Aspiration during anesthesia is not a common phenomenon. However, the incidence is higher in emergency anesthesia and for the individual, aspiration means a severe complication. The esophageal sphincters constitute the anatomical protection against pulmonary aspiration. The aim of this thesis was to study the esophageal sphincters and how they are affected by different components of emergency anesthesia using high-resolution solid-state manometry. Based on experimental studies in volunteers and clinical studies in patients, new knowledge is provided in this field.