

The beneficial effects of animals

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Aside from being associated with a diminished risk of cardiovascular diseases, having an animal companion can also have beneficial effects on the immune system by increasing our exposure to microorganisms.

Several studies have reported that possessing a **companion animal** was associated with several positive effects on cardiovascular health, most notably with an increase in the level of physical activity, a decrease in arterial pressure, improvement in the lipid profile and a better survival rate after a coronary event.

A review of these studies has led the American Heart Association to conclude that having a companion animal, particularly a dog, represents a reasonable approach for diminishing the risk of cardiovascular diseases¹. Domestic animals also diminish stress, anxiety and social isolation, an ensemble of psychological factors known to considerably increase the risk of heart diseases and to diminish the quality of life in general.

For those people who like animals and who have the time to take care of them, adopting a companion animal could thus prove to be a decision which leads to very positive effects on their health.

SOURCE OF MICROBES

Another factor associated with domestic animals, less well-known, is that they considerably modify the microbiome of our immediate environment, i.e. the billions of bacteria, viruses and molds present in our homes.

Dogs, which are naturally very curious, literally shove their noses (and their paws) everywhere and bring back to the house a considerable number of microorganisms. Even if this may seem disgusting at first, several observations indicate that this supply of microbes can, contrarily, be a positive thing since children who grow up in a home where dogs live have a lower risk of developing autoimmune disorders such as asthma and allergies. These results are in agreement with a study which appeared in the *New England Journal of Medicine* showing that children who grow up in a milieu that is rich in microbes, such as a traditional farm, are much less likely to develop asthma².

Thus, even though we have a general tendency to associate the word “microbe” with “disease”, the reality is that the very great majority of these microorganisms are not dangerous, but can actually have a positive effect on our health by educating our immune system to make good choices.



EXCESSIVE HYGIENE

An example of this influence is the strong increase in the incidence of autoimmune diseases in recent years. According to the hygiene hypothesis, the constant improvement in sanitary conditions has diminished our exposure to different microbes in the environment and resulted in our immune system not having sufficient contact with microorganisms to properly learn how to distinguish between that which is dangerous (pathogens originating outside the body) and that which is not dangerous (the human body itself).

In other words, the autoimmune disorders are principally caused by a poor education of the immune system, a consequence of diminished exposure to the immense variety of microorganisms which are normally present in our environment.

The improvement of our sanitary conditions represents a key factor in the extraordinary increase in life expectancy over the course of the past century. We need not return to the old ways, but we must always bear in mind that hygiene is associated with a diminution of the microorganisms in the environments of our life and this can perturb our immunity. The arrival of a domestic animal into the household, with the billions of microbes that accompany it, permits the diversification of the microbiome and can in this way prevent the negative effects associated with the diminution of microbes.

In summary, whatever their beneficial effects on health whether physical, mental or immune, domestic animals are truly fantastic life companions. It is not surprising that dogs have been part of human's daily life for more than 30,000 years!

- (1) Levine GN et al. Pet ownership and cardiovascular risk: a scientific statement from the American Heart Association. *Circulation* 2013;127:2353-2363.
- (2) Stein MM et al. Innate immunity and asthma risk in Amish and Hutterite farm children. *N. Engl. J. Med.* 2016;375:411-421.