

Being social is good for the heart!

Richard Béliveau

Translated from *Le Journal de Montréal*, October 02, 2017

An important study recently showed that the women who were the most socially integrated decreased their risk of developing coronary disease by half.

When we consider the prevention of **chronic diseases**, one generally thinks of the importance of stopping smoking, adopting a diet rich in plant-based foods, regular physical exercise and maintaining a normal body weight.

While these lifestyle habits are well understood to be crucial, we must not ignore the enormous influence of certain psychological factors: several studies have clearly shown that stress, anxiety, depression and the absence of adequate social relations have a negative effect on health and significantly reduce life expectancy.

Amongst these factors, social isolation is increasingly considered as an important risk factor for premature death.

For example, a meta-analysis of 148 studies (308,849 subjects) reported that unsatisfactory social relations were associated with a 50% increase in risk of death, compared to people whose social relations were well developed¹.

Although it is less well known, the effect of social isolation is thus far from negligible and can even be compared to such well-established risk factors as obesity, being sedentary and even smoking.

EFFECT ON THE HEART

It seems that the decreased life expectancy observed for people who are socially isolated is in large part due to an increased risk of cardiovascular disease: several studies have shown that poor social support is associated with an approximate doubling of the risk for cardiovascular events such as heart attacks or strokes. The mechanisms which cause this are poorly understood, but it is thought that the influence of the social network is principally due to two factors:

1. Social relations act as “stress buffers” which diminish the negative impact of diverse events in life (e.g. disease, mourning and divorce). Stress is an important risk factor for cardiovascular disease and the support provided by an adequate social network could thus allow one to better absorb the shocks associated with these hardships and reduce the harmful physiological consequences which result from chronic stress.
2. Studies have also shown that individuals who have a developed social network tend to also be more physically active and to adopt better lifestyle habits, which contributes to the diminished risk of cardiovascular diseases and to improving life expectancy.



DECREASING HEART ATTACKS

A study which recently appeared in *Circulation Research* allows us to better understand the relative contributions of these two types of factors in diminishing the risk of cardiovascular diseases associated with social networking.

By examining the levels of social integration for 76,362 participants in the *Nurses' Health Study*, a team of American researchers found that the women who had the most developed social networks (spouse, number of close friends, regular participation in social or religious activities) had approximately half of the risk for experiencing a coronary event (myocardial infarction, sudden heart death) as had those who were less well integrated socially².

A more powerful analysis has revealed that adoption of better lifestyle habits by the women who were more socially active played an important role in this diminution of risk for cardiovascular events, most notably due to a significant decrease in smoking and an increase in the levels of physical activity. However, these lifestyle habits do not entirely explain the protection offered by the social network, because the researchers observed that women who were socially isolated exhibited elevated levels of inflammatory markers and were at greater risk of fatal coronary events.

It is possible that isolation is perceived by the body as a form of “aggression” and provokes the activation of physiological mechanisms involved in the response to stress, thus creating a pro-inflammatory environment and an increased risk for cardiovascular diseases.

The influence of the social network is thus complex, involving simultaneous interactions between physical factors (lifestyle) and psychological factors. Whatever the mechanisms behind it, it is certain that a dynamic and diversified social network represents a major asset towards enjoying a long and healthy life.

Elsewhere, in all the regions of the world noted for the longevity of their inhabitants (e.g. Okinawa), the social fabric represents an indispensable ingredient for a long life, at the same level as healthy eating and regular physical activity.

- (1) Holt-Lunstad J et al. Social relationships and mortality risk: a meta-analytic review. *PLoS Med* 2010;7:e1000316.
- (2) Chang SC et al. Social integration and reduced risk of coronary heart disease in women: the role of lifestyle behaviors. *Circ. Res.* 2017;120:1927-1937.