 had either a "Needs improvement" or a "Fair" health benefit rating. Overall, only 25% of males and 17% of females were categorized as having "Very good" or "Excellent" health benefit ratings. The remainder (30% and 33%, for males and females, respectively) had a health benefit rating of "Good" (Chart 1). No significant differences between sexes were found for any of the categories.



Canadian Health Measures Survey

Chart 1 Distribution of the household population aged 15 to 69, by health benefit rating† and sex, Canada, 2009 to 2011



^E Use with caution (data with a coefficient of variation (CV) from 16.6% to 33.3%)

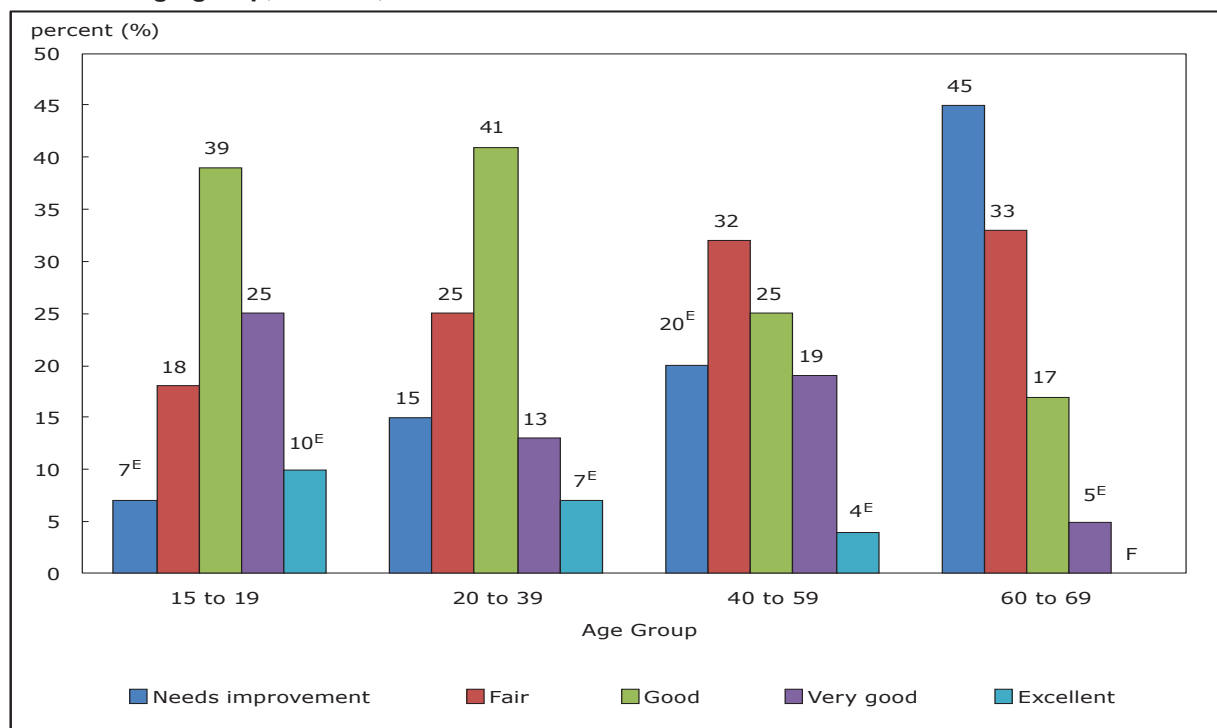
† Based on results from the modified Canadian Aerobic Fitness Test ³

Source: Canadian Health Measures Survey, 2009 to 2011. The CHMS collects health information on the Canadian household population aged 3 to 79.

Older adults tend to have lower health benefit ratings than younger adults, with 52% of 40 to 59 year olds and 78% of 60 to 69 year olds having a "Needs improvement" or "Fair" rating compared to 25% among 15 to 19 year olds and 40% among 20 to 39 year olds. Only 48% of 40 to 59 year olds and 22% of 60 to 69 year olds had health benefit ratings of "Good", "Very good" or "Excellent", compared with 74% of 15 to 19 year olds and 61% of 20 to 39 year olds (Chart 2). This age-related decline in aerobic fitness is a well-known phenomenon.^{4, 5}



Chart 2 Distribution of the household population aged 15 to 69, by health benefit rating[†] and age group, Canada, 2009 to 2011



^E Use with caution (data with a coefficient of variation (CV) from 16.6% to 33.3%)

^F Too unreliable to be published (data with a coefficient of variation (CV) greater than 33.3%; suppressed due to extreme sampling variability)

[†] Based on results from the modified Canadian Aerobic Fitness Test³

Source: Canadian Health Measures Survey, 2009 to 2011. The CHMS collects health information on the Canadian household population aged 3 to 79.

About aerobic fitness

Aerobic fitness is a measure of the combined efficiency of the lungs, heart, bloodstream and exercising muscles in getting the oxygen to muscles and putting them to work. A larger aerobic capacity increases the body's efficiency to perform daily activities,³ and reduces the risk of several chronic diseases.² Improvements in aerobic fitness are achieved through regular participation in moderate-to-vigorous physical activity. The CHMS measured the aerobic fitness of Canadians using the modified Canadian Aerobic Fitness Test,³ which consists of one or more sessions of three minutes of stepping at predetermined speeds based on age and sex.

References

1. Gilmour H. Physically active Canadians. *Health Reports*. 2007;18(3):45-65.
2. Warburton D, Charlesworth S, Ivey A, Nettlefold L, Bredin S. A systematic review of the evidence for Canada's Physical Activity Guidelines for Adults. *International Journal of Behavioral Nutrition and Physical Activity*. 2010;7:39.
3. Canadian Society for Exercise Physiology. *The Canadian Physical Activity, Fitness, and Lifestyle Approach (CPAFLA)*. Third ed. Ottawa, ON: Canadian Society for Exercise Physiology; 2003.



Canadian Health Measures Survey

4. Stephens T, Craig C, Ferris B. Adult physical fitness and hypertension in Canada: findings from the Canada Fitness Survey II. *Canadian Journal of Public Health*. 1986;77:291-5.
5. Carnethon M, Gulati MR, Greenland P. Prevalence and cardiovascular disease correlates of low cardiorespiratory fitness in adolescents and adults. *Journal of the American Medical Association*. 2005;294(23):2981-8.

For more information on the Canadian Health Measures Survey, please contact Statistics Canada's National Contact Centre (toll-free 1-800-263-1136; 613-951-8116; infostats@statcan.gc.ca).