After treatment of laryngeal cancer 35 patients with dysphagia have been examined by high speed cineradiography. When compared to normal swallowing patterns, the following abnormalities were observed: Excursion of the posterior pharyngeal wall during swallowing is twice as intensive as normal. The function of the base of the tongue becomes more important for pharyngeal emptying--a fact that surgeons should take into consideration when planning laryngeal resection. Timing of pharyngeal constriction and function of the upper esophageal sphincter are definitively altered. In view of these changes we think that cineradiography can help to find better methods for functional surgery of the pharynx and the adjacent structures.