Aim of this study is to investigate the influence of nerve monitoring for protection of recurrent nerve function in thyroid surgery. We analysed retrospectively the data of 369 patients, who underwent thyroid surgery at our clinic between 2000 and 2006. In 129 cases (35%) a hemithyroidectomy and in 236 cases (64%) a total thyroidectomy were performed. A single node in the isthmus was removed in 4 patients. In thyroidectomy we strove for identification of the recurrent nerve. This was performed successful in 96% (577 of 601) of the cases. In 94% of all thyroid surgeries nerve monitoring (NIM-Response/Medtronic) to watch the recurrent nerve were used. In 5 cases (0.83%) a permanent recurrent laryngeal nerve paralysis occurred. There was temporary recurrent laryngeal nerve paresis in 11 cases (1.84%). The use of nerve monitoring could not significantly lower the risk for recurrent laryngeal nerve paralysis or paresis (Fischer's exact test, p>0.05). As expected we found no influence of nerve monitoring on other surgical complications. The apply of intraoperative nerve monitoring is a useful tool in thyroid surgery and is described to lower the risk of recurrent laryngeal nerve damage, but to our opinion it does not replace the intraoperative preparation of the recurrent laryngeal nerve. Sound anatomical knowledge of the head-& neck region is an important requirement for save thyroid surgery.