

# GENDER DIFFERENCES IN HUMAN DISEASES

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**Резюме:** В настоящее время при наличии огромного количества различных заболеваний и дисфункций, нельзя не обратить внимание на их строго выраженную индивидуальность. Проявление болезни для организма отличается в зависимости от конституции, возраста, социального статуса и, конечно же, пола индивида. Большинство учёных занимаются исследованием влияния половой принадлежности на течение и исход того или иного заболевания. Поэтому мы считаем нашу работу весьма актуальной и в ней постараемся осветить некоторые аспекты на примере выбранных нами заболеваний.

**Resume:** Currently in the presence of a huge number of different diseases and dysfunctions, it's impossible not to pay attention to their strictly pronounced individuality. Manifestation of the disease for the body varies depending on the constitution, age, social status and, of course, an individual's sex. Most scientists study the influence of gender on the course and outcome of a disease. Therefore, we believe our work is very urgent and we'll try to highlight some aspects on the example of a chosen diseases.

**The relevance (actuality):** Identifying specific cases of how males and females differ biologically is important therapeutically, but in order for biologists and physicians to gain a full understanding, it is necessary to appreciate how these differences came about [1],[7]. Evolutionary theory can provide useful insights into the origins of sex differences, either as adaptations in their own right in the case of physiological differences or in explaining why pathogenic phenotypes persist in a population [7],[8].

From an evolutionary standpoint, sex differences in disease can be seen as a subset of the more general phenomenon of sexual dimorphism of quantitative traits, including important life-history traits such as ageing and longevity [9]. It is the ultimate causes and consequences of sexual dimorphism that we explore in this review, with the emphasis on human physiological and disease phenotypes. The aim is to provide a researcher working at the front line of human physiology and disease with a clearer understanding of how sex differences evolve and to explore some of the ways in which sex differences can create novel selective pressures, generating further evolutionary change.

**The task** is to present the differences.

**Main aims are:**

1. To explain the meaning of the words sex and gender according to the topic.
2. To find out the reason of the differences.
3. To name the main differences between the gender diseases of different systems of organs.

**Conclusion:** Evolutionary theory can provide a conceptual framework within which sex differences in human physiological or disease phenotypes can be understood. Sex differences in themselves can act as risk factors for disease, but there is increasing evidence that genetics plays a role in contributing to quantitative traits and disease risk in contemporary human populations. Although there are no concrete examples at present of sexually antagonistic loci contributing to disease risk, they are predicted to occur at higher frequencies than alleles with sex-limited effects, for which there is already evidence. Furthermore, while evidence that sexually antagonistic selection operates in humans is rare, there are recent examples that have demonstrated both selection and genetic variation can be sexually antagonistic. Overall, sex-specific and sexually antagonistic selection is clearly relevant to our understanding of the origins of human phenotypes, including disease, and this understanding could provide particular benefits to shaping therapies to the individual.

While women rate their health worse than men and visit the hospital more often than men from early adolescence to late middle age, they are less likely to die at each age. This paradox can be explained at least in part by differences in the prevalence of chronic conditions men and women face [8].

Women experience higher rates of pain (headache, arthritis), and some respiratory conditions, including bronchitis, asthma, and lung problems not related to cancer. They are also much more likely to suffer from reproductive cancers, hypertension, vision problems, and depression. Men are more likely to suffer from hearing loss; smoking-related ailments, such as emphysema and respiratory cancer; and circulatory problems including cardiovascular disease and diabetes.

However, women and men with the same chronic conditions have the same self-rated health. Yet men with respiratory cancer, cardiovascular disease, and bronchitis are more likely to die than women with these conditions. This implies that men may experience more severe forms of these conditions.

Researchers have found that conditions associated with excess male hospitalizations and deaths tend to be smoking-related. Indeed, men with smoking-related conditions are significantly more likely to die in two years than women with the same conditions. This may be the case, because typically, men are exposed to smoking for a longer time on average than women [9].

Public campaigns have helped decrease deaths related to unhealthy behaviors, particularly those associated with male deaths. These efforts may well help narrow the male-female mortality gap in the United States. The 40-year-old antismoking campaign has led to a drop in lung cancer death rates for men. And the efforts to reduce drunk driving have been effective, Waldron notes. Pointing to public concerns about secondhand smoke and the efforts of Mothers Against Drunk Driving to alert the public of the risks of drunk driving, Waldron says that the grassroots support made it easier to push through policy change. "In this country [the United States], movements that have had big benefits had citizens' support," she says. "Leadership was important, but not everything."

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