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What do Astronauts Eat?

Just like you and your parents plan family meals for the week, astronauts also have to decide ahead of time what they will be eating. Astronauts select their menu approximately five months before their flight. They meet with a dietician to choose their meals for their time in space. The dietician checks to make sure that each astronaut gets all the vitamins and minerals they will need while they are in space.

Did you know that all meal packages on board the International Space Station have a coloured sticker and a Velcro strip on them? The reason for the coloured sticker is that not everyone likes to eat the same thing, and not everyone has the same dietary needs. Thus, each astronaut is assigned a different colour to identify his or her meal.

Astronauts have an astonishing variety of food items to choose from. The kinds of foods they eat are not mysterious concoctions, but foods prepared here on Earth, many commercially available on grocery store shelves. Most of the food planned for the International Space Station will be frozen (like frozen TV dinners) refrigerated (like fruits, vegetables and dairy products) or thermostabilized (food that is heat-processed, canned and then stored at room temperature). Other types of food, such as fresh food and natural form food (ready-to-eat foods like peanuts), will also be flown. Many of the beverages will be dehydrated; this means that they will have to add cold or hot water to drink the beverage, just like we do with Kool-Aid or hot cocoa.

Meals are stowed in special pullout drawers, which allow complete viewing of drawer contents. Food and other supplies will be resupplied from Earth every 90 days.

A Typical Meal in Space

Aboard the Shuttle and the Space Station, astronauts prepare their meals in the galley; this is like the kitchen in your home. The galley has a water dispenser, a table, an oven, a freezer and two refrigerators.

The astronaut's meal tray is similar to cafeteria trays with one very important difference; it is magnetised so that metal knives, forks and spoons can stick to the tray and not float away. In addition, on the top and bottom of the tray there are also strips of Velcro. Velcro keeps the tray stuck to the table and the meal packages stuck to the tray.

Astronauts use a knife, fork and spoon to eat and a straw to drink with but they also need another special utensil. Can you guess what that might be? In order to open the food packages, astronauts need a pair of scissors.

What About Clean Up?

After a meal on Earth, whether it is putting the dishes in the dishwasher or washing them by hand, someone has to clean up. In space, because the water supply is limited, eating utensils and food trays are cleaned with pre-moistened wipes. When the meal is finished, all the trash is collected into trash bags and placed into containers to be brought back to Earth for disposal.

Meal time usually involves the following steps:

1. Collect meal tray and utensils.
2. Look on the computer to see what has been chosen for you for that meal.
3. Locate food using location display function.
4. Prepare food items for heating.
5. Place items to be heated in oven.
6. Enter cook control codes and press "start".
7. Rehydrate beverages and place them on meal tray.
8. Retrieve refrigerated foods and place them in meal tray.
9. Retrieve items from oven and place them in meal tray.
10. Place used containers in trash.
11. Clean and stow meal tray and utensils.

How does this compare to meal time at your home?



Prior to his STS-100 shuttle mission, CSA Astronaut Chris Hadfield tastes some of the food items that he will have on board. (Photo: NASA)

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