The use of high-frequency video cineradiography makes possible an objective and dynamic rendering of the individual velopharyngeal closer pattern. The high resolution and the depiction of the finest mucosal structures while in motion achieved by this technique opens up the possibility of exact and objective 3-dimensional evaluation of the velopharyngeal gap. Following secondary velopharyngoplasty on 80 cleft palate patients, the velopharyngeal closure was studied by means of high-frequency video cineradiography and this rendering was then compared to results obtained by nasoendoscopy and to the clinical findings. It became definitely apparent that the radiological technique is markedly superior in relation to clearness of depiction and ease of use, especially in young children. This imaging technique can be recommended without reservation for pre- and postoperative control of speech-improving procedures.