Health Risks in space

Microgravity	- environment in which objects behave as though there is very little gravity but there IS gravity. Ie: ISS or orbiting a planet
Health Risks in microgravity	- Our body, tissues & cells are adapted to living WITH gravity. So there are health problems when living in microgravity. • 50% of astronauts experience dizziness and nausea at first • blood pools in the upper part of your body without gravity. Therefore, skinny legs and puffy face. • bones and muscles weaken when they are not working against gravity. So astronauts have to work out in space. • lose 2% of bone mass every month in space. BUT…this is good for studying osteoporosis. • spine lengthens and can be 2 – 4 cm taller but back pain. • radiation – astronauts above atmosphere can be exposed to increased radiation.

Summary – without gravity, there are many associated health problems.

Space Spinoffs

Spin off	A spinoff is something that was created or invented for space but now we use to our benefit here on earth! ie: made for space → we use on earth now *new* metal alloys → are now used in braces! Non-stick surfaces → we use in Teflon fry pans. Energy storage → we use solar panels on earth (originally made for space) Hard plastics → we use for bicycle helmets Microelectronics (small electronics because spacecraft is small) → we use in digital watches, pacemakes, computers etc.