

**Table 5**

**SYNERGISTIC PATTERNS\***

**Upper Extremity**

**FLEXION SYNERGY**

**Scapular adduction**

Trapezius (middle fibers)  
Rhomboids major and minor

**Scapular elevation (variable)**

Trapezius (upper fibers)  
Levator scapulae

**Shoulder external rotation**

Infraspinatus  
Teres minor

**Shoulder abduction**

Deltoid (middle fibers)  
Supraspinatus

**Elbow flexion**

Biceps brachii  
Brachialis

**Forearm supination**

Biceps brachii  
Supinator

**Wrist Flexion**

Flexor carpi radialis  
Flexor carpi ulnaris

**Finger flexion (variable)**

Lumbricales  
Dorsal interossei  
Flexor digitorum sublimis  
Flexor digitorum profundus

**Finger adduction (variable)**

Palmar interossei

**Thumb flexion (variable)**

Flexor pollicis brevis  
Flexor pollicis longus

**EXTENSION SYNERGY**

**Scapular abduction**

Serratus anterior

**Shoulder internal rotation**

Subscapularis  
Latissimus dorsi  
Teres major

**Shoulder adduction**

Pectoralis major  
Latissimus dorsi

**Elbow extension**

Triceps

**Forearm pronat ion**

Pronator teres  
Pronator quadratus

**Wrist extension**

Extensor carpi radialis longus  
Extensor carpi radialis brevis  
Extensor carpi ulnaris

**Finger and thumb response variable**

**Thumb adduction (variables)**

Adductor pollicis

**Lower Extremity****FLEXION SYNERGY****Hip abduction**Gluteus medius  
Sartorius  
Tensor fasciae latae**Hip flexion**Psoas major and iliacus  
Sartorius**Hip external rotation**Obturator externus  
Obturator internus  
Quadratus femoris  
Gemellus inferior  
Gemellus superior  
Piriformis  
Gluteus maximus  
Sartorius**Knee flexion**Biceps femoris (long and short head)  
Semitendinosus  
Semimembranosus  
Sartorius**Ankle dorsiflexion**Anterior tibialis  
Extensor digitorum longus  
Extensor hallucis longus**Toe dorsiflexion**Extensor digitorum longus  
Extensor digitorum brevis  
Extensor hallucis longus**EXTENSION SYNERGY****Hip adduction**Adductor magnus  
Adductor longus  
Adductor brevis  
Pectineus  
Gracilis**Hip extension**Gluteus maximus  
Semimembranosus  
Biceps femoris (long head)  
Semitendinosus**Hip internal rotation**Gluteus minimus  
Tensor fasciae latae**Knee extension**Rectus femoris  
Vastus intermedius  
Vastus medialis  
Vastus lateralis**Ankle plantar flexion**Gastrocnemius  
Soleus**Ankle inversion**

Tibialis posterior

**Toe plantar flexion**Lumbricales  
Flexor hallucis brevis  
Flexor hallucis longus  
Flexor digitorum longus  
Flexor digitorum brevis

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\* Muscles listed (upper and lower extremities) are *prime movers for the specified function*. Refer to **Tables 3 and 4** for accessory *muscle activity*.