



HCl Challenge

Heartburn, or acid reflux, is an irritation of the esophagus by acid rising from the stomach. The lower esophageal sphincter which sits between the stomach and the esophagus is a muscle that normally should open to allow food to enter the stomach from the esophagus and close immediately to prevent that food (and other stomach contents including stomach acid) from re-entering the esophagus.

It is important to note that about 90% of all heartburn is caused by the body not producing enough stomach acid, while only 10% is due to high stomach acid levels. Stomach acid at appropriate amounts will trigger the lower esophageal sphincter to close, preventing any contents from moving into the esophagus, while weak amounts of acid cannot create this signal, and the sphincter will remain open. Low stomach acid levels also affect the signaling of digestive enzymes further along the digestive tract and can cause poor absorption of certain vitamins and minerals, poor protein digestion and absorption, and most notably, heartburn.

To assess stomach acid (HCl levels), take 1 capsule of betaine hydrochloride (HCl) or 1 tsp of apple cider vinegar in the middle of the largest meal of your day. Note any symptoms you may have (burping, warming sensation, burning) in the table below. If you feel an immediate strong burning pain then do not continue taking any more HCl on subsequent days. If you feel a mild warming sensation or nothing at all, the next day take 2 capsules of HCl or 2 tsp of apple cider vinegar with the largest meal of your day. Continue increasing by 1 capsule or 1 tsp until you feel a strong warming/burning sensation up to a maximum of 5 days. Note all symptoms for your ND to assess.

Day	# of Capsules of HCl or tsps of apple cider vinegar	Symptoms
1	1	
2	2	
3	3	
4	4	
5	5	