



## Swallowing Difficulties and Medications

A Bruno Byte

From Dr. Richard L. Bruno, HD, PhD

Director, International Centre for Polio Education

Question: I hope you can help me. I have had a lot of difficulties with my throat for a long time now. One of the issues is that after any meal food seems to get stuck just below my esophagus, which is really uncomfortable and sometimes painful. My GP prescribed domperidone (10mg three times a day) which is amazing and eases the problem quite considerably. However the packet states that I should not take the drug continually for more than 7 days, which is a problem because I need the drug continually. What should I be doing?

Answer: Fifty years ago polio pioneer David Bodian discovered that every polio survivor had some poliovirus-damage to neurons in the brain stem, the so-called "bulb" of the brain. When brain stem damage was severe "bulbar" polio was diagnosed whose icon, the iron lung, was needed when brain stem breathing-control neurons stopped working. But the most common symptom of "bulbar" polio was trouble swallowing, not trouble breathing.

Poliovirus-damaged brain stem neurons that control the vagus nerve, which carries commands from the brain stem to activate muscles in your throat, esophagus, stomach and intestines, are the cause of swallowing problems. Vagus damage disrupting the normal functioning of the gut may explain our 1985 National Post-Polio Survey findings that swallowing difficulty, diarrhea, colitis, ulcers and constipation are as much as six times more common in polio survivors than in non-polio survivors.

Polio survivors have also been reporting your problem: Food sticking in the esophagus, usually behind the upper breastbone. We think this is due to the vagus not stimulating esophagus muscles to move the food downward. When food gets stuck, irritation triggers painful esophagus muscle spasms.

With regard to medication, Post-Polio Institute patients have taken domperidone for many months to years to promote stomach emptying and reversing intestinal paralysis. I have not heard of domperidone being used to treat food getting stuck "just below the esophagus," the location of the esophageal sphincter (valve) between esophagus and stomach.

Domperidone blocks dopamine receptors in the gut and thereby makes the gut move, but does **not** enter the brain as does a similar drug, metoclopramide (Reglan), that makes the gut move but blocks dopamine receptors in the gut *and* in the brain. Any drug that affects dopamine is a huge **red flag** for polio survivors, whose dopamine producing neurons were damaged and killed during the original poliovirus infection and whose dopamine receptors are very susceptible to having their sensitivity turned way up or way down. A post-polio patient who took just one intravenous dose of Reglan to treat a paralyzed intestine developed a Parkinson'-like tremor, likely the result of dopamine receptor sensitivity being turned down, that lasted for years. I'd be concerned that long-term use of domperidone will make gut dopamine receptors *more* sensitive over time and slow down your entire intestine. Also, domperidone can alter electrical conduction in the heart, so your physician should monitor your EKG before the drug is begun and during use. For polio survivors who report that food gets stuck in the esophagus, we've found that a very low dose of the muscle relaxant clonazepam (Klonopin), taken thirty minutes before eating, relaxes spasms and stops food from sticking.

Polio survivors having frequent or severe trouble swallowing should see an ENT doctor and may need a video swallow study to find the cause and make sure something other than PPS isn't causing the trouble. Usually, slowly eating small bites of food, drinking water after each bite, tucking your chin or turning your head to one side when you swallow, swallowing several times, and eating your big meal when you're most rested, are what's needed to treat swallowing problems. A speech therapist can help you learn tricks to beat unique problems. Also, those who have heartburn may have reflux and should talk to their doctors about being evaluated with an endoscopy and treated with medication to reduce stomach acid.

Polio survivors who have any swallowing difficulty -- especially if they have breathing problems now or with the polio attack -- also need to make sure that food and water aren't "going down the wrong pipe," getting into the lungs and potentially causing pneumonia. Although pneumonia is exceedingly rare please remember: If you develop a new breathing problem or a hint of a chest infection, see a doctor ASAP! The lungs you save may be your own!

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