

# Mice in space: NASA's latest experiment

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Scientists are sending mighty mice to space, but rather than being gym rats, their strength was enhanced through genetic experimentation in the hopes of preventing human astronauts from experiencing muscle loss in microgravity.

NASA is sending 40 genetically modified mice to [space](#) via this week's scheduled SpaceX Dragon launch as part of its "Mighty Mice in Space" experiment to investigate the possible effect of disabling the body's natural muscle growth limiter.

The protein responsible for limiting muscle growth is known as myostatin, which acts like a traffic cop preventing drivers from going too fast on the roadways.

Two of the many challenges astronauts face are muscle and skeletal atrophies experienced in microgravity which long term exposure can cause heart disease and osteoporosis.

Scientists hope by blocking the actions of myostatin within mice and inducing muscle and bone growth should counter act the effects of microgravity, according to NASA.

As a result the mice are not only stronger, but also bigger than the average mouse.

Beyond space, scientists hypothesize that this therapeutic treatment could be used to treat patients recovering from hip fracture surgery, intensive care patients and the elderly.

As part of the space experiment, 40 [mice](#) with the myostatin inhibitor will remain Earthbound to be compared to their in-space counterparts when they return next month.

The launch had been scheduled for Wednesday but was delayed until Thursday because of high winds. It will be the 19th SpaceX Commercial Resupply Services contract mission for NASA and is also carrying a number of other experiments to the International Space Station, such as malting barley in microgravity for beer, launching new communication

satellites, understanding the spread of fire in space and measuring gravity.

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