- Slowly progressive, generalized weakness during teenage years

Most children with DMD reach the appropriate developmental milestones early in life, although they may have mild, subtle delays. Evidence of muscle weakness usually appears during the third to seventh year, although there may have been a history of delay in motor development, particularly walking. Difficulties in running, riding a bicycle, and climbing stairs are usually the first symptoms noted. Typically, affected boys have a waddling gait and lordosis, fall frequently, and develop a characteristic manner of rising from a squatting or sitting position on the floor (**Gower sign**) (Fig. 30-8). Lordosis occurs as a result of weakened pelvic muscles, and the waddling gait is a result of weakness in the gluteus medius and maximus muscles (Battista, 2010). In the early years, rapid developmental gains may mask the progression of the disease.

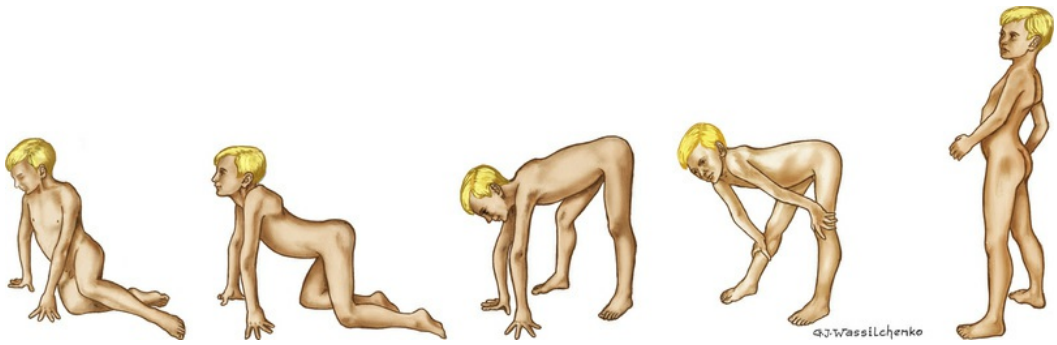

FIG 30-8 A child with Duchenne muscular dystrophy (DMD) attains standing posture by kneeling and then gradually pushing his torso upright (with knees straight) by "walking" his hands up his legs (Gower sign). Note the marked lordosis in an upright position.

Muscles, especially in the calves, thighs, and upper arms, become enlarged from fatty infiltration and feel unusually firm or woody on palpation (Box 30-9). The term **pseudohypertrophy** is derived from this muscular enlargement. Profound muscular atrophy occurs in the later stages; contractures and deformities involving large and small joints are common complications as the disease progresses. Ambulation usually becomes impossible by 12 years old. The loss of mobilization further increases the spectrum of complications, which may include osteoporosis, fractures,