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Applications and Practices in Health Care

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Rheumatoid Arthritis

Rheumatoid arthritis is a chronic, systemic, and inflammatory disease that occurs when the immune system mistakenly attacks the body's own tissue, the synovium. The synovium is a thin membrane that lines your joints and it becomes inflamed and produces excess fluid when the immune system attacks it. This causes the wearing down of the cartilage. As the cartilage narrows the space between the bones narrows as well causing the bones to rub against each other, resulting in bone erosion. Symptoms of this disease vary from person to person and can change on a daily basis. This means that you may have this disease only for a short period of time or symptoms can come and go, but the severe form can last a lifetime. Rheumatoid arthritis causes pain, swelling, stiffness, deformity of joints, and loss of function in the joints. Rheumatoid arthritis can affect any joint but it usually affects the wrists, fingers, knees, feet and ankles and the most commonly joints seen effected are the smaller joints such as in the hands and feet. The inflammation of the joints can sometimes affect the eyes, mouth, and lungs. Rheumatoid arthritis commonly affects joints on both sides of the body equally. It doesn't only affect only the joints, sometimes it can affect your entire body with fevers and fatigue. Rheumatoid arthritis is more susceptible in women than in men, and usually occurs between the ages of 40-60. This disease cannot be cured so the treatment focuses on controlling symptoms and preventing joint damage.

Aggressive treatment and early diagnosis put the disease in remission and is the best way of avoiding organ damage, joint destruction and disability. The cause of Rheumatoid arthritis is unknown but factors that are believed to contribute to it are: genes, environment and hormones. Smoking is also a factor known for increasing the risk and severity of the disease, and reducing the effectiveness of the treatment. The treatments for Rheumatoid arthritis include medications, rest, exercise, or surgery. Two types of drugs are used to treat of RA are: drugs that relieve the symptoms (reduce inflammation, joint pain, stiffness and swelling) and strong medications that work by interfering with suppressing the immune system's attack on the joints this prevents or minimizes the progression of the disease. When rheumatoid arthritis has become severe or pain is not controlled by drugs, surgery is an option to help restore function to a damages joint.

Muscles in Motion-Outline

II. Aerobic Activities [Part One]- Thrift Shop (ZUMBA)

A. Partial Lunges/Jumps (Synovial/Hinge)

1. Rectus Femoris (Quadriceps)

- a. Origin: Anterior and Interior Iliac Spine
- b. Insertion: Patellar Tendon
- c. Action: Knee Extension/ Hip Flexion
- d. Antagonist: Hamstring

2. Sartorius (Quadriceps)

- a. Origin: Iliac Spine
- b. Insertion: Tibia
- c. Action: Flexion, Abduction, and Lateral Rotation of the Hip
- d. Antagonist: Adductor Longus

3. Gastrocnemius (Calf)

- a. Origin: Femur
- b. Insertion: Achilles Tendon
- c. Action: Plantar Flexes foot, Flexes Knee
- d. Antagonist: Tibialis

4. Modifications

B. Knee Shake Left (Synovial/Hinge)

1. Gracilis (Quadriceps)

- a. Origin: Ischiopubic Ramus
- b. Insertion: Tibia
- c. Action: Flexes, Abducts the Hips, Flexes the knee
- d. Antagonist: Gluteus Maximus

2. Adductor Magnus (Hamstring)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Adductor Longus

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Extends Thigh at Hip
- d. Antagonist: Semimembranosus

4. Semimembranosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibial Condyle
- c. Action: Extends the Knee Joint and Flexes The Hip Joint
- d. Antagonist: Quadriceps Muscle

5. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Quadriceps Muscle

C. Knee Shake Right (Synovial/Hinge)

1. Gracilis (Quadriceps)

- a. Origin: Ischiopubic Ramus
- b. Insertion: Tibia
- c. Action: Flexes, Abducts the Hips, Flexes the knee
- d. Antagonist: Gluteus Maximus

2. Adductor Magnus (Hamstring)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Semitendinosus

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Extends Thigh At Hip
- d. Antagonist: Semimembranosus

4. Semimembranosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibial Condyle
- c. Action: Extends the Hip and Flexes the Knee Joint
- d. Antagonist: Quadriceps

5. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Quadriceps

D. Alternating Jumps (Synovial/Hinge)

1. Rectus Femoris (Quadriceps)

- a. Origin: Anterior and Interior Iliac Spine
- b. Insertion: Patellar Tendon
- c. Action: Knee Extension/ Hip Flexion
- d. Antagonist: Hamstring

2. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Quadriceps

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Knee Flexion
- d. Antagonist: Quadriceps

4. Adductor Magnus (Hamstring)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Semimembranosus

E. Alternate Lunges (Hamstring)

1. Rectus Femoris (Quadricep)

- a. Origin: Anterior and Interior Iliac Spine
- b. Insertion: Patellar Tendon
- c. Action: Knee Extension/ Hip Flexion
- d. Antagonist: Hamstring

2. Sartorius (Quadricep)

- a. Origin: Iliac Spine
- b. Insertion: Tibia
- c. Action: Flexion, Abduction, and Lateral Rotation of the Hip
- d. Antagonist: Flex Thigh At Hip

3. Adductors of Thigh (Quadricep)

- a. Origin: Pubis
- b. Insertion: Femur, Tibia
- c. Action: Adduction of Hip
- d. Antagonist: Adductor Magnus

4. Gluteus Maximus (Gluteal)

- a. Origin: Ilium, Sacrum
- b. Insertion: Femur
- c. Action: External Rotation and Extension of the Hip
- d. Antagonist: Iliacus

5. Adductor Magnus (Adductors)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Semimembranosus

6. Biceps Femoris (Hamstring)

- a. Origin: Ischium, Femur
- b. Insertion: Fibula
- c. Action: Flexes Knee Joint, Rotates Knee Joint
- d. Antagonist: Quadriceps Muscle

7. Semitendinosus (Hamstring)

- a. Origin: Ischium
- b. Insertion: Tibia
- c. Action: Flex Knee, Extend Hip Joint
- d. Antagonist: Quadriceps Muscle

8. Gracilis (Hamstring)

- a. Origin: Ischiopubic Ramus
- b. Insertion: Tibia
- c. Action: Flexes, Rotates and Adducts the Hip, Flexes the Knee
- d. Antagonist: Gluteus Maximus

F. Open Side Leg Wobbles

1. Biceps Femoris (Hamstring)

- a. Origin: Ischium, Femur
- b. Insertion: Fibula
- c. Action: Flexes Knee Joint, Rotates Knee Joint
- d. Antagonist: Quadriceps Muscle

2. Sartorius (Quadricep)

- a. Origin: Iliac Spine
- b. Insertion: Tibia
- c. Action: Flexion, Abduction, and Lateral Rotation of the Hip
- d. Antagonist: Gracilis

3. Gracilis (Hamstring)

- a. Origin: Ischiopubic Ramus
- b. Insertion: Tibia
- c. Action: Flexes, Rotates and Adducts the Hip, Flexes the Knee
- d. Antagonist: Gluteus Maximus

4. Vastus Lateralis (Quadriceps)

- a. Origin: Femur
- b. Insertion: Patella
- c. Action: Extends and Stabilizes the Knee
- d. Antagonist: Biceps Femoris

G. Alternate Lunges (Don't Forget)

1. Rectus Femoris (Quadricep)

- a. Origin: Anterior and Interior Iliac Spine
- b. Insertion: Patellar Tendon
- c. Action: Knee Extension/ Hip Flexion
- d. Antagonist: Hamstring

2. Sartorius (Quadricep)

- a. Origin: Iliac Spine
- b. Insertion: Tibia
- c. Action: Flexion, Abduction, and Lateral Rotation of the Hip
- d. Antagonist: Adductor Longus

3. Adductors of Thigh (Quadricep)

- a. Origin: Pubis
- b. Insertion: Femur, Tibia
- c. Action: Adduction of Hip
- d. Antagonist: Adductor Longus

4. Gluteus Maximus (Gluteal)

- a. Origin: Ilium, Sacrum
- b. Insertion: Femur
- c. Action: External Rotation and Extension of the Hip
- d. Antagonist: Iliacus

5. Adductor Magnus (Adductors)

- a. Origin: Pubis

b. Insertion: Femur

c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip

d. Antagonist: Adductor Longus

6. Biceps Femoris (Hamstring)

a. Origin: Ischium, Femur

b. Insertion: Fibula

c. Action: Flexes Knee Joint, Rotates Knee Joint

d. Antagonist: Quadriceps Muscle

7. Semitendinosus (Hamstring)

a. Origin: Ischium

b. Insertion: Tibia

c. Action: Flex Knee, Extend Hip Joint

d. Antagonist: Quadriceps Muscle

8. Gracilis (Hamstring)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Rotates and Adducts the Hip, Flexes the Knee

d. Antagonist:

H. Hip Shake/Open Legs (Don't Forget)

1. Biceps Femoris (Hamstring)

a. Origin: Ischium, Femur

b. Insertion: Fibula

c. Action: Flexes Knee Joint, Rotates Knee Joint

d. Antagonist: Quadriceps Muscle

2. Sartorius (Quadricep)

a. Origin: Iliac Spine

b. Insertion: Tibia

c. Action: Flexion, Abduction, and Lateral Rotation of the Hip

d. Antagonist: Adductor Longus

3. Gracilis (Hamstring)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Rotates and Adducts the Hip, Flexes the Knee

d. Antagonist: Gluteus Maximus

4. Vastus Lateralis (Quadriceps)

a. Origin: Femur

b. Insertion: Patella

c. Action: Extends and Stabilizes the Knee

d. Antagonist: Biceps Femoris

5. Rectus Abdominis (Don't Forget)

a. Origin: Pubis

b. Insertion: Ribs, Sternum

c. Action: Flexion of Lumbar Spine

d. Antagonist: Erector Spinae

6. Gluteus Medius (Don't Forget)

a. Origin: Ilium

b. Insertion: Femur

c. Action: Abduction of the Hip

d. Antagonist: Medial Rotator Group

I. Add Arms (Don't Forget)

1. Biceps Brachii

a. Origin: Scapula

b. Insertion: Radial Tuberosity

c. Action: Flexes Elbow

d. Antagonist: Triceps Brachii Muscle

J. Hip Shake/Open Legs -Left Right Step/Shake (Don't Forget)

1. Biceps Femoris (Hamstring)

a. Origin: Ischium, Femur

b. Insertion: Fibula

c. Action: Flexes Knee Joint, Rotates Knee Joint

d. Antagonist: Quadriceps Muscle

2. Sartorius (Quadricep)

a. Origin: Iliac Spine

b. Insertion: Tibia

c. Action: Flexion, Abduction, and Lateral Rotation of the Hip

d. Antagonist: Adductor Longus

3. Gracilis (Hamstring)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Rotates and Adducts the Hip, Flexes the Knee

d. Antagonist: Rectus Femoris

4. Vastus Lateralis (Quadriceps)

a. Origin: Femur

b. Insertion: Patella

c. Action: Extends and Stabilizes the Knee

d. Antagonist: Biceps Femoris

5. Rectus Abdominis (Don't Forget)

a. Origin: Pubis

b. Insertion: Ribs, Sternum

c. Action: Flexion of Lumbar Spine

d. Antagonist: Erector Spinae

6. Gluteus Medius (Don't Forget)

a. Origin: Ilium

b. Insertion: Femur

c. Action: Abduction of the Hip

d. Antagonist: Medial Rotator Group

K. Add Arms (Don't Forget)

1. Biceps Brachii (Don't Forget)

a. Origin: Scapula

b. Insertion: Radial Tuberosity

c. Action: Flexes Elbow

d. Antagonist: Triceps Brachii Muscle

L. Forward Rock/Roll (Don't Forget)

1. Vastus Intermedius (Don't Forget)

a. Origin: Femur

b. Insertion: Quadricep

c. Action: Extension of Knee Joint

d. Antagonist: Biceps Femoris

M. Alternating Jumps Back (Don't Forget)

1. Rectus Femoris (Quadriceps)

a. Origin: Anterior and Interior Iliac Spine

b. Insertion: Patellar Tendon

c. Action: Knee Extension/ Hip Flexion

d. Antagonist: Hamstring

2. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Flexes Knee Joint
- d. Antagonist: Quadriceps Muscle

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Flexes the Hip
- d. Antagonist: Quadriceps Muscle

4. Adductor Magnus (Hamstring)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Abductors

N. Hip Shake/Open Legs (Don't Forget)

1. Biceps Femoris (Hamstring)

- a. Origin: Ischium, Femur
- b. Insertion: Fibula
- c. Action: Flexes Knee Joint, Rotates Knee Joint
- d. Antagonist: Quadriceps Muscle

2. Sartorius (Quadricep)

- a. Origin: Iliac Spine
- b. Insertion: Tibia
- c. Action: Flexion, Abduction, and Lateral Rotation of the Hip
- d. Antagonist: Adductor Longus

3. Gracilis (Hamstring)

- a. Origin: Ischiopubic Ramus
- b. Insertion: Tibia
- c. Action: Flexes, Rotates and Adducts the Hip, Flexes the Knee
- d. Antagonist: Gluteus Maximus

4. Vastus Lateralis (Quadriceps)

- a. Origin: Femur
- b. Insertion: Patella
- c. Action: Extends and Stabilizes the Knee
- d. Antagonist: Biceps Femoris

5. Rectus Abdominis (Abdomen)

- a. Origin: Pubis
- b. Insertion: Ribs, Sternum
- c. Action: Flexion of Lumbar Spine
- d. Antagonist: Erector Spinae

6. Gluteus Medius (Gluteal)

- a. Origin: Ilium

- b. Insertion: Femur
- c. Action: Abduction of the Hip
- d. Antagonist: Medial Rotator Group

O. Side Dips (Don't Forget)

1. Semitendinosus (Hamstring)

- a. Origin: Ischium
- b. Insertion: Tibia
- c. Action: Flex Knee, Extend Hip Joint
- d. Antagonist: Quadriceps Muscle

2. Biceps Femoris (Hamstring)

- a. Origin: Ischium, Femur
- b. Insertion: Fibula
- c. Action: Flexes Knee Joint, Rotates Knee Joint
- d. Antagonist: Quadriceps Muscle

3. Semimembranosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibial Condyle
- c. Action: Extension of the Hip
- d. Antagonist: Semitendinosus

4. Rectus Femoris (Quadriceps)

- a. Origin: Anterior and Interior Iliac Spine

b. Insertion: Patellar Tendon

c. Action: Knee Extension/ Hip Flexion

d. Antagonist: Hamstring

5. Vastus Lateralis (Quadriceps)

a. Origin: Femur

b. Insertion: Patella

c. Action: Extends and Stabilizes the Knee

d. Antagonist: Biceps Femoris

6. Latissimus Dorsi (Abdomen)

a. Origin: Iliac Crest

b. Insertion: Humerus

c. Action: Adducts, Extends, and Rotates the Arm

d. Antagonist: Deltoid, Trapezius

7. Rectus Abdominis (Abdomen)

a. Origin: Pubis

b. Insertion: Ribs, Sternum

c. Action: Flexion of Lumbar Spine

d. Antagonist: Erector Spinae

P. Knee Shake (left) (Don't Forget)

1. Gracilis (Quadriceps)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Abducts the Hips, Flexes the knee

d. Antagonist: Gluteus Maximus

2. Adductor Magnus (Hamstring)

a. Origin: Pubis

b. Insertion: Femur

c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip

d. Antagonist: Abductors

3. Semitendinosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibia

c. Action: Extension of the Thigh

d. Antagonist: Semimembranosus

4. Semimembranosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibial Condyle

c. Action: Retraction of the Thigh

d. Antagonist: Semitendinosus

5. Biceps Femoris (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Fibula

c. Action: Knee Flexion

d. Antagonist: Quadriceps

Q. Knee Shake (right) (Don't Forget)

1. Gracilis (Quadriceps)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Abducts the Hips, Flexes the knee

d. Antagonist: Gluteus Maximus

2. Adductor Magnus (Hamstring)

a. Origin: Pubis

b. Insertion: Femur

c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip

d. Antagonist: Abductors

3. Semitendinosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibia

c. Action: Extends the Hip

d. Antagonist: Quadriceps

4. Semimembranosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibial Condyle

c. Action: Recoilation of the Hip

d. Antagonist: Semitendinosus

5. Biceps Femoris (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Fibula

c. Action: Knee Flexion

d. Antagonist: Quadriceps

R. Alternating Jumps (Synovial/Hinge)

1. Rectus Femoris (Quadriceps)

a. Origin: Anterior and Interior Iliac Spine

b. Insertion: Patellar Tendon

c. Action: Knee Extension/ Hip Flexion

d. Antagonist: Hamstring

2. Biceps Femoris (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Fibula

c. Action: Knee Flexion

d. Antagonist: Quadriceps

3. Semitendinosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibia

c. Action: Extends the Hip

d. Antagonist: Semimembranosus

4. Adductor Magnus (Hamstring)

a. Origin: Pubis

b. Insertion: Femur

c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip

d. Antagonist: Abductors

S. Alternate Lunges

1. Rectus Femoris (Quadricep)

a. Origin: Anterior and Interior Iliac Spine

b. Insertion: Patellar Tendon

c. Action: Knee Extension/ Hip Flexion

d. Antagonist: Hamstring

2. Sartorius (Quadricep)

a. Origin: Iliac Spine

b. Insertion: Tibia

c. Action: Flexion, Abduction, and Lateral Rotation of the Hip

d. Antagonist: Adductor Longus

3. Adductors of Thigh (Quadricep)

a. Origin: Pubis

b. Insertion: Femur, Tibia

c. Action: Adduction of Hip

d. Antagonist: Abductors

4. Gluteus Maximus (Gluteal)

a. Origin: Ilium, Sacrum

b. Insertion: Femur

c. Action: External Rotation and Extension of the Hip

d. Antagonist: Iliacus

5. Adductor Magnus (Adductors)

a. Origin: Pubis

b. Insertion: Femur

c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip

d. Antagonist: Abductors

6. Biceps Femoris (Hamstring)

a. Origin: Ischium, Femur

b. Insertion: Fibula

c. Action: Flexes Knee Joint, Rotates Knee Joint

d. Antagonist: Quadriceps Muscle

7. Semitendinosus (Hamstring)

a. Origin: Ischium

b. Insertion: Tibia

c. Action: Flex Knee, Extend Hip Joint

d. Antagonist: Quadriceps Muscle

8. Gracilis (Hamstring)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Rotates and Adducts the Hip, Flexes the Knee

d. Antagonist: Gluteus Maximus

T. Knee Shake (left)

1. Gracilis (Quadriceps)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Abducts the Hips, Flexes the knee

d. Antagonist: Gluteus Maximus

2. Adductor Magnus (Hamstring)

a. Origin: Pubis

b. Insertion: Femur

c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip

d. Antagonist: Abductors

3. Semitendinosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibia

c. Action: Knee Flexion

d. Antagonist: Semimembranosus

4. Semimembranosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibial Condyle

c. Action: Extends the Hip

d. Antagonist: Semitendinosus

5. Biceps Femoris (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Fibula

c. Action: Knee Flexion

d. Antagonist: Hamstring Muscles

U. Knee Shake (right)

1. Gracilis (Quadriceps)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Abducts the Hips, Flexes the knee

d. Antagonist: Gluteus Maximus

2. Adductor Magnus (Hamstring)

a. Origin: Pubis

b. Insertion: Femur

c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip

d. Antagonist: Abductors

3. Semitendinosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibia

c. Action: Extension of the Hip

d. Antagonist: Semimembranosus

4. Semimembranosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibial Condyle

c. Action: Flexes the Knee

d. Antagonist: Semitendinosus

5. Biceps Femoris (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Fibula

c. Action: Flexes Knee

d. Antagonist: Semitendinosus

V. Hip Shake/Open Legs

1. Biceps Femoris (Hamstring)

a. Origin: Ischium, Femur

b. Insertion: Fibula

c. Action: Flexes Knee Joint, Rotates Knee Joint

d. Antagonist: Quadriceps Muscle

2. Sartorius (Quadricep)

a. Origin: Iliac Spine

b. Insertion: Tibia

c. Action: Flexion, Abduction, and Lateral Rotation of the Hip

d. Antagonist: Gluteus Maximus

3. Gracilis (Hamstring)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Rotates and Adducts the Hip, Flexes the Knee

d. Antagonist: Quadriceps

4. Vastus Lateralis (Quadriceps)

a. Origin: Femur

b. Insertion: Patella

c. Action: Extends and Stabilizes the Knee

d. Antagonist: Gracilis

5. Rectus Abdominis (Abdomen)

a. Origin: Pubis

b. Insertion: Ribs, Sternum

c. Action: Flexion of Lumbar Spine

d. Antagonist: Erector Spinae

6. Gluteus Medius (Gluteal)

- a. Origin: Ilium
- b. Insertion: Femur
- c. Action: Abduction of the Hip
- d. Antagonist: Medial Rotator Group

W. Add Arms

1. Biceps Brachii

- a. Origin: Scapula
- b. Insertion: Radial Tuberosity
- c. Action: Flexes Elbow
- d. Antagonist: Triceps Brachii Muscle

X. Hip Shake/Open Legs -Left Right Step/Shake

1. Biceps Femoris (Hamstring)

- a. Origin: Ischium, Femur
- b. Insertion: Fibula
- c. Action: Flexes Knee Joint, Rotates Knee Joint
- d. Antagonist: Quadriceps Muscle

2. Sartorius (Quadricep)

- a. Origin: Iliac Spine
- b. Insertion: Tibia
- c. Action: Flexion, Abduction, and Lateral Rotation of the Hip

d. Antagonist: Gracilis

3. Gracilis (Hamstring)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Rotates and Adducts the Hip, Flexes the Knee

d. Antagonist: Sartorius

4. Vastus Lateralis (Quadriceps)

a. Origin: Femur

b. Insertion: Patella

c. Action: Extends and Stabilizes the Knee

d. Antagonist: Hamstring (Adductors)

5. Rectus Abdominis

a. Origin: Pubis

b. Insertion: Ribs, Sternum

c. Action: Flexion of Lumbar Spine

d. Antagonist: Erector Spinae

6. Gluteus Medius

a. Origin: Ilium

b. Insertion: Femur

c. Action: Abduction of the Hip

d. Antagonist: Medial Rotator Group

Y. Rock/Roll Forwards

1. Vastus Intermedius

- a. Origin: Femur
- b. Insertion: Quadricep
- c. Action: Extension of Knee Joint
- d. Antagonist: Semitendinosus

Z. Alternating Jumps Back

1. Rectus Femoris (Quadriceps)

- a. Origin: Anterior and Interior Iliac Spine
- b. Insertion: Patellar Tendon
- c. Action: Knee Extension/ Hip Flexion
- d. Antagonist: Hamstring

2. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Semitendinosus

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Extension of the Hip

d. Antagonist: Semimembranosus

4. Adductor Magnus (Hamstring)

a. Origin: Pubis

b. Insertion: Femur

c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip

d. Antagonist: Abductors

AB. Hip Shake/Open Legs

1. Biceps Femoris (Hamstring)

a. Origin: Ischium, Femur

b. Insertion: Fibula

c. Action: Flexes Knee Joint, Rotates Knee Joint

d. Antagonist: Quadriceps Muscle

2. Sartorius (Quadricep)

a. Origin: Iliac Spine

b. Insertion: Tibia

c. Action: Flexion, Abduction, and Lateral Rotation of the Hip

d. Antagonist: Gracilis

3. Gracilis (Hamstring)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Rotates and Adducts the Hip, Flexes the Knee

d. Antagonist: Gluteus Maximus

4. Vastus Lateralis (Quadriceps)

a. Origin: Femur

b. Insertion: Patella

c. Action: Extends and Stabilizes the Knee

d. Antagonist: Semimembranosus

5. Rectus Abdominis (Abdomen)

a. Origin: Pubis

b. Insertion: Ribs, Sternum

c. Action: Flexion of Lumbar Spine

d. Antagonist: Erector Spinae

6. Gluteus Medius (Gluteal)

a. Origin: Ilium

b. Insertion: Femur

c. Action: Abduction of the Hip

d. Antagonist: Medial Rotator Group

BC. Add Arms

1. Biceps Brachii

a. Origin: Scapula

b. Insertion: Radial Tuberosity

c. Action: Flexes Elbow

d. Antagonist: Triceps Brachii Muscle

CD. Side Dips

1. Semitendinosus (Hamstring)

- a. Origin: Ischium
- b. Insertion: Tibia
- c. Action: Flex Knee, Extend Hip Joint
- d. Antagonist: Quadriceps Muscle

2. Biceps Femoris (Hamstring)

- a. Origin: Ischium, Femur
- b. Insertion: Fibula
- c. Action: Flexes Knee Joint, Rotates Knee Joint
- d. Antagonist: Quadriceps Muscle

3. Semimembranosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibial Condyle
- c. Action: Flexion of the Knee
- d. Antagonist: Semitendinosus

4. Rectus Femoris (Quadriceps)

- a. Origin: Anterior and Interior Iliac Spine
- b. Insertion: Patellar Tendon
- c. Action: Knee Extension/ Hip Flexion

d. Antagonist: Hamstring

5. Vastus Lateralis (Quadriceps)

a. Origin: Femur

b. Insertion: Patella

c. Action: Extends and Stabilizes the Knee

d. Antagonist: Gracilis

6. Latissimus Dorsi (Abdomen)

a. Origin: Iliac Crest

b. Insertion: Humerus

c. Action: Adducts, Extends, and Rotates the Arm

d. Antagonist: Deltoid, Trapezius

7. Rectus Abdominis (Abdomen)

a. Origin: Pubis

b. Insertion: Ribs, Sternum

c. Action: Flexion of Lumbar Spine

d. Antagonist: Erector Spinae

DE. Wobble In Place

1. Gracilis (Quadriceps)

a. Origin: Ischiopubic Ramus

b. Insertion: Tibia

c. Action: Flexes, Abducts the Hips, Flexes the knee

d. Antagonist: Semitendinosus

2. Adductor Magnus (Hamstring)

a. Origin: Pubis

b. Insertion: Femur

c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip

d. Antagonist: Abductors

3. Semitendinosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibia

c. Action: Flexion of the Knee

d. Antagonist: Semimembranosus

4. Semimembranosus (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Tibial Condyle

c. Action: Extension of the Hip

d. Antagonist: Semitendinosus

5. Biceps Femoris (Hamstring)

a. Origin: Ischial Tuberosity

b. Insertion: Fibula

c. Action: Knee Flexion

d. Antagonist: Gracilis

EF. Knee Shake Left (Synovial/Hinge)

1. Gracilis (Quadriceps)

- a. Origin: Ischiopubic Ramus
- b. Insertion: Tibia
- c. Action: Flexes, Abducts the Hips, Flexes the knee
- d. Antagonist: Gluteus Maximus

2. Adductor Magnus (Hamstring)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Abductors

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Flexion of the Knee
- d. Antagonist: Semimembranosus

4. Semimembranosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibial Condyle
- c. Action: Extension of the Hip
- d. Antagonist: Semitendinosus

5. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Gracilis

FG. Knee Shake Right (Synovial/Hinge)

1. Gracilis (Quadriceps)

- a. Origin: Ischiopubic Ramus
- b. Insertion: Tibia
- c. Action: Flexes, Abducts the Hips, Flexes the knee
- d. Antagonist: Semitendinosus

2. Adductor Magnus (Hamstring)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Abductors

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Knee Flexion
- d. Antagonist: Semimembranosus

4. Semimembranosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibial Condyle
- c. Action: Extension of the Hip
- d. Antagonist: Semitendinosus

5. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Gracilis

GH. Alternating Jumps (Synovial/Hinge)

1. Rectus Femoris (Quadriceps)

- a. Origin: Anterior and Interior Iliac Spine
- b. Insertion: Patellar Tendon
- c. Action: Knee Extension/ Hip Flexion
- d. Antagonist: Hamstring

2. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Gracilis

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Extension of Hip
- d. Antagonist: Semimembranosus

4. Adductor Magnus (Hamstring)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Abductors

HI. Low Roll Dip

1. Vastus Lateralis

- a. Origin: Femur
- b. Insertion: Patella
- c. Action: Extends and Stabilizes the Knee
- d. Antagonist: Hamstring

2. Rectus Femoris

- a. Origin: Anterior and Interior Iliac Spine
- b. Insertion: Patellar Tendon
- c. Action: Knee Extension/ Hip Flexion
- d. Antagonist: Hamstring

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Knee Flexion
- d. Antagonist: Semimembranosus

4. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Gracilis

5. Gracilis (Quadriceps)

- a. Origin: Ischiopubic Ramus
- b. Insertion: Tibia
- c. Action: Flexes, Abducts the Hips, Flexes the knee
- d. Antagonist: Gluteus Maximus

6. Rectus Abdominis (Abdomen)

- a. Origin: Pubis
- b. Insertion: Ribs, Sternum
- c. Action: Flexion of Lumbar Spine
- d. Antagonist: Erector Spinae

IJ. Knee Shake Left (Synovial/Hinge)

1. Gracilis (Quadriceps)

- a. Origin: Ischiopubic Ramus
- b. Insertion: Tibia
- c. Action: Flexes, Abducts the Hips, Flexes the knee
- d. Antagonist: Gluteus Maximus

2. Adductor Magnus (Hamstring)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Abductors

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Extension of the Hip
- d. Antagonist: Semimembranosus

4. Semimembranosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibial Condyle
- c. Action: Knee Flexion
- d. Antagonist: Semitendinosus

5. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Gracilis

JK. Knee Shake Right (Synovial/Hinge)

1. Gracilis (Quadriceps)

- a. Origin: Ischiopubic Ramus
- b. Insertion: Tibia
- c. Action: Flexes, Abducts the Hips, Flexes the knee
- d. Antagonist: Gluteus Maximus

2. Adductor Magnus (Hamstring)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Abductors

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Knee Flexion
- d. Antagonist: Semimembranosus

4. Semimembranosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibial Condyle
- c. Action: Extension of the Hip
- d. Antagonist: Semitendinosus

5. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Gracilis

KL. Alternating Jumps

1. Rectus Femoris (Quadriceps)

- a. Origin: Anterior and Interior Iliac Spine
- b. Insertion: Patellar Tendon
- c. Action: Knee Extension/ Hip Flexion
- d. Antagonist: Hamstring

2. Biceps Femoris (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Fibula
- c. Action: Knee Flexion
- d. Antagonist: Gracilis

3. Semitendinosus (Hamstring)

- a. Origin: Ischial Tuberosity
- b. Insertion: Tibia
- c. Action: Extension of the Hip
- d. Antagonist: Semimembranosus

4. Adductor Magnus (Hamstring)

- a. Origin: Pubis
- b. Insertion: Femur
- c. Action: Adduction of Hip, Flexion of Hip, Extension of Hip
- d. Antagonist: Abductors

II. Aerobic Activities [Part Two]- Look At Me Now (ZUMBA)

A. Side Step-Shuffle (Synovial/Ball and Socket)

1. Gluteus Medius/Minimus (Gluteal)

- a. Origin: Ilium
- b. Insertion: Trochanter of Femur
- c. Action: Abduction of the Hip
- d. Antagonist: Lateral Rotator Group

2. Semitendinosus (Hamstring)

- a. Origin: Ischium
- b. Insertion: Tibia, Fibula
- c. Action: Flexion of Knee, Extension of Hip
- d. Antagonist: Rectus Femoris

B. Hip Side Rock (Synovial/Ball and Socket)

1. Gluteus Maximus (Gluteal)

- a. Origin: Ilium, Sacrum
- b. Insertion: Gluteal Tuberosity of the Femur, Iliotibial
- c. Action: External Rotation, Extension of Hip
- d. Antagonist: Iliacus, Psoas Major/Minor

C. Right Dip Hook (Synovial/Ball and Socket)

1. Deltoids (Shoulder)

- a. Origin: Clavicle, Acromion, Scapula

b. Insertion: Deltoid Tuberosity of Femur

c. Action: Shoulder Abduction, Flexion, Extension

d. Antagonist: Latissimus Dorsi

2. Pectoralis Major (Chest)

a. Origin: Clavicle, Sternum, Costal Cartilage

b. Insertion: Bicipital Groove of Humerus

c. Action: Adducts, Medially Rotates Humerus, Flexes

d. Antagonist:

D. Left Dip Hook (Synovial/Ball and Socket)

1. Deltoids (Shoulder)

a. Origin: Clavicle, Acromion, Scapula

b. Insertion: Deltoid Tuberosity of Femur

c. Action: Shoulder Abduction, Flexion, Extension

d. Antagonist: Latissimus Dorsi

2. Pectoralis Major (Chest)

a. Origin: Clavicle, Sternum, Costal Cartilage

b. Insertion: Bicipital Groove of Humerus

c. Action: Adducts, Medially Rotates Humerus, Flexes

d. Antagonist:

E. Down Low Leg Twist Rx8 Lx7 (Synovial/Ball and Socket)

1. Adductors of Thigh (Adductor)

- a. Origin: Pubis
- b. Insertion: Femur, Tibia
- c. Action: Adduction of Hip
- d. Antagonist:

2. Adductor Magnus (Adductor)

- a. Origin: Pubis, Tuberosity of Ischium
- b. Insertion: Femur
- c. Action: Adduction/Flexion/Extension of Hip
- d. Antagonist:

F. Side Step-Shuffle (Synovial/Ball and Socket)

1. Gluteus Medius/Minimus (Gluteal)

- a. Origin: Ilium
- b. Insertion: Trochanter of Femur
- c. Action: Abduction of the Hip
- d. Antagonist: Lateral Rotator Group

2. Semitendinosus (Hamstring)

- a. Origin: Ischium
- b. Insertion: Tibia, Fibula
- c. Action: Flexion of Knee, Extension of Hip
- d. Antagonist: Rectus Femoris

G. "Gettin Paper"- Money Rain (Synovial/Hinge)

1. Triceps Brachii (Tricep)

- a. Origin: Tubercle of Scapula, Radial Sulcus
- b. Insertion: Olecranon Process of Ulna
- c. Action: Extends Forearm/Shoulder
- d. Antagonist: Biceps Brachii Muscle

H. Side Step-Shuffle (Synovial/Ball and Socket)

1. Gluteus Medius/Minimus (Gluteal)

- a. Origin: Ilium
- b. Insertion: Trochanter of Femur
- c. Action: Abduction of the Hip
- d. Antagonist: Lateral Rotator Group

2. Semitendinosus (Hamstring)

- a. Origin: Ischium
- b. Insertion: Tibia, Fibula
- c. Action: Flexion of Knee, Extension of Hip
- d. Antagonist: Rectus Femoris

I. Side Step/Back Kick Rx8 Lx8 (Synovial/Hinge)

1. Rectus Femoris (Hamstring)

- a. Origin: Anterior Inferior of Iliac Spine, Acetabulum
- b. Insertion: Patellar Tendon, Quadriceps
- c. Action: Knee Extension, Hip Flexion

d. Antagonist: Hamstring

2. Gluteus Maximus (Gluteal)

a. Origin: Ilium, Sacrum

b. Insertion: Gluteal Tuberosity of the Femur, Iliotibial

c. Action: External Rotation, Extension of Hip

d. Antagonist: Iliacus, Psoas Major/Minor

J. Side Step-Shuffle (Synovial/Ball and Socket)

1. Gluteus Medius/Minimus (Gluteal)

a. Origin: Ilium

b. Insertion: Trochanter of Femur

c. Action: Abduction of the Hip

d. Antagonist: Lateral Rotator Group

2. Semitendinosus (Hamstring)

a. Origin: Ischium

b. Insertion: Tibia, Fibula

c. Action: Flexion of Knee, Extension of Hip

d. Antagonist: Rectus Femoris

K. Left/Right Throw/Squat-Alternate (Synovial/Hinge)

1. Gluteus Maximus (Gluteal)

a. Origin: Ilium, Sacrum

b. Insertion: Gluteal Tuberosity of the Femur, Iliotibial

c. Action: External Rotation, Extension of Hip

d. Antagonist: Iliacus, Psoas Major/Minor

2. Adductors of Thigh (Adductor)

a. Origin: Pubis

b. Insertion: Femur, Tibia

c. Action: Adduction of Hip

d. Antagonist:

3. Rectus Femoris (Hamstring)

a. Origin: Anterior Inferior of Iliac Spine, Acetabulum

b. Insertion: Patellar Tendon, Quadriceps

c. Action: Knee Extension, Hip Flexion

d. Antagonist: Hamstring

4. Deltoids (Shoulder)

a. Origin: Clavicle, Acromion, Scapula

b. Insertion: Deltoid Tuberosity of Femur

c. Action: Shoulder Abduction, Flexion, Extension

d. Antagonist: Latissimus Dorsi

5. Pectoralis Major (Chest)

a. Origin: Clavicle, Sternum, Costal Cartilage

b. Insertion: Bicipital Groove of Humerus

c. Action: Adducts, Medially Rotates Humerus, Flexes

d. Antagonist:

6. External Oblique (Abdominal)

a. Origin: Ribs 5-7

b. Insertion: Iliac Crest, Pubis Tubercle, Linea Alba

c. Action: Contralateral Rotation of Torso

d. Antagonist:

L. Arm Raise (Synovial/Ball and Socket)

1. Supraspinatus (Shoulder)

a. Origin: Fossa of Scapula

b. Insertion: Facet of Greater Tubercle of Humerus

c. Action: Adduction

d. Antagonist:

2. Deltoids (Shoulder)

a. Origin: Clavicle, Acromion, Scapula

b. Insertion: Deltoid Tuberosity of Femur

c. Action: Shoulder Abduction, Flexion, Extension

d. Antagonist: Latissimus Dorsi

3. Serratus Anterior (Chest)

a. Origin: Upper Surface of Ribs

b. Insertion: Medial Margin of the Scapula

c. Action: Protracts Scapula

d. Antagonist: Rhomboid Major/Minor, Trapezius

M. Around the World-Booty Shake Right (Synovial/Hinge)

1. Gluteus Medius/Minimus (Gluteal)

a. Origin: Ilium

b. Insertion: Trochanter of Femur

c. Action: Abduction of the Hip

d. Antagonist: Lateral Rotator Group

2. Deltoids (Shoulder)

a. Origin: Clavicle, Acromion, Scapula

b. Insertion: Deltoid Tuberosity of Femur

c. Action: Shoulder Abduction, Flexion, Extension

d. Antagonist: Latissimus Dorsi

3. Internal Abdominal Oblique (Back)

a. Origin: Iliac Crest, Inguinal Ligament, Lumbodorsal Fascia

b. Insertion: Linea Alba, Pecten Pubis, Ribs 10-12

c. Action: Compresses Abdomen

d. Antagonist:

4. Tensor Fascia Latae (Back)

a. Origin: Iliac Crest

b. Insertion: Iliotibial Tract

c. Action: Thigh Flexion, Medial Rotation, Abduction

d. Antagonist:

N. Bend Down-Breathe (

1. Serratus Posterior Inferior (Back)

a. Origin: Vertebrae T11-L2

b. Insertion: 9-12 Ribs

c. Action: Depress Lower Ribs, Expiration

d. Antagonist:

2. Latissimus Dorsi (Back)

a. Origin: T7-L5, Iliac Crest, Inferior Scapula

b. Insertion: Intertubercular groove of Humerus

c. Action: Adducts, Extends/Internally Rotates Arm

d. Antagonist: Deltoid, Trapezius

3. Erector Spinae (Back)

a. Origin: Thoracic Vertebrae, T9-T12

b. Insertion: Thoracic Vertebrae, Cervical Vertebrae, T1-T2

c. Action: Extends Vertebral Column

d. Antagonist: Rectus Abdominis

O. Around the World-Booty Shake Left (Synovial/Hinge)

1. Gluteus Medius/Minimus (Gluteal)

a. Origin: Ilium

b. Insertion: Trochanter of Femur

c. Action: Abduction of the Hip

d. Antagonist: Lateral Rotator Group

2. Deltoids (Shoulder)

a. Origin: Clavicle, Acromion, Scapula

b. Insertion: Deltoid Tuberosity of Femur

c. Action: Shoulder Abduction, Flexion, Extension

d. Antagonist: Latissimus Dorsi

3. Internal Abdominal Oblique (Back)

a. Origin: Iliac Crest, Inguinal Ligament, Lumbodorsal Fascia

b. Insertion: Linea Alba, Pecten Pubis, Ribs 10-12

c. Action: Compresses Abdomen

d. Antagonist:

4. Tensor Fascia Latae (Back)

a. Origin: Iliac Crest

b. Insertion: Iliotibial Tract

c. Action: Thigh Flexion, Medial Rotation, Abduction

d. Antagonist:

P. Body Roll ()

1. Latissimus Dorsi (Back)

a. Origin: T7-L5, Iliac Crest, Anterior Scapula

b. Insertion: Intertubercular groove of Humerus

c. Action: Adducts, Extends/Internally Rotates Arm

d. Antagonist: Deltoid, Trapezius

2. Internal Abdominal Oblique (Back)

a. Origin: Iliac Crest, Inguinal Ligament, Lumbodorsal Fascia

b. Insertion: Linea Alba, Pecten Pubis, Ribs 10-12

c. Action: Compresses Abdomen

d. Antagonist:

3. Rectus Abdominis (Abdomen)

a. Origin: Pubis

b. Insertion: Costal Cartilage, Ribs 5-7, Xiphoid Process

c. Action: Flexion of Lumbar

d. Antagonist: Erector Spinae

Q. Sidestep/Knee Lift Rx7 Lx7(Synovial/Hinge)

1. Gluteus Medius (Gluteal)

a. Origin: Ilium

b. Insertion: Trochanter of Femur

c. Action: Abduction of the Hip

d. Antagonist: Lateral Rotator Group

2. Rectus Femoris (Quadriceps)

a. Origin: Anterior Inferior Spine, Acetabulum

b. Insertion: Patellar Tendon, Quadriceps

c. Action: Knee Extension, Hip Flexion

d. Antagonist: Hamstring

3. Vastus Lateralis (Quadriceps)

a. Origin: Greater Trochanter, Linea Aspera of Femur

b. Insertion: Patella, Quadriceps Tendon, Tibial Tuberosity,

c. Action: Extends and supports knee

d. Antagonist: Hamstring

4. Tensor Fasciae Latae (Hip)

a. Origin: Iliac Crest

b. Insertion: Iliotibial Tract

c. Action: Thigh Flexion, Medial Rotation, Abduction

d. Antagonist:

5. Gluteus Maximus (Gluteal)

a. Origin: Ilium, Sacrum

b. Insertion: Gluteal Tuberosity of the Femur, Iliotibial

c. Action: External Rotation, Extension of Hip

d. Antagonist: Iliacus, Psoas Major/Minor

R. Side Step-Shuffle (Synovial/Ball and Socket)

1. Gluteus Medius/Minimus (Gluteal)

a. Origin: Ilium

b. Insertion: Trochanter of Femur

c. Action: Abduction of the Hip

d. Antagonist: Lateral Rotator Group

2. Semitendinosus (Hamstring)

a. Origin: Ischium

b. Insertion: Tibia, Fibula

c. Action: Flexion of Knee, Extension of Hip

d. Antagonist: Rectus Femoris

S. Back Kick x2 (Synovial/Hinge)

1. Rectus Femoris (Quadriceps)

a. Origin: Anterior Inferior Spine, Acetabulum

b. Insertion: Patellar Tendon, Quadriceps

c. Action: Knee Extension, Hip Flexion

d. Antagonist: Hamstring

2. Vastus Lateralis (Quadriceps)

a. Origin: Greater Trochanter, Linea Aspera of Femur

b. Insertion: Patella, Quadriceps Tendon, Tibial Tuberosity,

c. Action: Extends and supports knee

d. Antagonist: Hamstring

3. Gluteus Maximus (Gluteal)

a. Origin: Ilium, Sacrum

b. Insertion: Gluteal Tuberosity of the Femur, Iliotibial

c. Action: External Rotation, Extension of Hip

d. Antagonist: Iliacus, Psoas Major/Minor

T. Punches-Alternate (Synovial/Ball and Socket)

1. Deltoids (Shoulder)

a. Origin: Clavicle, Acromion, Scapula

b. Insertion: Deltoid Tuberosity of Femur

c. Action: Shoulder Abduction, Flexion, Extension

d. Antagonist: Latissimus Dorsi

2. Pectoralis Major (Chest)

a. Origin: Clavicle, Sternum, Costal Cartilage

b. Insertion: Bicipital Groove of Humerus

c. Action: Adducts, Medially Rotates Humerus, Flexes

d. Antagonist:

U. Down Low Leg Twist (Synovial/Ball and Socket)

1. Adductors of Thigh (Adductor)

a. Origin: Pubis

b. Insertion: Femur, Tibia

c. Action: Adduction of Hip

d. Antagonist:

2. Adductor Magnus (Adductor)

a. Origin: Pubis, Tuberosity of Ischium

b. Insertion: Femur

c. Action: Adduction/Flexion/Extension of Hip

d. Antagonist:

V. Back Kicks-Alternate Rx7 Lx7 (Synovial/Hinge)

1. Rectus Femoris (Quadriceps)

a. Origin: Anterior Inferior Spine, Acetabulum

b. Insertion: Patellar Tendon, Quadriceps

c. Action: Knee Extension, Hip Flexion

d. Antagonist: Hamstring

2. Vastus Lateralis (Quadriceps)

a. Origin: Greater Trochanter, Linea Aspera of Femur

b. Insertion: Patella, Quadriceps Tendon, Tibial Tuberosity,

c. Action: Extends and supports knee

d. Antagonist: Hamstring

3. Gluteus Maximus (Gluteal)

a. Origin: Ilium, Sacrum

b. Insertion: Gluteal Tuberosity of the Femur, Iliotibial

c. Action: External Rotation, Extension of Hip

d. Antagonist: Iliacus, Psoas Major/Minor

W. Side Step-Shuffle

1. Gluteus Medius/Minimus (Gluteal)

- a. Origin: Ilium
- b. Insertion: Trochanter of Femur
- c. Action: Abduction of the Hip
- d. Antagonist: Lateral Rotator Group

2. Semitendinosus (Hamstring)

- a. Origin: Ischium
- b. Insertion: Tibia, Fibula
- c. Action: Flexion of Knee, Extension of Hip
- d. Antagonist: Rectus Femoris

X. Around Knee Lift-Alternate Rx8 Lx8 (Synovial/Hinge)

1. Gluteus Medius (Gluteal)

- a. Origin: Ilium
- b. Insertion: Trochanter of Femur
- c. Action: Abduction of the Hip
- d. Antagonist: Lateral Rotator Group

2. Rectus Femoris (Quadriceps)

- a. Origin: Anterior Inferior Spine, Acetabulum
- b. Insertion: Patellar Tendon, Quadriceps
- c. Action: Knee Extension, Hip Flexion
- d. Antagonist: Hamstring

3. Vastus Lateralis (Quadriceps)

- a. Origin: Greater Trochanter, Linea Aspera of Femur
- b. Insertion: Patella, Quadriceps Tendon, Tibial Tuberosity,
- c. Action: Extends and supports knee
- d. Antagonist: Hamstring

4. Tensor Fasciae Latae (Hip)

- a. Origin: Iliac Crest
- b. Insertion: Iliotibial Tract
- c. Action: Thigh Flexion, Medial Rotation, Abduction
- d. Antagonist:

5. Gluteus Maximus (Gluteal)

- a. Origin: Ilium, Sacrum
- b. Insertion: Gluteal Tuberosity of the Femur, Iliotibial
- c. Action: External Rotation, Extension of Hip
- d. Antagonist: Iliacus, Psoas Major/Minor

III. Cool Down Activities- Just The Way You Are (ZUMBA)

A. Shoulder Circles (Synovial/Ball and Socket) (circumduction)

1. Deltoid (Skeletal Muscle)

- a. Origin: Clavicle, Scapula
- b. Insertion: Humerus
- c. Action: Shoulder Abduction, Flexion and Extension
- d. Antagonist: Latissimus Dorsi

2. Trapezius (Skeletal Muscle)

- a. Origin: Vertebrae
- b. Insertion: Clavicle, Scapula
- c. Action: Rotation, Retraction, Elevation, and Depression of Scapula
- d. Antagonist: Latissimus dorsi

B. Lean for side to side reaching to the sky

1. Gastrocnemius (Skeletal Muscle)

- a. Origin: superior to articular surfaces of lateral condyle of femur and medial condyle of femur
- b. Insertion: tendo calcaneus (achilles tendon) into mid-posterior calcaneus
- c. Action: plantar flexes foot, flexes knee

d. Antagonist: plantar flexes foot, flexes knee

2. Deltoid (Skeletal Muscle)

a. Origin: the anterior border and upper surface of the lateral third of the clavicle, acromion, spine of the scapula

b. Insertion: deltoid tuberosity of humerus

c. Action: shoulder abduction, flexion and extension

d. Antagonist: Latissimus dorsi

3. Vastus intermedius (Skeletal Muscles)

a. Origin: antero/ lateral femur

b. Insertion: Quadriceps tendon

c. Action: Extension of knee joint

d. Antagonist: Gastrocnemius, Popliteus, Gracilis, and Sartorius

C. Left Straddle Stretch (Synovial/ Ball and Socket) (Flexion/ Abduction)

1. Vastus lateralis (Skeletal Muscle)

a. Origin: Greater trochanter, Intertrochanteric line, and Linea aspera of the Femur

b. Insertion: Patella via the Quadriceps tendon and Tibial tuberosity via the Patellar ligament

c. Action: Extends and stabilizes knee

d. Antagonist: Hamstring

2. Rectus medialis (Skeletal Muscle)

- a. Origin: Medial side of femur
- b. Insertion: Quadriceps tendon
- c. Action: extends leg
- d. Antagonist: sartorius, biceps femoris, semitendinosus and semimembranosus.

3. Vastus femoris (Skeletal Muscle)

- a. Origin: anterior inferior iliac spine and the exterior surface of the bony ridge which forms the iliac portion of the acetabulum
- b. Insertion: inserts into the patellar tendon as one of the four quadriceps muscles
- c. Action: knee extension; hip flexion
- d. Antagonist: Hamstring

4. External oblique muscle (Skeletal Muscle)

- a. Origin: Ribs 5-12
- b. Insertion: iliac crest, Pubic tubercle, Linea Alba
- c. Action: Contralateral rotation of torso
- d. Antagonist: rectus abdominus and trunk flexors

D. Reach your toes and come back up in a circular motion to the right (ball and socket/synovial) (circumduction)

1. Semitendinosus (Skeletal Muscle)

- a. Origin: tuberosity of the ischium

- b. Insertion: pes anserinus (tibia)
- c. Action: flex knee, extend hip joint
- d. Antagonist: Quadriceps muscle

2. Semitendinosus (Skeletal Muscle)

- a. Origin: tuberosity of the ischium
- b. Insertion: pes anserinus (tibia)
- c. Action: flex knee, extend hip joint
- d. Antagonist: flex knee, extend hip joint

3. Biceps femoris (Skeletal Muscle)

- a. Origin: tuberosity of the ischium, linea aspera, femur
- b. Insertion: the head of the fibula which articulates with the back of the lateral tibial condyle
- c. Action: flexes knee joint, laterally rotates knee joint, extends hip joint
- d. Antagonist: Quadriceps muscle

E. Right Straddle Stretch (Synovial/ Ball and Socket) (Flexion/ Abduction)

1. Vastus lateralis (Skeletal Muscle)

- a. Origin: Greater trochanter, Intertrochanteric line, and Linea aspera of the Femur
- b. Insertion: Patella via the Quadriceps tendon and Tibial tuberosity via the Patellar ligament

c. Action: Extends and stabilizes knee

d. Antagonist: Hamstring

2. Rectus medialis (Skeletal Muscle)

a. Origin: Medial side of femur

b. Insertion: Quadriceps tendon

c. Action: extends leg

d. Antagonist: sartorius, biceps femoris, semitendinosus and semimembranosus.

3. Vastus femoris (Skeletal Muscle)

a. Origin: anterior inferior iliac spine and the exterior surface of the bony ridge which forms the iliac portion of the acetabulum

b. Insertion: inserts into the patellar tendon as one of the four quadriceps muscles

c. Action: knee extension; hip flexion

d. Antagonist: Hamstring

4. External oblique muscle (Skeletal Muscle)

a. Origin: Ribs 5-12

b. Insertion: iliac crest, Pubic tubercle, Linea Alba

c. Action: Contralateral rotation of torso

d. Antagonist: rectus abdominus and trunk flexors

F. Reach your toes and come back up in a circular motion to the left (ball and

socket/synovial) (circumduction)

1. Semitendinosus (Skeletal Muscle)

- a. Origin: tuberosity of the ischium
- b. Insertion: pes anserinus (tibia)
- c. Action: flex knee, extend hip joint
- d. Antagonist: Quadriceps muscle

2. Semitendinosus (Skeletal Muscle)

- a. Origin: tuberosity of the ischium
- b. Insertion: pes anserinus (tibia)
- c. Action: flex knee, extend hip joint
- d. Antagonist: flex knee, extend hip joint

3. Biceps femoris (Skeletal Muscle)

- a. Origin: tuberosity of the ischium, linea aspera, femur
- b. Insertion: the head of the fibula which articulates with the back
of the lateral tibial condyle
- c. Action: flexes knee joint, laterally rotates knee joint, extends hip
joint
- d. Antagonist: Quadriceps muscle

G. Side Reaches with extended hands (ball and socket/synovial) (abduction)

1. External Oblique (Skeletal Muscle)

- a. Origin: Ribs 5-12

b. Insertion: Iliac crest, Pubic tubercle, Linea Alba

c. Action: Contralateral rotation of torso

d. Antagonist: Erector spinae, Quadratus Lumborum

2. Biceps Brachii (Skeletal Muscle)

a. Origin: short head: coracoid process of the scapula. Long head: supraglenoid tubercle.

b. Insertion: radial tuberosity and bicipital aponeurosis into deep fascia on medial part of forearm

c. Action: flexes elbow and supinates forearm

d. Antagonist: Triceps brachii muscle

H. Cross Shoulder Stretch right hand (Synovial/Ball and Socket) (flexion/rotation)

1. Deltoid (Skeletal Muscle)

a. Origin: the anterior border and upper surface of the lateral third of the clavicle, acromion, spine of the scapula

b. Insertion: deltoid tuberosity of humerus

c. Action: shoulder abduction, flexion and extension

d. Antagonist: Latissimus dorsi

2. Biceps Brachii (Skeletal Muscle)

a. Origin: short head: coracoid process of the scapula. Long head: supraglenoid tubercle.

- b. Insertion: radial tuberosity and bicipital aponeurosis into deep fascia on medial part of forearm.
- c. Action: flexes elbow and supinates forearm
- d. Antagonist: Triceps brachii muscle

I. Overhead Triceps Stretch Right Hand (Synovial/Ball and Socket)

(Flexion/Abduction)

1. Triceps Brachii (Skeletal Muscle)

- a. Origin: long head: infraglenoid tubercle of scapula lateral head: above the radial sulcus medial head: below the radial sulcus
- b. Insertion: olecranon process of ulna
- c. Action: extends forearm, long head extends shoulder
- d. Antagonist: Biceps brachii muscle

2. Latissimus Dorsi (Skeletal Muscle)

- a. Origin: spinous processes of thoracic T7-L5, thoracolumbar fascia, iliac crest and inferior 3 or 4 ribs, inferior angle of scapula
- b. Insertion: floor of intertubercular groove of the humerus
- c. Action: adducts, extends and internally rotates the arm
- d. Antagonist: deltoid, trapezius

J. Cross Shoulder Stretch Left Hand (Synovial/Ball and Socket) (flexion/rotation)

1. Deltoid (Skeletal Muscle)

- a. Origin: the anterior border and upper surface of the lateral third

of the clavicle, acromion, spine of the scapula

b. Insertion: deltoid tuberosity of humerus

c. Action: shoulder abduction, flexion and extension

d. Antagonist: Latissimus dorsi

2. Biceps (Skeletal Muscle)

a. Origin: short head: coracoid process of the scapula. long head: supraglenoid tubercle.

b. Insertion: radial tuberosity and bicipital aponeurosis into deep fascia on medial part of forearm.

c. Action: flexes elbow and supinates forearm

d. Antagonist: Triceps brachii muscle

K. Overhead Triceps Stretch Left Hand (Synovial/Ball and Socket)

(Flexion/Abduction)

1. Triceps Brachii (Skeletal Muscle)

a. Origin: long head: infraglenoid tubercle of scapula lateral head: above the radial sulcus medial head: below the radial sulcus

b. Insertion: olecranon process of ulna

c. Action: extends forearm, long head extends shoulder

d. Antagonist: Biceps brachii muscle

2. Latissimus Dorsi (Skeletal Muscle)

a. Origin: spinous processes of thoracic T7-L5, thoracolumbar fascia,

iliac crest and inferior 3 or 4 ribs, inferior angle of scapula

b. Insertion: floor of intertubercular groove of the humerus

c. Action: adducts, extends and internally rotates the arm

d. Antagonist: deltoid, trapezius

L .Forward Lean Stretch (Synovial/Ball and Socket) (Flexion/Supination)

1. Hamstrings (Skeletal Muscle)

a. Origin: tuberosity of the ischium, linea aspera

b. Insertion: tibia, fibula

c. Action: flexion of knee, extension of hip

d. Antagonist: Rectus femoris muscle

2. Trapezius (Skeletal Muscle)

a. Origin: external occipital protuberance, nuchal ligament, medial superior nuchal line, spinous processes of vertebrae C7-T12

b. Insertion: posterior border of the lateral third of the clavicle, acromion process, and spine of scapula

c. Action: rotation, retraction, elevation, and depression of scapula

d. Antagonist: serratus anterior muscle, Latissimus dorsi

3. Lumbricals (Skeletal Muscles)

a. Origin: flexor digitorum profundus

b. Insertion: Gluteal tuberosity of the femur, iliotibial tract

c. Action: flex metacarpophalangeal joints, extend interphalangeal

joints

d. Antagonist: Dorsal interossei

M. Standing Straddle Stretch (Synovial/Ball and Socket) (Flexion/Abduction)

1. Semitendinosus (Skeletal Muscle)

a. Origin: tuberosity of the ischium

b. Insertion: pes anserinus (tibia)

c. Action: flex knee, extend hip joint

d. Antagonist: Quadriceps muscle

2. Semimembranosus (Skeletal Muscle)

a. Origin: Ischial tuberosity

b. Insertion: Medial surface of tibia

c. Action: Hip extension, Knee flexion

d. Antagonist: Quadriceps muscle

3. Biceps femoris (Skeletal Muscle)

a. Origin: tuberosity of the ischium, linea aspera, femur

b. Insertion: the head of the fibula which articulates with the back of the lateral tibial condyle

c. Action: flexes knee joint, laterally rotates knee joint (when knee is flexed), extends hip joint (long head only)

d. Antagonist: Quadriceps muscle

4. Trapezius (Skeletal Muscle)

- a. Origin: external occipital protuberance, nuchal ligament, medial superior nuchal line, spinous processes of vertebrae C7-T12
- b. Insertion: posterior border of the lateral third of the clavicle, acromion process, and spine of scapula
- c. Action: rotation, retraction, elevation, and depression of scapula
- d. Antagonist: serratus anterior muscle, Latissimus dorsi

N. Neck Circles (Pivot/ Synovial)

1. Sternocleidomastoid (Skeletal Muscle)

- a. Origin: manubrium sterni, medial portion of the clavicle
- b. Insertion: mastoid process of the temporal bone, superior nuchal line
- c. Action: tilts head to its own side and rotates it so the face turned towards the opposite side.
- d. Antagonist: opposite Sternocleidomastoid

2. Longus capitis (Skeletal Muscle)

- a. Origin: anterior tubercles of the transverse processes of the third, fourth, fifth, and sixth cervical vertebrae
- b. Insertion: basilar part of the occipital bone
- c. Action: flexion of neck at atlanto-occipital joint
- d. Antagonist: Sternocleidomastoid; Longus colli and capitis;

Scalenus anterior, medial, and posterior

3. Splenius capitis (Skeletal Muscle)

- a. Origin: Ligamentum nuchae, spinous process of C7-T3
- b. Insertion: Mastoid process of temporal and occipital bone
- c. Action: Extend, rotate, and laterally flex the head
- d. Antagonist: sternocleidomastoid

4. Semispinalis capitis (Skeletal Muscle)

- a. Origin: Transverse process of lower cervical and higher thoracic column
- b. Insertion: Area between superior and inferior nuchal line
- c. Action: extend the head
- d. Antagonist: Upper Trapezius, Splenius Capitis, Splenius Cervicis, Longissimus Capitis, Longissimus Cervicis

5. Longus colli (Skeletal Muscle)

- a. Origin: Transverse processes of C-5 to T-3
- b. Insertion: Anterior arch of the atlas
- c. Action: Flexes the neck and head
- d. Antagonist: Upper Trapezius, Semispinalis Capitis, Splenius Capitis, Splenius Cervicis, Longissimus Capitis, Longissimus Cervicis

O. Shoulder Lifts with fingers pointing out horizontally (Synovial/Ball and Socket)(Dorsiflexion)

1. Deltoid (Skeletal Muscle)

- a. Origin: the anterior border and upper surface of the lateral third of the clavicle, acromion, spine of the scapula
- b. Insertion: deltoid tuberosity of humerus
- c. Action: shoulder abduction, flexion and extension
- d. Antagonist: Latissimus dorsi

2. Latissimus Dorsi (Skeletal Muscle)

- a. Origin: spinous processes of thoracic T7-L5, thoracolumbar fascia, iliac crest and inferior 3 or 4 ribs, inferior angle of scapula
- b. Insertion: floor of intertubercular groove of the humerus
- c. Action: adducts, extends and internally rotates the arm
- d. Antagonist: deltoid, trapezius

3. Brachioradialis (Skeletal Muscle)

- a. Origin: Lateral supracondylar ridge of the humerus
- b. Insertion: Distal radius (Radial styloid process)
- c. Action: Distal radius (Radial styloid process)
- d. Antagonist: Triceps Brachii

P. Incomplete side lunges (Hinge/ Synovial) (Flexion/Abduction)

1. Gastrocnemius (Skeletal Muscle)

- a. Origin: superior to articular surfaces of lateral condyle of femur and medial condyle of femur
- b. Insertion: tendo calcaneus (achilles tendon) into mid-posterior

calcaneus

c. Action: knee extension; hip flexion

d. Antagonist: Hamstring

2. Rectus femoris (Skeletal Muscle)

a. Origin: anterior inferior iliac spine and the exterior surface of the bony ridge which forms the iliac portion of the acetabulum

b. Insertion: inserts into the patellar tendon as one of the four quadriceps muscles

c. Action: Knee extension; Hip flexion

d. Antagonist: sartorius, biceps femoris, semitendinosus and semimembranosus.

3. Sartorius (Skeletal Muscle)

a. Origin: inferior to the anterior superior iliac spine

b. Insertion: anteromedial surface of the upper tibia in the pes anserinus.

c. Action: Flexion, abduction, and lateral rotation of the hip, flexion of the knee

d. Antagonist: Vastus Intermedius

4. Gracilis (Skeletal Muscle)

a. Origin: ischiopubic ramus

b. Insertion: tibia (pes anserinus)

- c. Action: flexes, medially rotates, and adducts the hip, flexes the knee
- d. Antagonist: Rectus femoris, Vastus lateralis, Vastus medialis, and
Vastus intermedius

5. Vastus Medialis (Skeletal Muscle)

- a. Origin: Medial side of femur
- b. Insertion: Quadriceps tendon
- c. Action: extends leg
- d. Antagonist: sartorius, biceps femoris, semitendinosus and
semimembranosus

Q. Full Lunges on each leg (Joint/ Synovial) (Flexion/Abduction)

1. Gracilis (Skeletal Muscle)

- a. Origin: ischiopubic ramus
- b. Insertion: tibia (pes anserinus)
- c. Action: flexes, medially rotates, and adducts the hip, flexes the knee
- d. Antagonist: Rectus femoris, Vastus lateralis, Vastus medialis, and
Vastus intermedius

2. Rectus femoris (Skeletal Muscle)

- a. Origin: anterior inferior iliac spine and the exterior surface of the bony
ridge which forms the iliac portion of the acetabulum
- b. Insertion: inserts into the patellar tendon as one of the four
quadriceps muscles

c. Action: knee extension; hip flexion

d. Antagonist: Hamstring

3. Sartorius (Skeletal Muscle)

a. Origin: inferior to the anterior superior iliac spine

b. Insertion: anteromedial surface of the upper tibia in the pes anserinus

c. Action: Flexion, abduction, and lateral rotation of the hip, flexion of the knee

d. Antagonist: Vastus Intermedius

4. Biceps femoris (Skeletal Muscle)

a. Origin: tuberosity of the ischium, linea aspera, femur

b. Insertion: the head of the fibula which articulates with the back of the lateral tibial condyle

c. Action: flexes knee joint, laterally rotates knee joint (when knee is flexed), extends hip joint (long head only)

d. Antagonist: Quadriceps muscle

5. Semimembranosus (Skeletal Muscle)

a. Origin: Ischial tuberosity

b. Insertion: Medial surface of tibia

c. Action: Hip extension, Knee flexion

d. Antagonist: Hip extension, Knee flexion

6. Semitendinosus (Skeletal Muscle)

- a. Origin: tuberosity of the ischium
- b. Insertion: pes anserinus (tibia)
- c. Action: flex knee, extend hip joint
- d. Antagonist: Quadriceps muscle

R. Balancing on One Leg While Extending the Other one Forward(Synovial/Ball and Socket)

1. Biceps femoris (Skeletal Muscle)

- a. Origin: tuberosity of the ischium, linea aspera
- b. Insertion: tibia, fibula
- c. Action: flexion of knee, extension of hip
- d. Antagonist: Rectus femoris muscle

2. Rectus femoris (Skeletal Muscle)

- a. Origin: anterior inferior iliac spine and the exterior surface of the bony ridge which forms the iliac portion of the acetabulum
- b. Insertion: inserts into the patellar tendon as one of the four quadriceps muscles
- c. Action: knee extension; hip flexion
- d. Antagonist: Hamstring

3. Biceps brachii (Skeletal Muscle)

- a. Origin: short head: coracoid process of the scapula. long head:

supraglenoid tubercle

- b. Insertion: radial tuberosity and bicipital aponeurosis into deep fascia on medial part of forearm
- c. Action: flexes elbow and supinates forearm
- d. Antagonist: Triceps brachii muscle

4. Quadriceps femoris (Skeletal Muscle)

- a. Origin: combined rectus femoris and vastus muscles
- b. Insertion: tibial tuberosity
- c. Action: Knee extension; Hip flexion
- d. Antagonist: Hamstring

5. Vastus Medialis (Skeletal Muscle)

- a. Origin: Medial side of femur
- b. Insertion: Quadriceps tendon
- c. Action: extends leg
- d. Antagonist: sartorius, biceps femoris, semitendinosus and semimembranosus

6. Vastus intermedius (Skeletal Muscle)

- a. Origin: antero/ lateral femur
- b. Insertion: Quadriceps tendon
- c. Action: Extension of knee joint
- d. Antagonist: Gastrocnemius, Popliteus, Gracilis, and Sartorius.

7. Vastus lateralis (Skeletal Muscle)

- a. Origin: Greater trochanter, Intertrochanteric line, and Linea aspera of the Femur
- b. Insertion: Patella via the Quadriceps tendon and Tibial tuberosity via the Patellar ligament
- c. Action: Extends and stabilizes knee
- d. Antagonist: Hamstring

8. Gluteus Maximus (Skeletal Muscle)

- a. Origin: Gluteal surface of ilium, lumbar fascia, sacrum, sacrotuberous ligament
- b. Insertion: Gluteal tuberosity of the femur, iliotibial tract
- c. Action: external rotation and extension of the hip joint, supports the extended knee through the iliotibial tract, chief antigravity muscle in sitting
- d. Antagonist: Iliacus, Psoas major, Psoas minor

9. Gastrocnemius (Skeletal Muscle)

- a. Origin: superior to articular surfaces of lateral condyle of femur and medial condyle of femur
- b. Insertion: tendo calcaneus (achilles tendon) into mid-posterior calcaneus
- c. Action: plantar flexes foot, flexes knee

d. Antagonist: Tibialis anterior muscle

S. Tilt Head to the Right (Pivot/Synovial)

1. Scalene (Skeletal/ Muscle)

a. Origin: cervical vertebrae

b. Incretion: first and second ribs

c. Action: elevation of ribs

d. Antagonist: Upper Trapezius, Splenius Capitis, Splenius Cervicis, Semispinalis Capitis,

2. Deltoid (Skeletal Muscle)

a. Origin: the anterior border and upper surface of the lateral third of the clavicle, acromion, spine of the scapula

b. Insertion: deltoid tuberosity of humerus

c. Action: shoulder abduction, flexion and extension

d. Antagonist: Latissimus dorsi

I. lean down to the ground (Synovial/ Ball and Socket)

1. Deltoid (Skeletal Muscle)

a. Origin: the anterior border and upper surface of the lateral third of the clavicle, acromion, spine of the scapula

b. Insertion: deltoid tuberosity of humerus

c. Action: shoulder abduction, flexion and extension

d. Antagonist: Latissimus dorsi

2. Rectus femoris (Skeletal Muscle)

- a. Origin: anterior inferior iliac spine and the exterior surface of the bony ridge which forms the iliac portion of the acetabulum
- b. Insertion: inserts into the patellar tendon as one of the four quadriceps muscles
- c. Action: knee extension; hip flexion
- d. Antagonist: Hamstring

3. Vastus lateralis (Skeletal Muscle)

- a. Origin: Greater trochanter, Intertrochanteric line, and Linea aspera of the Femur
- b. Insertion: Patella via the Quadriceps tendon and Tibial tuberosity via the Patellar ligament
- c. Action: Extends and stabilizes knee
- d. Antagonist: Hamstring

Our exercise routine can be beneficial for someone who has rheumatoid arthritis because our routine includes a lot of stretching. Stretching is very important to do when suffering from rheumatoid arthritis in order to increase joint flexibility and range of motion. It is important of an RA patient to

engage in physical activity to decrease fatigue, strengthen muscles that surround the joint, increase flexibility and stamina. A range of motion exercises are recommended to practice regularly to maintain joint mobility. Our routine is also fast paced and works the muscles of the body. It helps build muscles and makes them stronger which is also a key factor for those who suffer from rheumatoid arthritis because they need to increase muscle strength to help support the affected joint(s). Aerobic exercises are also important to maintain good overall health, weight, control, muscle strength and energy level. Luckily our routine includes an aerobic part as well. Moderate physical activity on a regular basis is very important for a RA patient but at the same time it is important for them to rest their joints during flare-ups. An RA patient can rest their joints by trying not to use the joint very often or by lightening the force applied on the joint. If needed temporal use of a cane can be used or other support equipment. Since our routine is mostly based on Zumba it is a very fun workout and can be done at slower and faster paces which can be very beneficial. It is important for an RA patient to talk to their healthcare team ask them if this exercise is right for them.