



Gaps in Public Knowledge of Peripheral Arterial Disease The First Canadian P.A.D. Public Awareness Survey

Executive Summary

Peripheral Arterial Disease and its Impact on Public Health

Peripheral arterial disease (P.A.D.) is one of the most common cardiovascular diseases and is known to affect about 800,000 Canadians. People have P.A.D. when the arteries in their legs become narrowed or clogged with fatty deposits, or *plaque*. The buildup of plaque causes the arteries to harden and narrow, in a process called *atherosclerosis*. When leg arteries are hardened and clogged, blood flow to the legs and feet is reduced.

P.A.D. has major impact on leg function, and the most common symptom of P.A.D. is the exertional leg muscle fatigue, cramping or pain known as “claudication”. Lack of leg blood flow, thus, is associated with disability and a poor quality of life. When P.A.D. is not promptly diagnosed and treated and leg blood flow is severely decreased, it may lead to “critical limb ischemia” and amputation. P.A.D. is also a warning sign that other arteries in the body, including those in the heart and brain, may also be blocked. Thus, it is also associated with a high risk of heart attack, stroke and even death.

New clinical research published in 2007 has documented that P.A.D. continues to be associated with very high rates of adverse outcomes.¹ The REACH registry evaluated cardiovascular outcomes in 68,000 individuals internationally. This registry demonstrated that **one in five patients with P.A.D. will have a heart attack or stroke, be hospitalized or die due to cardiovascular complications within one year**. Patients with P.A.D. had higher one-year death rates than patients who previously had a heart attack or stroke.

Other research has shown that in those with critical limb ischemia (the most severe form of P.A.D.), 30% may suffer an amputation and 20% may die within 6 months.²

How can individuals and the health care community decrease rates of heart attack, stroke, hospitalization, amputation and death, if awareness of P.A.D. and its risk factors is low? Similarly, if the public does not know the impact of P.A.D. on leg function, how can they know that leg symptoms could be a sign of a serious disease? From what sources do individuals at risk for P.A.D. now obtain their relevant health information?

Survey Methodology

The survey instrument and knowledge domains were created by an independent, interdisciplinary academic committee, with expertise in survey methodology, from the non-profit P.A.D. Coalition. The telephone survey of 501 adults over the age of 50 was conducted from June to July 2006 using a random direct dialing method to reach individual Canadian households.³ Interviews were conducted in English and French and results were weighted by age and gender to reflect Canadian census estimates for 2006.

Key Findings

Public awareness of P.A.D. is dangerously low. Canadians are not informed of one of the most prevalent and dangerous cardiovascular diseases.

- Two out of three adults surveyed are not familiar with P.A.D.
- Public awareness of P.A.D. (36%) is markedly lower than other cardiovascular diseases such as stroke (72%), coronary artery disease (51%) and heart failure (48%) although the risk for P.A.D. is identical or higher than these conditions.

Most Canadians do not know the causes of P.A.D. and thus cannot take steps to avoid it.

Established risk factors for P.A.D. include advancing age, history of smoking, diabetes, hypertension, abnormal blood cholesterol and personal history of heart disease or stroke. The 64% of Canadians surveyed who reported to be aware of P.A.D., actually knew very little about the disease's risk factors.

Thus, "awareness" is not knowledge:

- Many adults who reported that they are aware of P.A.D. do not know that cigarette smoking (42%) and diabetes (49%) can lead to P.A.D.
- About half of those familiar with P.A.D. are unaware that high blood pressure and high blood cholesterol are risk factors for P.A.D.
- More than half of the adults who reported that they are aware of P.A.D. cited obesity and lack of exercise as causes of P.A.D. Yet, obesity and lack of exercise are currently not proven risk factors for P.A.D.

Few Canadians know that having P.A.D. markedly increases one's short-term risk for heart attack, stroke, amputation and death.

Patients with P.A.D. are known to have a two- to six-fold increase in heart-related death and a greater risk of amputation, disability and diminished quality of life than those without P.A.D. Yet, most Canadians are uninformed about P.A.D. devastating consequences.

- Only 21% of "P.A.D. aware" adults surveyed know that P.A.D. is associated with an increased risk of stroke and/or death; only 20% know that P.A.D. is associated with an increased risk of heart attack; and only 12% link P.A.D. with a risk of amputation.
- Only 6.7% knew that P.A.D. could lead to disability or diminished ability to walk.
- Knowledge of potential consequences was lowest in those \geq age 70.

Adults first learn about P.A.D. through media sources, family and friends.

- Respondents who were familiar with P.A.D. primarily learned about the disease from television, friends, family members and magazines.
- Few individuals reported to receive information on P.A.D. from a physician (14%), nurse (2%), or other health care professional (1.7%).
- Only 5% of survey respondents got P.A.D. information online.

Conclusions: P.A.D. is one of the most common cardiovascular diseases with significant morbidity and is short-term mortality. Approximately 800,000 Canadians are affected by P.A.D., and the prevalence of P.A.D. will increase as the population ages and rates of diabetes rise. Despite P.A.D.'s prevalence and seriousness, Canadian adults are poorly informed about P.A.D. and its risk factors, symptoms and consequences.

Health professionals, the media, and government agencies share a responsibility to work together to inform the public about this common cardiovascular disease.

Note: The Peripheral Arterial Disease Coalition (www.P.A.D.coalition.org) is an alliance of leading health organizations, professional societies, and government agencies united to raise public and health professional awareness about lower extremity P.A.D. Established in 2004, the P.A.D. Coalition is

coordinated by the Vascular Disease Foundation (www.vdf.org), a national, non-profit section 501(c)(3) organization.

Through its efforts, the P.A.D. Coalition and its member organizations aim to deliver consistent, evidence-based P.A.D. messages to the public and the health care community. Key messages include:

- Heart attack, stroke, and death can be prevented in people with P.A.D. by effective risk reduction interventions;
- Exertional leg muscle discomfort in high risk individuals should prompt an evaluation for P.A.D.;
- Most amputations are caused by P.A.D. and can be prevented; and
- The name of this common cardiovascular disease is “peripheral arterial disease” or simply “P.A.D.”

The Coalition has developed new tools to help medical practices, hospitals, health plans and health systems educate their patients and clinicians about P.A.D. For more information, visit www.PADcoalition.org.

References

1. Steg PG and the REACH Registry Investigators. One-year cardiovascular event rates in outpatients with atherothrombosis. *JAMA*. 2007;297(11):1197-206.
2. Dormandy JA, Rutherford RB: Management of peripheral arterial disease (P.A.D.): TASC Working Group: TransAtlantic Inter-Society Consensus (TASC). *J Vasc Surg* 31:S1–S296, 2000
3. Lovell, MB, Harris K, Forbes T, Abramson E, Twillman G, Criqui MH, Schroeder P, Mohler ER, Hirsch AT: Peripheral Arterial Disease: Lack of Awareness in Canada. *Canadian Journal of Cardiology*, in press, 2009