



Research Psychologist



Dr. Patricia Cowings
Research Psychologist

NASA Ames Research Center
Professor of Psychiatry,
University of California, Los Angeles

I am a research psychologist. I study how people adapt to space and other extreme environments, such as working inside a tank or flying rescue missions by helicopter. I collaborate with many people, and my work partly involves convincing others to try my ideas. Space motion sickness is common in microgravity. Our patented method called "Autogenic-Feedback Training Exercise" (AFTE), allows us to teach our subjects to voluntarily suppress their motion sickness and malaise, and to improve their performance. Teaching and training are my job and my passion.

Areas of expertise:

- Human neurophysiology
- Psychology
- Performance assessment
- Statistics

How I first became interested in this profession:

I was the first female scientist trained to be an astronaut. This was long before Sally Ride's day, and they did not even have a uniform for me. I was the alternate and never got a chance to fly, but that experience is something I will never forget.

What helped prepare me for this job:

Training to be an astronaut at NASA, I learned the RIGHT way to do flight experiments. I also became interested in what people may need in order to adapt better and faster to living and traveling in space.

My role models or inspirations:

My parents, who encouraged me to do what I WANTED to do, not what someone else thought I SHOULD do; they helped me understand my own unique value as a thinking and feeling human being. My husband Bill, who is not only my best friend, but also my lab partner.

My education and training:

- B.S., Psychology, New York State University, Stony Brook
- M.A. and Ph.D., Psychology, University of California, Davis

My career path:

- Twenty-three years at NASA Ames heading the Gravitational Research Branch and the Psychophysiological Research Laboratory (Science director). For the past five years, I have worked with the Russian cosmonauts on the MIR space station.
- Fifteen years as the principal investigator for life sciences shuttle flight experiments on "Autogenic-Feedback Training: A Preventive Method for Space Motion Sickness"

What I like about my job:

I love working directly with the astronauts and helping them cope with traveling in space. I also like to ask questions and to design clever experiments to learn new things about how people can adapt to space.

What I don't like about my job:

As a kid, I wasn't good at math, but I learned to use it as a tool. I was told I wasn't good at science, but to me, science was like a game. I earned my Ph.D. the age of 23, and it took many years for my associates to take me seriously.

My advice to anyone interested in this occupation:

The human being is the best animal on the whole planet. It doesn't matter where you are from, or what you look like. Set your goals high. Human beings can learn and achieve almost anything they set out to do.

Additional Resources:

- American Institute of Biological Sciences
<http://www.aibs.org>
- American Physiological Society
<http://www.faseb.org/aps>
- American Society for Biochemistry and Molecular Biology
<http://www.biophysics.org/biophys/society/biohome.htm>
- American Society for Microbiology
<http://www.asmsusa.org>
- Astrobiology Summer Academy
<http://academy.arc.nasa.gov/>
- Biotechnology Industry Organization
<http://www.bio.org/welcome.html>
- Education Pays Calculator
<http://www.educationpays.org/calc.asp>
- Graduate Student Researchers Program
<http://spacelink.nasa.gov/Instructional.Materials/NASA.Educational.Products/Graduate.Student.Researchers.Program.Brochure/.index.html>
- MATHCOUNTS Competition
<http://mathcounts.org/>
- Minority University Research and Education Programs
<http://mured.nasaprs.com/>
- NASA Cooperative Education Program for college students
<http://spacelink.nasa.gov/Educational.Services/NASA.Education.Programs/Student.Support/NASA.Cooperative.Education.Program/.index.html>
- NASA Jobs
<http://nasajobs.nasa.gov/>
- NASA Office of Life and Microgravity Sciences and Applications
<http://www.hq.nasa.gov/office/olmsa/>
- NASA SHARP Internship Program for high-schoolers
<http://www.mtsibase.com/sharp/>
- NASA Student Employment
http://nasajobs.nasa.gov/stud_opps/employment/index.htm
- NASA Student Involvement Program student contests
<http://www.nsip.net/index.cfm>
- Order NASA career videos such as "Engineers: Turning Ideas into Reality," "Careers: Aerospace Engineer" or "Reaching for the Stars" from NASA CORE.
<http://core.nasa.gov>
- Student's Guide to Astrobiology
<http://www.astrobiology.com/student.html>
- Tech-Interns.com
<http://www.tech-interns.com/>

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Thank you.

