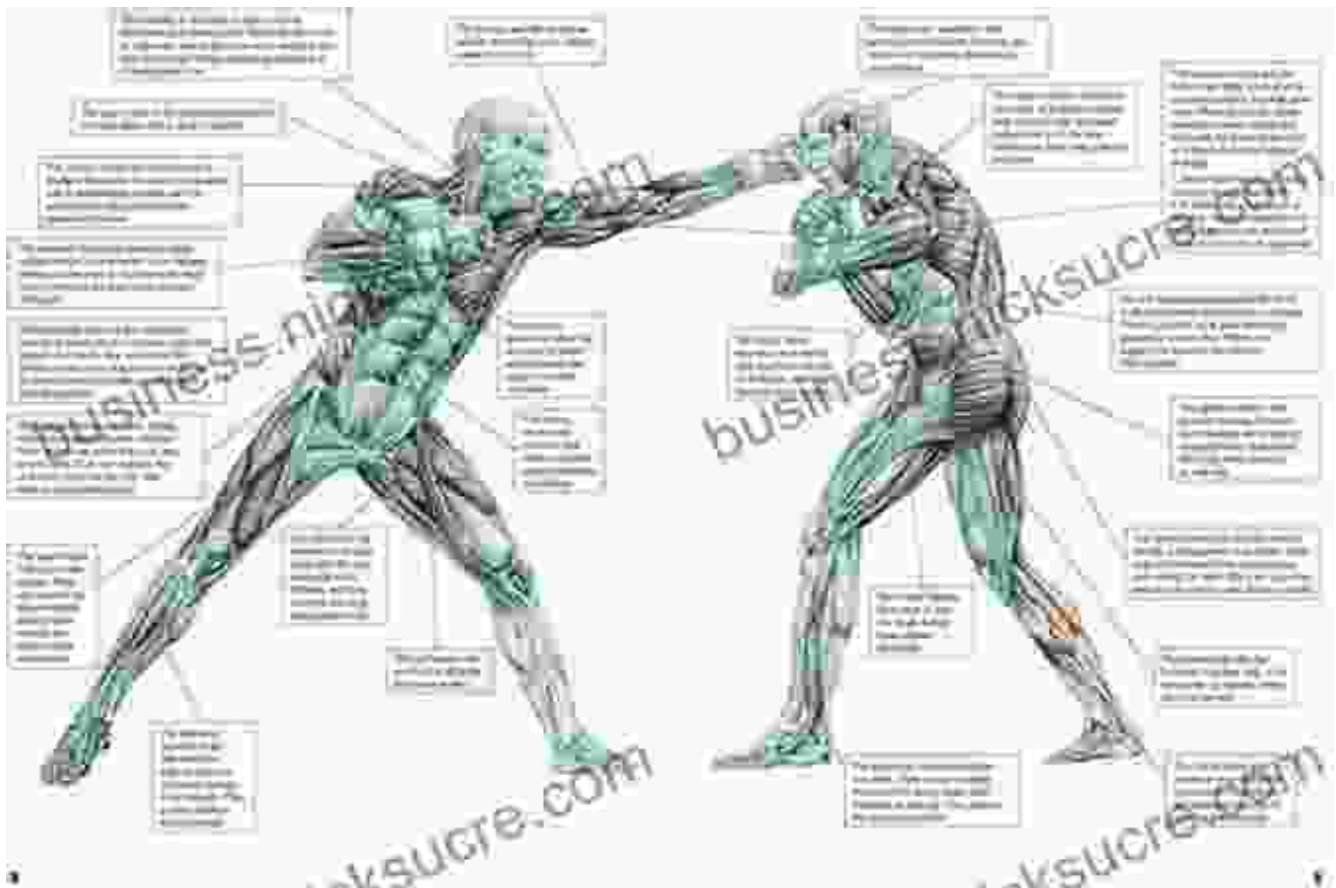


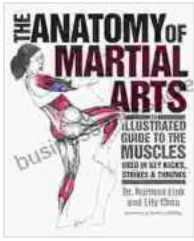
# An Illustrated Guide To The Muscles Used For Each Strike, Kick, And Throw

In the realm of martial arts, executing strikes, kicks, and throws effectively requires a thorough understanding of the muscles involved. Each technique utilizes a unique combination of muscles, working in synergy to generate power, precision, and control. This illustrated guide will delve into the anatomy of these movements, providing a detailed breakdown of the muscles used for each strike, kick, and throw.

## Strikes

### 1. Jab (Straight Punch)





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by Norman Link

★★★★☆ 4.5 out of 5

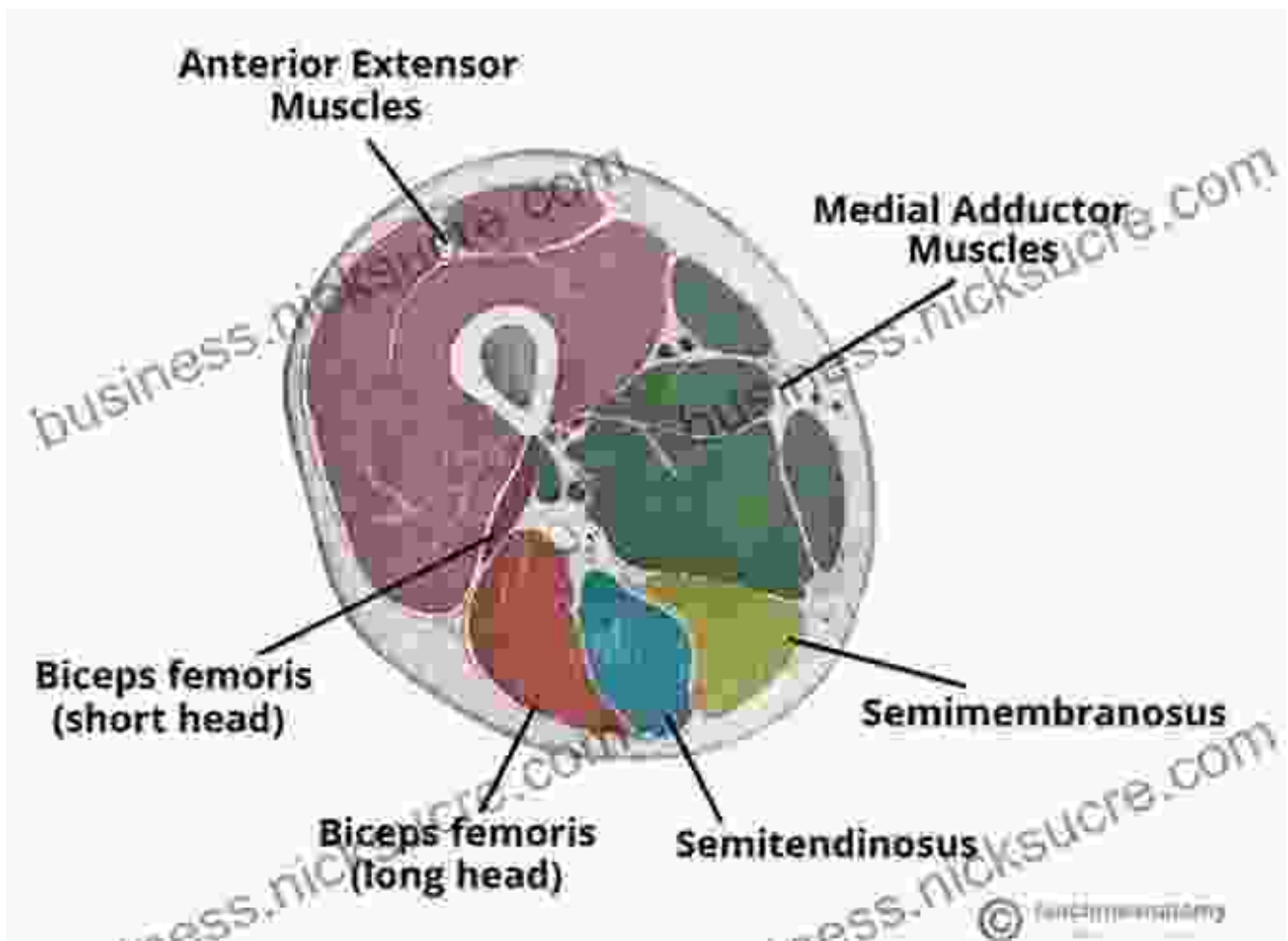
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\* **Prime Movers:** Triceps brachii (medial and lateral heads), brachialis, brachioradialis \* **Stabilizers:** Deltoids (anterior), pectoralis major, serratus anterior

The jab, a fundamental strike in boxing, requires the extension of the elbow joint. The triceps brachii is the primary muscle responsible for this action, with the brachialis and brachioradialis assisting in the forearm flexion. The deltoids, pectoralis major, and serratus anterior stabilize the shoulder joint, ensuring proper positioning and control.

## 2. Cross (Right Cross/Left Cross)



\* **Prime Movers:** Deltoids (anterior and lateral), pectoralis major, triceps brachii \* **Stabilizers:** Trapezius (upper and middle), serratus anterior, latissimus dorsi

The cross, a powerful rotational strike, involves a combination of shoulder flexion, abduction, and external rotation. The deltoids, particularly the anterior and lateral heads, act as the prime movers for shoulder flexion and abduction. The pectoralis major assists in shoulder flexion and external rotation, while the triceps brachii contributes to elbow extension. The upper and middle trapezius, latissimus dorsi, and serratus anterior stabilize the shoulder joint and facilitate the rotational motion.

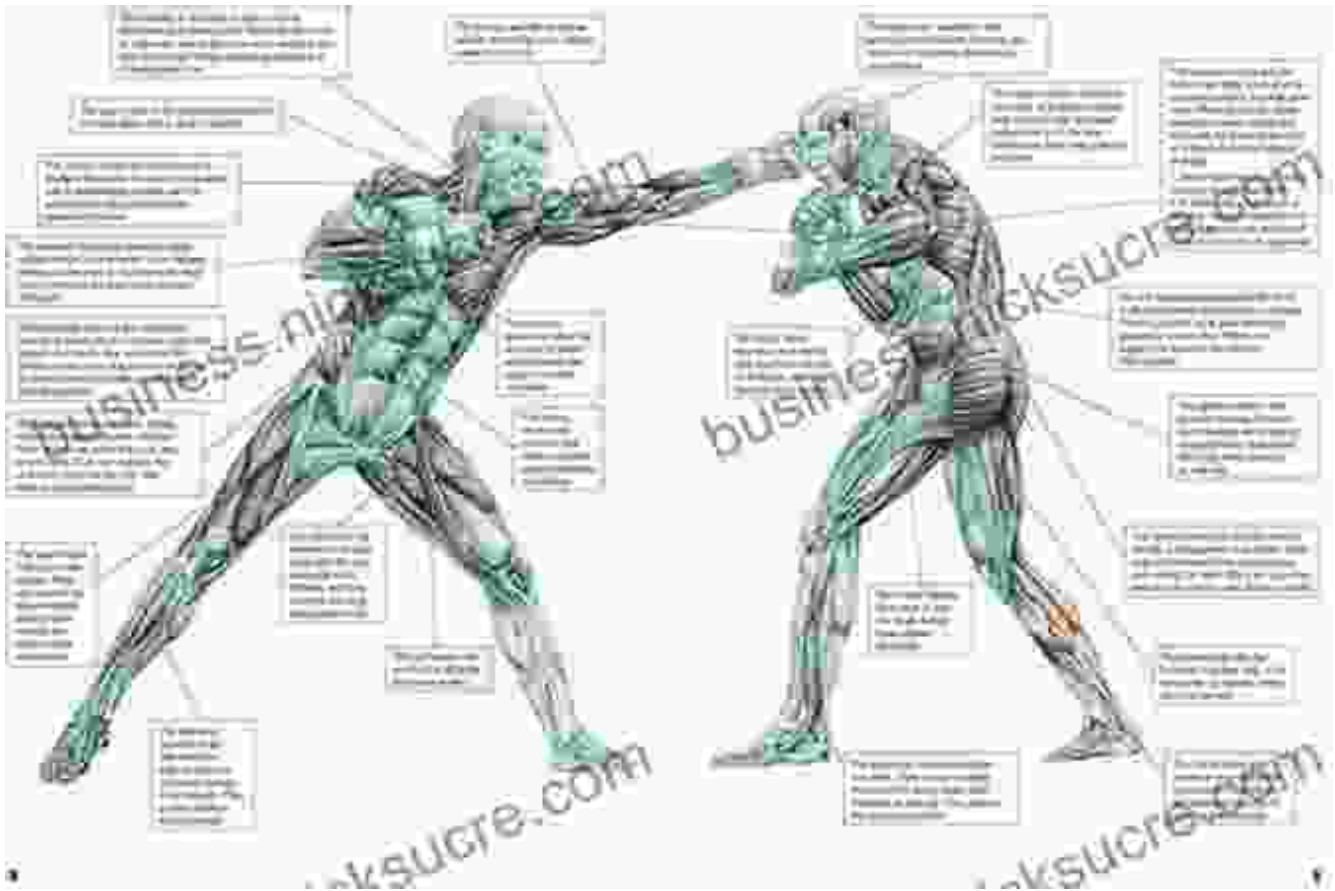
### 3. Hook (Left Hook/Right Hook)



\* **Prime Movers:** Deltoids (anterior and lateral), pectoralis major, latissimus dorsi \* **Stabilizers:** Trapezius (upper and middle), serratus anterior, rhomboids

The hook, a short, powerful punch, is characterized by a horizontal arc. The deltoids and pectoralis major are the primary muscles involved in shoulder flexion and adduction, respectively. The latissimus dorsi assists in adduction and extension, contributing to the rotational motion. The trapezius, serratus anterior, and rhomboids provide stability and support to the shoulder joint.

### 4. Uppercut



\* **Prime Movers:** Deltoids (anterior and lateral), triceps brachii, brachioradialis \* **Stabilizers:** Trapezius (upper and middle), pectoralis minor, serratus anterior

The uppercut, an upward strike, utilizes a combination of elbow flexion and shoulder abduction. The triceps brachii is the primary muscle responsible for the flexion of the elbow joint, while the deltoids elevate the shoulder. The brachioradialis, pectoralis minor, and serratus anterior assist in various aspects of the movement. The upper and middle trapezius provide stability and support to the shoulder joint.

## Kicks

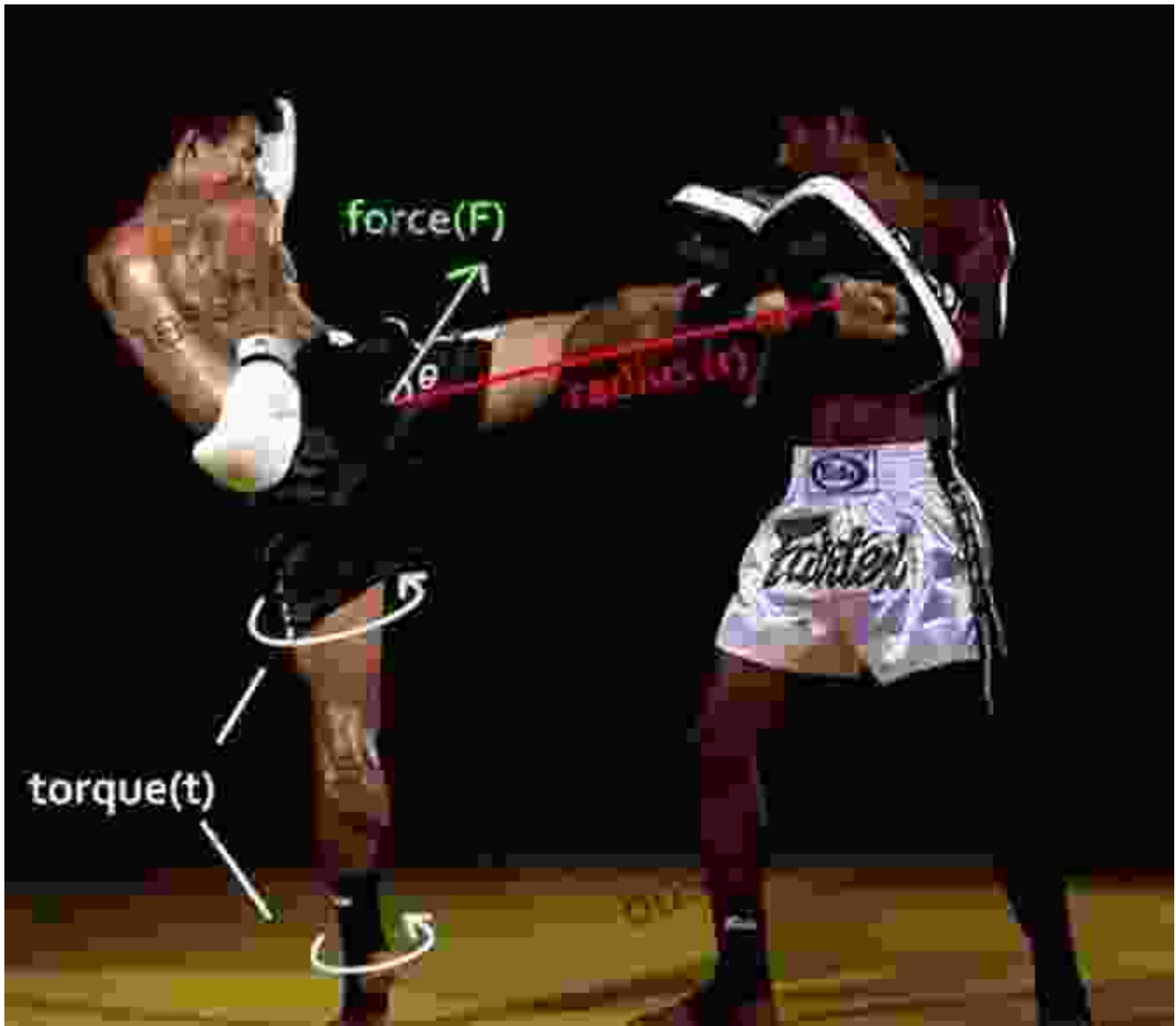
### 1. Front Kick



\* **Prime Movers:** Quadriceps (rectus femoris, vastus lateralis, vastus medialis, vastus intermedius), iliopsoas \* **Stabilizers:** Gluteus maximus, hamstrings (biceps femoris, semitendinosus, semimembranosus)

The front kick involves the extension of the knee joint and hip flexion. The quadriceps, consisting of the rectus femoris, vastus lateralis, vastus medialis, and vastus intermedius, are the primary muscles responsible for knee extension. The iliopsoas assists in hip flexion. The gluteus maximus stabilizes the hip joint, while the hamstrings provide support and control during the movement.

## 2. Roundhouse Kick



\* **Prime Movers:** Gluteus maximus, hamstrings (biceps femoris, semitendinosus, semimembranosus), quadriceps (vastus lateralis) \*

**Stabilizers:** Adductors (adductor magnus, adductor longus, adductor brevis), tensor fasciae latae, sartorius

The roundhouse kick, a spinning strike, requires a combination of hip extension, knee flexion, and ankle plantarflexion. The gluteus maximus and hamstrings are the primary muscles involved in hip extension. The vastus lateralis, part of the quadriceps, assists in knee flexion. The adductors,



tensor fasciae latae, and sartorius stabilize the hip and knee joints, facilitating the rotational motion.

### 3. Side Kick



\* **Prime Movers:** Gluteus medius, gluteus minimus, tensor fasciae latae \*

**Stabilizers:** Adductors (adductor magnus, adductor longus, adductor brevis), piriformis, quadratus lumborum

The side kick involves the abduction and external rotation of the hip joint. The gluteus medius, gluteus minimus, and tensor fasciae latae are the primary muscles responsible for hip abduction and external rotation. The adductors, piriformis, and quadratus lumborum provide stability and control during the movement.



## 4. Back (Rear) Kick



\* **Prime Movers:** Gluteus maximus, hamstrings (biceps femoris, semitendinosus, semimembranosus), quadriceps (biceps femoris) \*

**Stabilizers:** Adductors (adductor magnus, adductor longus, adductor brevis), tensor fasciae latae, sartorius

The back kick, a reverse roundhouse kick, utilizes a combination of hip extension, knee flexion, and ankle plantarflexion. The gluteus maximus and hamstrings are the primary muscles involved in hip extension. The biceps femoris, part of the hamstrings, assists in knee flexion. The adductors, tensor fasciae latae, and sartorius stabilize the hip and knee joints, facilitating the rotational motion.

## Throws

## 1. Hip Throw (O-goshi)



\* **Prime Movers:** Gluteus maximus, hip adductors (adductor magnus, adductor longus, adductor brevis), quadriceps (vastus lateralis) \*

**Stabilizers:** Hamstrings (biceps femoris, semitendinosus, semimembranosus), gluteus medius, piriformis

The hip throw involves a powerful hip rotation and adduction. The gluteus maximus and hip adductors are the primary muscles responsible for this action. The vastus lateralis, part of the quadriceps, assists in knee stability. The hamstrings, gluteus medius, and piriformis provide support and control during the throw.

## 2. Shoulder Throw (Seoi-nage)



\* **Prime Movers:** Deltoids (anterior, lateral, and posterior), trapezius (upper and middle) \* **Stabilizers:** Latissimus dorsi, rhomboids, serratus anterior

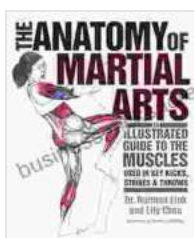
The shoulder throw is characterized by a forceful downward motion and rotation of the shoulder. The deltoids, anterior, lateral, and posterior heads, are the primary muscles responsible for this action. The trapezius provides stability to the shoulder joint, while the latissimus dorsi, rhomboids, and serratus anterior assist in various aspects of the movement.

### 3. Single Leg Takedown (Osoto-gari)



\* **Prime Movers:** Hamstrings (biceps femoris, semitendinosus, semimembranosus), quadriceps (rectus femoris, vastus lateralis, vastus medialis, vastus intermedius), gluteus maximus \* **Stabilizers:** Adductors (adductor magnus, adductor longus, adductor brevis), tensor fasciae latae, sartorius

The single leg takedown requires a combination of knee flexion, hip extension, and external rotation. The hamstrings and quad



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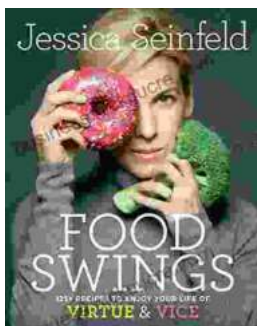
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