**What happens when you aspirate food?**

What exactly is happening when your food goes down the wrong pipe?  
  
We've all been there: You're having a pleasant meal when suddenly, out of nowhere, your food goes down the wrong pipe. It's uncomfortable, annoying and scary at the same time. It's the worst.   
  
But why does this happen? What are all of these "pipes" for? And where does that food or liquid even go? To clear things up, we spoke to Dr. Clark Rosen, a professor of otolaryngology at the University of Pittsburgh School of Medicine and medical director of UPMC Voice Center, and Dr. Lawrence S. Kim, M.D., a Colorado-based gastroenterologist.  
  
When you put food in your mouth, a lot of muscles go into action without you even knowing it.  
  
"Theres a mental component," says Rosen. "You have to know that you're getting ready to swallow." The act of swallowing involves more than 30 different muscles in and around the throat that spring into action in less than one second. First, you have to chew food down to a size you know you can swallow, and then your tongue pushes it into the back of the throat, where it has two "pipe" options: the esophagus and the trachea.   
  
After you're done chewing, that's where the "pipes" come in.  
  
If you swallow correctly, solids or liquid will go down your esophagus into your stomach. This is because, when your tongue propels the food into your throat, your voice box elevates to close off your trachea, or breathing "pipe." At the same time, the opening of your esophagus opens up (it's usually closed to protect the contents of your stomach from pouring out each time you bend over).   
  
At this point, a series of muscles in your throat forces the food down into your esophagus -- picture it like the way snakes move food down into their bodies, where muscles constrict at the top part of the column and relax at the bottom part of the column. This is called persistalsis and it takes about 10 to 15 seconds, says Kim.  
  
Yes, your food really can go "down the wrong pipe."  
  
Since your mouth has to do double-duty -- breathing air in and out and swallowing food -- things don't always run smoothly. When somebody feels like something went down the wrong pipe, it usually means that it went into his or her trachea, a process known as aspiration.  
  
"In otherwise healthy people, the presence of foreign material in the airway is extremely uncomfortable and will stimulate immediate gag and coughing reflexes," says Kim. "If these reflexes fail to clear the material, it may become lodged in and obstruct the trachea causing choking." Even if you don't choke, food that makes its way down the trachea into your lungs can lead to a very serious case of pneumonia.  
  
So why does this happen? It's usually a cognitive issue -- the person swallowing isn't fully awake or they're distracted -- or it can be a physical problem, where someone has a sensation or motor abnormality. It also commonly occurs after a stroke or surgery on the throat. "This happens more frequently as we age, too, because our muscles don't react as quickly and our sensation isn't as good as it was when we were younger," Rosen adds.  
  
Liquids are trickier than solid food.  
  
You should also take into consideration that liquids are much harder to swallow than solids, simply because they move faster and are more difficult to manage. "When people are having swallowing problems, liquids are their nemesis," says Rosen. "When people get life-threatening pneumonia from their swallowing, it's usually liquids, not solids."  
  
Even if you don't have problems swallowing per se, it's a good idea to be extra alert every time you drink.  
  
Sometimes, food is just stuck in the right "pipe."  
  
Discomfort while swallowing can also be caused when food goes down the esophagus like it's supposed to -- it's that feeling that something's caught in your throat, accompanied by an uncomfortable fullness in your upper chest or neck area, but you can still breathe. If you're violently coughing, though, that's a good indication that the food did, in fact, go down the "wrong pipe," your trachea.  
  
So what should you do when food goes "down the wrong pipe"?  
  
"Immediately after you feel that something went down the wrong way, you feel like you can't breathe and your voice is really constricted or you have no voice at all," says Rosen. "That's because everything has gone into restriction, shut-down, violation mode." When your voice box senses that something went into your windpipe, it closes off, because there's been a "violation." Often, there's more food or liquid coming, so it doesn't want anything else entering the windpipe.   
  
Don't be afraid to cough when this happens. Coughing is your natural protective mechanism that will clear your throat -- and it's very powerful. Most of the time, your coughing will get the food or liquid out of your trachea and into your esophagus, a.k.a. the right "pipe," without you even knowing it. (So don't worry if you don't actually see or feel the food come up.) You can also take small sips of water to help this process along.  
  
Once your body knows that it's gotten everything out of the airway, you'll stop coughing, start breathing normally and you'll get your voice back if it was scratchy or restricted. Moral of the story: Pay attention while you're eating or drinking, and don't fight an urge to cough. But if you consistently have swallowing problems, consult an ENT.