Under the influence of vertically oriented microtubules, cells of the developing neural plate elongate, while contraction of actin microfilaments arranged circumferentially around the apical portions of the cells results in cells with a broad base and narrow apex. The process of neural fold bending in a dorsomedial direction also appears to involve differential proliferation and translocation of the neuroepithelial cells.34 Surface glycoproteins, especially cell adhesion molecules important for cell–cell recognition, as well as adhesive interactions with extracellular matrix, mediate fusion of the opposing neural folds. 1.1).