

## **What will happen if you go to space without a spacesuit?**

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It was published in Sandarbh issue - 91**

To understand this, we will have to first know why astronauts/cosmonauts wore space suits. It is obvious that special space suits have been created because living in space is different than living on earth, or even flying in a aeroplane.

So what is the difference between space and earth. You must have heard that every object attracts every other object. This force of attraction depends on the mass of the two objects attracting each-other and the distance between them. So earth also attracts every object. This force is called gravity. Because the force reduces as you go away from earth, the further you are, the less gravity you will experience. There may be a distance where this force (gravity) is almost zero (not completely zero).

Difference number two – There is air all around the earth. It is called the atmosphere. As we go away from the earth atmosphere becomes thinner and thinner. It means that air becomes less and less as we go up. There may be a distance where there will be no air.

These two differences are the most important as far as space travel is concerned. You must be knowing that every object falls on earth due to gravity. When there is no gravity things will not fall. If you drop a ball in space it will remain where you left it. Actually there is no 'up' or 'down' if there is no gravity. So, in space things just float. This creates various problems which will make you laugh but right now I am not bothered about those funny problems. I will look into the problem created because there is no air in space.

I do not know if you know the things which I am going to tell you here.

For example, you can hear your friend's voice if there is air between the two of you, because sound needs a medium to go from one place to another. So, in space you can not talk to each other because there is no air between you. But this is not a problem which can be solved by wearing a space suit.

As you know, there is blood flowing in our bodies. The blood flows in special tubes called arteries and veins. The blood flows in these tubes because the heart pushes the blood in the arteries. Because of the push given by the heart the blood flows at a pressure. If the pressure is too high the blood might break the arteries and veins. But the pressure of the atmosphere stops this from happening.

In space there is no atmosphere. So, there is no pressure of the atmosphere. In this situation the pressure of the blood inside the body might break the arteries and veins and come out. Such a thing actually happens. As I said above, as you go up on the mountains air becomes less and less. Therefore its pressure becomes less. So, sometimes, on high mountains people start bleeding from the nose. You can imagine if there is no air (as happens in space) this bleeding may become a big problem.

Space suit is a suit which is filled with air under pressure. In other words, a space suit provides you with a small atmosphere of your own, so that you will not bleed.