

Eating and Swallowing Challenges After Burn Injury

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<https://msktc.org/burn/factsheets>

BURN Factsheet

This factsheet outlines what to expect if you have challenges with eating and swallowing after a burn injury. It covers common symptoms, risk factors, treatment options, and types of supports.

What Are Eating and Swallowing Challenges After Burn Injury?

Eating and swallowing challenges, also known as dysphagia (dis-fay-ja), are a common result of burns to the face, neck, and mouth. Burns in these regions can affect a person's ability to fully move their lips and face to eat and drink. Burns can also affect the sensation in the mouth and throat regions that is necessary to swallow safely.

Burns can also cause contractures to form in these areas. Contractures are a tightening of the skin and underlying tissues that can restrict movement, often across joints. They occur during the burn healing process, when scar tissue forms and contracts. This can lead to reduced range of motion, pain, and other issues.

Challenges with eating or drinking can affect nutrition and health. They can also affect the social enjoyment of eating. Knowing how swallowing works can help you understand how burns can affect the ability to swallow.

Normal swallowing has two parts: an oral phase and a pharyngeal phase.

The Oral Phase

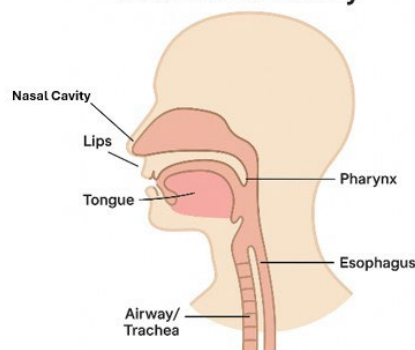
This phase includes the ability to fully open and close the mouth to get food from a utensil, contain the food or drink within the mouth, move the mouth to chew the food adequately, and move the chewed food or drink to the back of the mouth and throat.

The Pharyngeal Phase

In general, this phase happens after a person triggers a swallow response. The swallow response moves food or drink from the throat down to the stomach. It may prevent food or drink from going into the airway to the lungs or "down the wrong pipe;" this is known as aspiration.



Oral and Pharyngeal Swallow Anatomy



Note. This image was generated by artificial intelligence and then reviewed by experts. When given a prompt to create a "simple image/diagram with the swallow physiology including the lips, nasal cavity, tongue, palate, pharynx, esophagus, and airway/trachea," ChatGPT generated the graphic above (OpenAI, 2025).

The Model Systems Knowledge Translation Center works with Burn Model System (BMS) centers to provide free, research-based rehabilitation resources for people living with burn injury (See <https://msktc.org/burn> for more information). This factsheet has been approved by experts from the BMS centers.



After a Burn Injury, Who Might Have Challenges With Eating or Swallowing?

Research shows that up to 28% of people with burn injuries have challenges with swallowing.

You are more likely to have trouble swallowing if you have any of the following:

- An inhalation injury. This means that you have damage to your lungs or airways from breathing in smoke or hot air. Up to 9 out of 10 people with an inhalation injury have some degree of swallowing difficulty.
- Burns or contractures in the face or neck area. Contractures can affect the way your mouth, tongue, and throat muscles move, making it hard to swallow.
- A breathing tube or a tracheostomy. This is a surgical hole through the neck and into the airway.



Symptoms of Eating or Swallowing Challenges

Eating and swallowing challenges can occur at any point after a burn. They may occur depending on the location and severity of the burns. The next section highlights the variety of symptoms that a person with a burn injury may have, or that their spouse, caregiver, or loved one may see.

Challenges during the oral phase may include:

- Trouble opening or closing the mouth or lips. This can result in food or drink coming out of the mouth, trouble getting food off a utensil, or trouble sucking liquid from a straw.
- Trouble opening the mouth to bite into whole foods or to take a larger bite (e.g., of an apple or sandwich).
- Trouble moving the mouth and jaw to chew solid foods.
- Trouble using the tongue and lips to move food to prepare for swallowing. This can result in leftover food in the mouth after swallowing.
- Pain or new sensations during any of these actions.



Challenges during the pharyngeal phase may include:

- Pain or new sensations while swallowing.
- Coughing during or after swallowing.
- A sensation of food or drink being “stuck.”
- Changes in the voice while eating or drinking, or after eating and drinking. This could include a wet or gurgling voice quality.
- Choking.



What Are the Potential Impacts of Eating or Swallowing Challenges?

Aspiration

This happens when food, drink, or saliva goes down the “wrong pipe” into your lungs instead of your stomach. You might cough a lot or feel like something is stuck in your throat. Sometimes, you may not feel anything. This is known as “silent aspiration.”

Aspiration Pneumonia

If food or drink gets into your lungs, it can cause an infection in your lungs called aspiration pneumonia. This can make you feel very sick with a cough, fever, and trouble breathing. If you are having any of these symptoms, you should contact your doctor as soon as possible.

Malnutrition

Burn survivors often need more calories, protein, and nutrients than usual to help the body repair the skin, fight infections, and heal wounds. But when it is hard to swallow, it can be hard to eat enough food, including food that is rich in vitamins, minerals, and protein. Foods that are high in protein include meat, eggs, fish, and legumes. Some protein-rich foods that may be easier to swallow include yogurt, cottage cheese, soft eggs, tender meats, and protein shakes.



If your body doesn't get what it needs,

- Wounds can take longer to heal.
- You may lose muscle and strength.
- Your immune system may weaken, making it hard to fight infections.
- You may feel tired, weak, or dizzy more often.

Dehydration

After a burn injury, your body can lose fluids quickly through the damaged skin. On top of that, having a fever, breathing fast, or sweating more than usual can increase water loss. Staying hydrated by drinking plenty of fluids is crucial and can help your body to do the following:

- Regulate temperature,
- Deliver nutrients to cells,
- Flush out waste, and
- Help your skin and your wounds to heal properly.



If swallowing is painful or slow, you may avoid drinking. This can lead to the following:

- Dry mouth, which can make swallowing even harder.
- Constipation.
- Kidney problems.
- Increased confusion or fatigue, especially in older adults.



Do Eating or Swallowing Challenges Get Better?

Yes, for many people, these issues do get better. In one study, 9 out of 10 burn survivors could swallow normally by the time they left the hospital. A few needed to eat soft foods or pureed food. But most patients improved with time and with the support of others.

If you have burns to your mouth or face, you should know that scar tissue can continue to change for months or years after the burn. This can sometimes affect how you move your lips, jaw, or tongue, which can make eating and drinking hard later.

If you notice new or worsening swallowing challenges, tell your doctor or care team right away. They can help you connect with the correct specialists.



Who Can Treat Eating or Swallowing Challenges?

Across care settings, your burn care team can assess, treat, and offer referrals for challenges with swallowing. When doctors identify a person who is at high risk for swallowing challenges, they may recommend an assessment by a speech-language pathologist (SLP). The SLP evaluation may include:

- Assessment of the face and mouth movements used for chewing and swallowing.
- Watching a person as they eat and swallow foods with various textures. This will help them to make recommendations for food or drinks that are safe to have.
- A swallow test to evaluate how easily food and drinks move through the mouth and throat, and if any foods or drinks are aspirated. This may include either an x-ray video swallow study or a fiberoptic endoscopic evaluation of swallowing. For the video swallow study, the SLP will provide food and drinks and watch how they move through the mouth and throat on x-ray. With the latter test, the provider will pass a camera scope through the nose and into the throat. SLPs often work with other providers to choose the best treatment plan. They may work with other doctors, surgeons, physical and occupational therapists, dietitians, nurses, and other clinicians.

What Treatments Can Help With Eating or Swallowing Challenges?

Your care team will choose treatments based on your symptoms and may recommend the following:

- **Changes to your diet.** This involves changing the consistency, temperature, or texture of your food and drink. For example, you may switch to eating soft foods or thickened liquids.
- **Strategies.** This may include cutting your food into smaller pieces. You may avoid certain foods or use a specific posture or maneuver when eating or drinking if your care team recommends it.
- **Exercises.** Some exercises may improve the strength and flexibility of the throat or face and mouth muscles and tissues. You should do them with the supervision or with the recommendation of a professional.
- **Other treatments for burns to the face and mouth.** Treatments may include external massage, pressure garments, oral splints, or surgery to improve range of motion.



What Can You Do to Help Yourself if You Have Challenges With Eating or Swallowing?

Tell your health care providers if you are having trouble with eating or swallowing. You should follow their guidance for specific treatment options. There are ways that you and your caregivers and family can help with eating and swallowing challenges. Family members and caregivers can help by watching for swallowing challenges, preparing foods that are easy to eat, and providing emotional support during meals. Other things you can do at home to support safe eating and swallowing include the following:



- Always sit upright while eating and for 30 minutes after meals.
- Take small bites and chew your food until it is soft or ground up.
- Avoid talking or laughing while eating.
- Drink plenty of fluids unless your doctor tells you otherwise.
- Have someone else present when eating or drinking in case a choking episode or difficulty occurs.
- Complete daily stretches for your face, lips, and mouth if recommended. This includes smiling wide, moving your mouth side to side, and puckering your lips.
- Practice opening your mouth wide as if biting into an apple or large sandwich.
- Maintain good dental health and oral hygiene. Let your provider know if this is hard to do because of your injuries so that they can provide suggestions or guidance.
- Follow any other specific instructions from your SLP or dietitian.

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Authorship

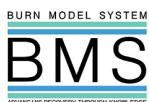
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Disclaimer: This information is not meant to replace the advice of a medical professional. You should consult your health care provider about specific medical concerns or treatment. The contents of this factsheet were developed under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant number 90DPKT0009). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this factsheet do not necessarily represent the policy of NIDILRR, ACL, or HHS, and you should not assume endorsement by the federal government.

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