

## Physical abilities of the Feminine body

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### STATEMENT OF THE PROBLEM

Scientists have found that women are more resistant to prolonged physical activity than men. They expect that the data attained will be beneficial in evaluating athletic performance, and put forward reducing the load on men so that their stamina is equal to that of women's. In the year of 1967, Katherine Schwitzer became the foremost woman to run the Boston marathon. She got this chance thanks a lot to the judges, who decided that her name on the list of participants belongs to a man — in those years, women were forbidden to participate in marathon races. According to the Runner, he was considered “dangerous, unfeminine and blurring gender boundaries”.

**METHODOLOGY & THEORETICAL ORIENTATION:** A Professor of neurophysiology at the University of British Columbia is ready to argue with the first point: his latest study showed that prolonged physical activity for women is much less exhausting than for men of the same age and fitness level. The study involved young people from the University community — nine women and eight men with the same level of physical fitness. «It was previously known that women are more resilient than men during isometric tests (static exercises when the joints do not move — for example, the plank), but we wanted to find out how this is also true for dynamic, more everyday movements, says Brian Dalton, lead author of the study. — And the answer is clear: women outnumber men by a wide margin. «The study involved young people from the University community — nine women and eight men with the same level of physical fitness. The researchers attached sensors to their legs, and then asked them to bend their legs 200 times as fast as possible. At this time, sensors registered the speed and strength of flexion and electrical activity of the muscles. We found that men completed the task with greater speed and strength, but tired much earlier than women,” says Dalton. By the end of the test, their strength had decreased by 15%. This may be due to the location of muscle fibers, the researchers suggest.

**Findings:** Although only one muscle group was studied in the study, Dalton is confident that the results are true for the rest. “We know that, for example, in long cross-country races, men can finish first, but women are significantly less tired by the finish,” he adds. If there is ever an ultra-long marathon, women will lead it.” However, according to Dalton, it is not so much about sports achievements, as in creating the most comfortable working conditions or developing complexes of exercises taking into account gender differences — this will lead to increased productivity.

“We can, for example, reduce the load on men so that their endurance is equal to women's,” he says. — Both sexes have their own physical characteristics, and our task is to create tools that will provide them with the greatest advantage. It is not about the opposition between the sexes, but rather about their balance.”

Another difference in the physiology of women and men was found earlier this month by doctors from the United States — according to their study, the female brain is more active than the male. They analyzed 128 brain regions in women and men using single-photon emission computed tomography (SPECT).

The greatest difference in activity was observed in the prefrontal cortex, which is responsible for decision-making, volitional control and regulation of social behavior, and in the limbic system, which is involved in the regulation of emotions, sleep, memory, and internal organ functions.

**CONCLUSION & SIGNIFICANCE:** Understanding the differences in the brain function of men and women is important, because gender determines the propensity for certain brain diseases, the researchers note. Women are much more likely to experience Alzheimer's disease, depression, and anxiety disorders, while men are more likely to experience behavioral disorders.

And a good way to prevent Alzheimer's disease for women, an international team of researchers recognized gender equality — they found that middle-aged and older women from countries with high levels of gender equality perform better on tasks for testing cognitive abilities than women from societies with low levels of it. These tasks include tests of memory its deterioration is one of the signs of the onset of Alzheimer's disease.

1. Wilmore George.H. - physiology of sports
2. Kots Ya. M. - Sports physiology
3. Mark Vella Anatomy of fitness and strength exercises for women.
4. Jennifer Eckerman -A brief history of the human body
5. J.H. Wilmore, D. L. Costill -Physiology of sports and motor activity