

TABLE 10-1

## Muscles Supplied and Functions Served by Spinal Nerve Motor Roots

Root Segment	Representative Muscles	Function Served
C1 & C2	High Neck Muscles	Aid in head control
C3 & C4	Diaphragm	Inspiration (breathing in)
C5 & C6	Deltoid	Shoulder flexion, abduction (arm forward, out to side), Elbow flexion (elbow bent)
C6 & C7	Extensor Carpi Radialis- Pronator Teres	Wrist dorsiflexion (back of hand up)
C7 & C8	Triceps Extensor Digitorum Communis	Elbow extension (elbow straight) Finger extension ("knuckles" straight)
C8 & T1	Flexor Digitorum Superficialis Opponens Pollicis	Finger flexion (fist clenched) Thumb opposition (thumb brought to little finger) Spreading and closing the fingers
T2-T6	Intercostals	Forced inspiration (breathing in) Expiration (breathing out, coughing)
T6-T12	Intercostals Abdominals	Forced inspiration (breathing in) Aid in expiration (coughing) Aid in trunk flexion (sitting up)
L1, L2, L3	Illiopsoas Abductors	Hip flexion (thigh to chest) Hip adduction (thigh to midline, legs together)
L3 & L4	Quadriceps	Knee extension (knee straight)
L4, L5, S1	Gluteus Medius	Hip abduction (thigh out to side, legs apart) Foot dorsiflexion (foot up, walk on heels)
L5, S1, S2	Gluteus Maximus  Gastrocnemius	Hip extension (thigh in line with trunk, hips straight, e.g., standing) Foot plantar flexion (foot down walk on toes)
S2, S3, S4	Anal spincter  Urethral spincter	Bowel function (fetal continence) Bladder control (urinary continence)

Reprinted from:

Stolov, W.C.; Clower, M.R.; Handbook of Severe of Disabilities  
U.S. Department of Education Rehabilitation Services Administration, 1981, p.67.