



TALKING

with

NASA'S

EILEEN

COLLINS

First woman to pilot the space shuttle

By **Rebecca MacDonald**





“Landing the space shuttle is like hitting a great golf shot. It’s all in the grip.”

Eileen Collins doesn't think of herself as a pioneer, even though her resumé includes a list of accomplishments that rival those of the most intrepid explorer. She doesn't believe in glass ceilings, although she has shattered barriers in her quest to excel in a traditionally male-dominated field. And she doesn't consider herself particularly gifted, attributing her achievements as the first female to pilot—and later command—a space shuttle mission to a combination of hard work, perseverance, and fortunate timing. At least one person agrees with Collins's assessment. “My daughter is unimpressed when she sees me on TV. She thinks everyone's mom is an astronaut,” Collins says with a laugh.

That's not to say Collins doesn't recognize her place in history or the opportunity she has to inspire others to dream big. “There were no women astronauts or women military pilots when I was growing up,” she says. “My heroes were my parents. They taught me that if I worked hard, I could achieve my dreams.”

Dreaming Big

Growing up in Elmira, New York, Collins dreamt of flying while watching gliders from the nearby National Soaring Museum float overhead. But it was NASA's Gemini program, which later led to the Apollo missions and the moon landings, that inspired her to dream of one day becoming an astronaut. However, Collins's family didn't have the money for flying lessons, and she had to wait until she turned sixteen, when she got a job and began saving her money. Three years later, with \$1,000 saved, she went to the local airport and asked to learn how to fly.

Her parents wanted her to go to college, but again, there was no money to fund the dream. Collins didn't give up. She attended Corning Community College, where her hard work earned her a two-year scholarship to Syracuse University. She majored in math and science, which she says she had a natural inclination for, but adds, “I had to study

hard for my grades. It didn't come easily to me.”

When she graduated, Collins's grades and flight experience made her eligible to become one of the first women to go from college directly into Air Force pilot training. It was 1978, the same year NASA opened its astronaut training program to women. “That's when I realized that my dream of becoming an astronaut might actually be possible,” she says.

Getting Hooked on the Game

Collins went to Vance Air Force Base in Oklahoma for her pilot training. Women were not allowed to fly combat aircraft at the time, so Collins became a flight instructor, teaching others to fly the T-38 jets used to train pilots. That was also where she learned to play golf. “I was friends with a bunch of guys who played, and they invited me to play in the squadron golf tournament. I got hooked on the game,” she says. “I started going to the range by myself to hit balls.”

In 1983 Collins transferred to Travis Air Force Base in Sacramento, California, where she flew C-141 cargo planes, eventually earning her own air-

craft command. It was there that she met her husband, Pat Youngs, also a military pilot. They were married in the Air Force Academy chapel. In between flying cargo planes, Collins kept up with her game, playing at courses around the world, in exotic places such as the Philippines and Hawaii.

Although she doesn't get much time to play in between training for space missions, her love for the game remains strong. “I love being outside. I'm not particularly competitive, and I'm good at keeping my emotions in check, so I don't get nasty or throw clubs. I learned from being a parent that you have to be able to handle difficult situations without letting your emotions get the better of you.”

Collins says she also likes the challenges the game presents. “I like the fact that you're always learning, that you'll never be perfect at it. That's what keeps you coming back.”

Collins plays when she can with her husband, Youngs, who is now a Delta Airlines pilot and an accomplished amateur golfer who has dominated the club championship at the South Shore Golf and Country Club, where the couple are members. “He's the real golfer in the family!” Collins exclaims. “You should be writing about him!”

Space Cadet

In spite of her modesty, Collins's accomplishments have placed her in an



elite corps of men and women, and earned her a place in history. In 1989 Collins was selected for the prestigious Air Force Test Pilot School at Edwards Air Force Base in California. All in all, she has logged more than 6,000 hours in 30 different types of aircraft. She also participated in the U.S. invasion of Grenada, evacuating medical students and their families as part of Operation Urgent Fury in 1983.

Through it all, Collins never lost sight of her dream, and in 1990 her patience and dedication paid off when she was accepted into NASA's astronaut training program. At first, she served in engineering support roles, working in Mission Control as a spacecraft communicator, as well as in other capacities. Then, in February 1995, she became the first female to pilot the space shuttle, flying STS-63 *Discovery* to rendezvous with the Russian Space Station Mir.

Although she was helping to break down barriers for women, she says she never felt like an outsider. "I always felt accepted, like I was one of the guys, whether it was in the Air Force or on the golf course, and later as an astronaut," she says. "I just focused on doing my job. I knew that if I did my job well, I could put myself in a position to succeed."

That focus on excelling at her job, along with a reputation for levelheaded leadership, was rewarded again when, four years later, Collins was picked to lead the team of astronauts flying STS-

93 *Columbia*, the first shuttle mission to be commanded by a woman. The mission's goal was to deploy the Chandra X-Ray Observatory, a telescope designed to study exotic phenomena such as exploding stars, quasars, and black holes.

Grounded by Tragedy

Collins's career as an astronaut was temporarily grounded when tragedy struck the space program. On February 1, 2003, Space Shuttle *Columbia* disintegrated over Texas about 15 minutes before its scheduled landing at the Kennedy Space Center in Florida, killing all seven of the astronauts aboard. The loss of *Columbia* was caused by damage sustained during launch, when a chunk of foam broke off and harmed the shuttle's wing. Collins was scheduled to pilot the next shuttle mission one month later, but after the tragedy, the space shuttle program was suspended.

Finally, NASA announced the shuttle's return to space and named Collins as the mission commander. On July 26, 2005, at 10:39 a.m. EST, Space Shuttle *Discovery* cleared the tower, marking NASA's return to space. After preliminary reports, however, it seemed that the same foam-detachment problem that had resulted in the destruction of *Columbia*—debris separating from the external tank during ascent—had recurred during the launch of *Discovery*. Collins kept her trademark cool, and the astronauts performed an unplanned space walk during the mission to repair the damage.

"As in golf, having a plan and keeping your emotions under control is the key. I had a great team up there, and we had all trained together for months for every possible scenario," says Collins. She adds, "We were very safe. People on the ground thought we were in danger, but the media really sensationalized it."

Collins also says, however, that when unexpected situations arise, it's crucial to be able to adapt quickly. "A lot of people think that everything is controlled from the ground, but that's not always the case. You're isolated up there. In an emergency you have to make decisions, there's no time to call Ground Control. You need to be flexible and adapt. That's why our preparation and training are so important."

Mission Accomplished

Despite the foam incident, the mission was a success. Originally scheduled to land at Kennedy Space Center in Florida, the space shuttle was delayed for two days because of bad weather and rerouted to land at Edwards Air Force Base in California instead. With the *Columbia* tragedy on everyone's minds, America held its collective breath. Collins executed a perfect landing, bringing the shuttle and its crew safely home.

"Landing the space shuttle is similar to hitting a great golf shot in a way," says Collins. Given that the stakes are par or bogie in one situation, and life or death in the other, the comparison seems absurd, but, Collins explains, "One small change in the way you hold your club, or the throttle, can change your outcome."

She acknowledges feeling the pressure. "You land at 195 knots (about 200 miles per hour), and coming in you feel very heavy due to the gravitational forces. You're literally being pushed down into your seat. Your hands feel different, and it's hard to feel what you're doing. I finally took off my gloves—you're not supposed to do that because if there's a fire on landing they're designed to protect you—but I needed to feel the throttle."

Now back at home, Collins says that at her age (she's 49), she thinks she's flown the last of her missions. "There are so many other astronauts in line who haven't flown in space yet. They need to have their chance," she says. Asked if she regrets never having landed on the moon, Collins says, "I would have loved to have done a moon landing, but at my age it's probably not in the cards."

She does not, however, rule out returning to space someday. "I look at what's being done now in the private sector, the people who are trying to take space flight to the commercial public, and I think it's great," she says. "I would love to return to space as a civilian and have the time to truly enjoy it. As an astronaut, you're constantly working, and there's not much time to just sit back and take it all in."

A self-confessed workaholic, she says being on the ground will give her more time to spend with her husband playing golf, and with her son and daughter. "I've got no regrets, she says. "I have the two best jobs in the world. I'm a parent and an astronaut." **TWG&L**

