

doc Space mum :

When Catherine Coleman, known as Cady, goes to work, waving goodbye to her son Jamey, 10, she doesn't drive or take a train – she blasts off in a spaceship. Many more women now work in space, but Cady's next Nasa mission is a big one. In December, she leaves Earth on a Soyuz rocket for the International Space Station, where she will live and work for six months. This will be the longest mission undertaken by a Nasa astronaut who is the mother of a young child.

The Cady Coleman who greets me at the door of her 200-year-old farmhouse deep in the woods of New England is smaller than I had expected. This is a woman who walked into an American Air Force centrifuge programme as a volunteer and walked out with a world record for endurance. She once spent six weeks camping in Antarctica, learning that "my mother was correct when she told me to dress in layers." She has also lived 18m underwater in a giant tank, as part of Nasa's extreme environment training, an experience she took in her stride as the daughter of a navy diver. And she has clocked up 500 hours in space on two previous short-duration shuttle missions, in 1995 and 1999.

Cady is 49, 5ft 4in, slim and narrow-waisted. She confesses to having had trouble getting space suits small enough.

There is excitement in her voice when she talks about the possibility of a space walk during the coming mission – but the reality is that committing to a mission at all has required soul-searching. She needed the full support of her husband, Josh Simpson, and she needed Jamey to understand, too. "We talked a lot about whether I would even sign up to go – but it is part of who I am – and it's part of who Jamey's mother is and Josh's wife is. If I'm not doing those things, I'm not sure I'm being as much of a mum as I could be. It is part of me."

How does an astronaut with a child come to terms with the risks inherent in space travel? Cady answers by putting those risks into a broader context. Soldiers are deployed all the time to places "not nearly as nice to be as the International Space Station" she says.

However, she and her husband do their best to shield Jamey from the starker realities of his mother's profession.

They recall sitting down as a family to watch a television series about space flight and then, when the topic turned to the Columbia disaster in 2003, deciding calmly that it was Jamey's bedtime. It's harder to protect him from the tactlessness of the public. "People come up to me all the time, with Jamey there, and say: 'Aren't you afraid that rocket's going to blow up?'" says Josh. "I'm always taken aback."

These days, more thought is put into pre-mission preparation, especially when children are involved. "Everyone in the family has to be committed," says Al Holland, a Nasa psychologist. "It's not just one person on one mission."

Kate McCann, The Guardian, Saturday 7 August 2010