

Person of the Issue: Ivan Petrovich Pavlov (1849–1936)

Mr. Ankit P. Patel*

Quick Facts

Name: Ivan Petrovich Pavlov

Occupation: Physiologist, Scientist

Birth Date: September 14, 1849

Death Date: February 27, 1936

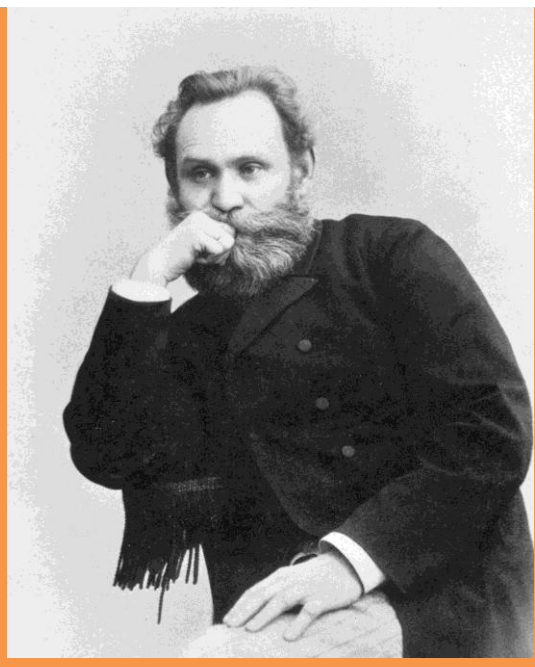
**Education: University of St. Petersburg, Imperial
Medical Academy**

Place of Birth: Ryazan, Russia

Place of Death: Leningrad, Russia

AKA: Pavlov

Full Name: Ivan Petrovich Pavlov



Russian Physiologist Ivan Pavlov developed his concept of the conditioned reflex through a famous study with dogs and won a Nobel Prize Award in 1904.

Synopsis

Born on September 14, 1849, in Ryazan, Russia, Ivan Pavlov abandoned his early theological schooling to study science. As the Department of Physiology head at the Institute of Experimental Medicine, his groundbreaking work on the digestive systems of dogs earned him the Nobel Prize for Physiology or Medicine in 1904. Pavlov remained an active researcher until his death on February 27, 1936.

Early Life and Education

Ivan Petrovich Pavlov was born on September 14, 1849, in Ryazan, Russia. The son of a priest, he attended a church school and theological seminary. However, he was inspired by the ideas of Charles Darwin and I.M. Sechenov, the father of Russian physiology, and gave up his theological studies in favor of scientific pursuit.

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Pavlov studied chemistry and physiology at the University of St. Petersburg and received the degree of Candidate of Natural Sciences in 1875. He then enrolled at the Imperial Medical Academy in St. Petersburg, completing his graduate dissertation on the centrifugal nerves of the heart in 1883.

Awards and Achievements

For his groundbreaking work, Pavlov was named the 1904 Nobel Prize winner for Physiology or Medicine. More honors followed over the years. He was elected Academician of the Russian Academy of Sciences in 1907, and in 1912 he was given an honorary doctorate at Cambridge University. Following a recommendation by the Medical Academy of Paris, he was awarded the Order of the Legion of Honour in 1915.

Later Years

Later in life, Pavlov applied his laws to the study of psychosis, arguing that some people withdrew from daily interactions with others due to the association of external stimuli with a harmful event. Although he was notably dismissive of psychology as a pseudo-science, his research helped lay the groundwork of several important concepts in the then-nascent discipline. Pavlov openly decried the war-torn conditions of his country after the Russian Revolution of 1917. He took a dangerous line with his criticism of Communism after visits to the United States in the 1920s, though he escaped prosecution due to his standing as one of Russia's preeminent scientists. Pavlov softened his tone in the last years of his life, perhaps due to increased government support of scientific research. He remained devoted to his lab work until his death from double pneumonia on February 27, 1936, in Leningrad.

Personal Life

In 1881, Pavlov married pedagogical student Seraphima Vasilievna Karchevskaya. The couple had virtually no money in their early years together, and often lived separately until their finances stabilized. Their first son died suddenly as a young child, but they proceeded to have three more sons and a daughter.

Discovery

After graduation, Pavlov studied under cardiovascular physiologist Carl Ludwig in Leipzig, Germany, and gastrointestinal physiologist Rudolf Heidenhain in Breslau, Poland. With Heidenhain, he devised an operation in which he created an exteriorized "pouch" on a dog's stomach and maintained nerve supply to properly study gastrointestinal secretions. He then spent

two years at a laboratory in St. Petersburg, where he researched cardiac physiology and the regulation of blood pressure.

In 1890, Pavlov took charge of the Department of Physiology at the newly created Institute of Experimental Medicine. He was also named Professor of Pharmacology at the Imperial Medical Academy, and five years later was appointed to its vacant Chair of Physiology. During this period, Pavlov focused on the secretory activity of digestion in dogs, implanting fistulas in their salivary ducts to record the uninterrupted effects of the nervous system on the digestive process.

Pavlov's observations led him to formulate his concept of the conditioned reflex. In his most famous experiment, he sounded a tone just before presenting dogs with food, conditioning them to begin salivating every time he sounded the tone. Pavlov published his results in 1903, and delivered a presentation on "The Experimental Psychology and Psychopathology of Animals" at the 14th International Medical Congress in Madrid, Spain, later that year.

Time Line:

- ✚ September 14, 1894 Born in Ryazan, Russia.
- ✚ 1870 Leaving his religious career, Pavlov enrolled to take a natural science course at the University of St. Petersburg.
- ✚ 1875 Graduated from the University of St. Petersburg and took an assistantship from Cyon in his laboratory at the Military-Medical Academy; received the degree of Candidate of Natural Sciences.
- ✚ 1876-78 Becomes an assistant in Ustimovich's laboratory.
- ✚ Summer of 1877 He spent time in Physiological Laboratory of Professor R. Heidenhain at Breslau.
- ✚ 1879 Graduated from the Military-Medical Academy.
- ✚ 1879 Completed third course of study at the Academy of Medical Surgery; awarded his first gold medal.
- ✚ 1879-1904 Wrote for a volume in commemoration of the 25th Graduation Anniversary from the Military-Medical Academy.

- + June 13, 1880 Proposed to Seraphima (Sara) Vasilievna karchevskaya.
- + 1880-84 Postgraduate study and research at the Academy.
- + 1881 Married Sara.
- + 1883 Discovered dynamic nerves of the heart and submitted thesis for the degree of Doctor of Medicine.
- + April 24, 1884 Made a lecturer in physiology at the Military-Medical Academy.
- + 1885-86 Studied abroad June 15, 1890 Made chair and appointed professor of pharmacology in the Military-Medical Academy.
- + 1890 Appointed director of physiology department at the Institute of Experimental Medicine in St. Petersburg.
- + June 13, 1891 Gained directorship of the Department of Physiology in the Institute of Experimental Medicine.
- + 1891-1900 Did most of his research on physiology of digestion at the Institute of Experimental Medicine.
- + May 29, 1895 Appointed to Chair of Physiology until 1925.
- + 1897 Published his lectures entitled *Lectures on the functions of the principal digestive gland*.
- + 1901 Elected as a corresponding member of the Russian Academy of Sciences.
- + 1904 Received Nobel Prize in Physiology and Medicine for work on the physiology of the digestive glands.
- + 1907 Elected Academician of the Russian Academy of Sciences.
- + 1912 Given an honorary doctorate at Cambridge University.
- + 1915 Awarded the Order of the legion of Honour (Medical Academy of Paris recommendation).
- + January 24, 1921 Awarded a special government decree signed by Lenin.
- + 1924 Resigned from professorship at the Military-Medical Academy.

✚ 1935 Youngest son, Vsevolod, died.

✚ 1935 Government built a laboratory for Pavlov with his chief work on conditioned reflexes.

✚ 1936 On February 27, Pavlov died in Leningrad

Books:

Conditioned Reflexes and Psychiatry - Lectures on Conditioned Reflexes, (1903)

Quotes:

“As a young man I entered the laboratory, I have spent my entire life in it, I became an old man in it, and it is my dream to spend my final days in it.”

—Ivan Petrovich Pavlov

Reference:

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2. Babkin, B.P. (1949). *Pavlov, A Biography*. Chicago and London: The University of Chicago Press. pp. 27–54. ISBN 1406743976.
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6. Sheehy, Noel; Chapman, Antony J. and Conroy, Wendy A., ed. (2002). "Ivan Petrovich Pavlov". *Biographical Dictionary of Psychology*. Routledge. ISBN 0415285615.
7. The Nobel Prize in Physiology and Medicine 1904 Ivan Pavlov". Nobelmedia. Retrieved 2 February 2012.
8. <http://www.muskingum.edu/~psych/psycweb/history/pavlov.html>