

1 Wash your hands often with soap and clean water (esp. after using the toilet and before eating). In general, it is advisable to keep your hands away from your mouth.



Lebensretter Antibiotika

Wissen wann - wissen wie.

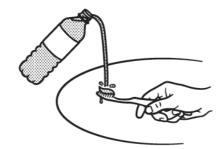
2 In case soap and clean water are not available, you can alternatively use an alcohol-based hand disinfectant.



3 Freshly cooked, roasted, or deep-fried hot dishes are to be preferred. Always peel raw fruit or vegetables before eating. Do not eat reheated dishes! Avoid eating food from buffet tables.



4 Probiotics (dietary supplements containing viable microorganisms) can strengthen the intestinal flora and may thus represent a preventive measure against travelers' diarrhea. However, there is no clear evidence to prove their effectiveness.



5 In some areas, tap water may also contain disease-causing agents. Therefore, it is advisable to brush your teeth with boiled water or water from original sealed bottles.



6 For certain individuals (e.g. people with chronic inflammatory intestinal diseases or insufficient gastric acid secretion) it is possible to obtain a vaccination against specific diarrheal pathogens when traveling to risk areas. If needed, such a vaccination will be prescribed by a physician.



Beverages should preferably only be used when still in their original sealed containers (examine seal!). Ice cubes should be avoided because they may have been produced from contaminated water. Tap water should be boiled for at least 1 minute before using it (at an elevation of greater than 2,000 meters, boil for at least 3 minutes, because at these heights water starts boiling at a rather low temperature).

Another possibility is to disinfect water with iodine, chlorine, and/or silver ions (e.g. Micropur<sup>®</sup>). Turbid water should be filtered first because turbidity and suspended particles may impede the effect of the disinfectant. Adequate filters and ready-to-use products can, for example, be purchased from outdoor stores.

This patient information was created in coordination with the Robert Koch Institute (Berlin).

# ■ Travelers' diarrhea



Lebensretter Antibiotika Wissen wann — wissen wie.

### Travelers' diarrhea — what can I do?

### Restoration of lost fluids (oral rehydration)

In most cases, it is sufficient to drink sweetened tea (herbal tea) or broth. Diluted fruit juice and salted biscuits are also recommended. Pretzel sticks and cola are not recommended because they lead to an uncontrolled intake of large amounts of sugar and salt.

### Antibiotics

In case of fever (> 38.5 °C) or bloody diarrhea, an appropriate antibiotic should be taken. The prescription must be provided by a physician. Please never take leftover antibiotics from previous illnesses or travels without consulting a doctor.

## Secretion blockers (e.g. Tiorfan<sup>®</sup>, Vaprino<sup>®</sup>)

Secretion blockers impede the increased secretion of water and salts through the bowel that typically occur with diarrhea. Thus, stool quantity and stool frequency are reduced and the duration of the diarrhea is shortened. The actual cause is not remedied. Do not take when running a fever or if the stool is bloody. Do not take for more than 3 days.

### When should a doctor be consulted?

- Poor general condition (dehydration, low blood pressure, tendency to collapse)
- If symptoms persist for more than 5 days. In this case it should be determined which pathogen is responsible for the diarrhea (possibly you are dealing with a different infection with similar symptoms)
- When running a fever (>38.5°C)
- Diarrhea with bloody stools
- When no or no sufficient fluid intake is possible (e.g. when one of the symptoms is vomiting)

#### **Electrolyte solutions**

If you are dealing with a severe case of travelers' diarrhea or if children or elderly individuals are affected, the additional intake of electrolyte solutions is required. These may be purchased from pharmacies or, if needed, they can be self-prepared on site, e.g. from 1 liter of boiled water, 1 level teaspoon of salt, and 8 teaspoons of sugar. Children under the age of 5 should not be given a self-made solution.

### Antimotility agents (e.g. Loperamid)

These drugs may stop the diarrhea by slowing down bowel motility. However, the diarrhea pathogen is then retained in the bowel. The result is thus merely a remission of symptoms, but not a treatment of the actual cause of the disease. Accordingly, such drugs should only be used in the case of severe diarrhea (but only in the absence of fever or blood in the stool, and not with children under the age of 2) and only for a maximum of 3 days.

### Other drugs

There are indications that probiotics (preparation containing viable microorganisms) may strengthen the intestinal flora. However, there is no clear evidence to support their effectiveness. It is not recommended to take tannin, kaolin, pectin, or medicinal charcoal. So far, these drugs could not been shown to have a clear benefit.

#### Important to know

These recommendations cannot serve as a substitute for a personal consultation with a physician. For people with underlying medical conditions or if specific risk factors apply, individual consultation is recommended.