

EFFECT OF RMT ON REFLUX IN GERD



The crural diaphragm (CD) is an essential component of the esophagogastric junction (EGJ) and, in combination with inspiratory muscles and abdominal wall, prevents gastroesophageal reflux (GER). CD is impaired in people with GER disease (GERD), leading to increased GER. Inspiratory muscle training may improve CD strength and EGJ motility and function in people with GERD.

Respiratory muscle training (RMT) was tested to improve GER in GERD patients.

Key Findings

- The crural diaphragm is involved in both ventilation and prevention of reflux.
- The crural diaphragm is impaired in people with gastroesophageal reflux disease (GERD), leading to heartburn, regurgitation, acid exposure and other symptoms.
- Respiratory muscle training (RMT) significantly reduced the symptoms of GERD by strengthening the crural diaphragm and improving the motility of the esophagogastric junction.
- RMT effectively improves crural diaphragm function and GERD symptoms in people with GERD.

Study Methods

Heartburn, regurgitation, EGJ pressure, lower esophageal sphincter relaxations, acid exposure, reflux, and heart rate variability were tested before and after 2 months of RMT in patients with GERD, and compared to healthy controls.

Study Results

Heartburn, regurgitation, acid exposure, EGJ pressure, lower esophageal sphincter relaxations, reflux and heart rate variability significantly improved due to RMT.

In conclusion, RMT significantly improves the symptoms of GERD by strengthening of the crural diaphragm.

References

Nobre e Souza MÂ. Inspiratory muscle training improves antireflux barrier in GERD patients. *Am J Physiol Gastrointest Liver Physiol.* 2013 Dec;305(11):G862-7.