

Life on Mars: Ryan's mission

Ryan MacDonald, 21, is a physics student at Oxford University. He likes science fiction, gaming, and has recently finished writing his first novel. And in the near future he may be heading on a one-way trip to Mars.

The Mars One foundation is a not-for-profit organisation that aims to establish a permanent human settlement on the Red Planet. In April 2013 over 200,000 budding astronauts from across the globe applied to the programme, and after a rigorous selection process only 660 candidates remain. Ryan MacDonald is one of them, and if chosen he will go to Mars and never come back.

Like many young boys, as a child Ryan dreamed of becoming an astronaut. With a Masters degree in astrophysics on the horizon he had his sights set on joining the European Space Agency, but their highly selective astronaut admissions process made this an unlikely feat. So when Mars One opened its doors Ryan was incredibly excited. "I suddenly had this chance," he says, "if I didn't try then I might always have it in the back of my mind: what if it could have been me?"

"At the heart of every scientist is a child who never lost their curiosity, still seeking answers to the burning questions of their youth," Ryan adds. "I had to take advantage of this opportunity to live my lifelong dream."

Despite Ryan's optimism, uprooting from his life on Earth would not be easy – particularly for his sister Brönte, 19. The pair are extremely close, and speak at least every other day through Skype.

"I'd never made any secret that if I got the chance to go to space I'd take it," Ryan says. "But as it's become more real, as more and more people have been cut out of the selection process, it's been difficult. Brönte's not very keen on the idea but she knows it's what I really want to do and will still support me."

In spite of their concern, his family's continued good humour keeps Ryan grounded. Brönte jokes that as Martians have no use for the six-figure salary the astronaut training programme provides she's happy for Ryan to leave her and the cash behind. They also point out that communication through video messages will still be possible, so despite being over 55 million kilometres apart they can remain as close as ever.

But the prospect of such a distance still takes its toll. "Leaving Brönte behind will definitely be the hardest thing for me," he admits. "I'll never be able to hug my sister again."

If Ryan is chosen for the mission, due to launch in 2024, he may well have to sacrifice starting a family of his own, too. "I would be wary of having a family," he says, "because I wouldn't want to leave them behind." And although Ryan predicts that relationships will inevitably blossom on Mars, they have been warned against trying to have children there. "If you have four people on Mars and one of your women dies in childbirth you might have just lost your chief engineer, or your doctor," Ryan points out. "In all likelihood the first people who go will not have children."

When asked if the astronauts would be expected to abstain from sex altogether, Ryan laughs. “It doesn’t really bother me because I’m asexual, but it’s an interesting question. Nobody even knows whether sex is actually possible in zero gravity.” Although most space agencies don’t officially disallow it, they do have regulations about ‘appropriate conduct’ that may make astronauts think twice about extra-terrestrial fornication.

Ryan, however, is more concerned about missing the smaller things that people on Earth take for granted. “I’m sure I would miss going outside without wearing a suit, and being able to feel the wind through my hair. Also the variety of food will be significantly smaller on Mars – we’ll have to live off hydroponically grown vegetables and insects.”

Although sounding a little hesitant, Ryan still puts a positive spin on the situation. “For me, the mission has to come first. And if that means that I have to give up on some things that most people enjoy in order to gain things that others will never get to experience, that seems an obvious trade-off.”

Looking to the future, Ryan is cautiously optimistic about his chances of being selected, and enthusiastically anticipates the mission regardless of whether he is chosen to participate. “To be able to look at the sky at night and see Mars, knowing that there are people living there... That would just be incredible.”