



More Fire Fighters. More Active. More Often.

PERFORMANCE REDEFINED

**Appendix E: Posters** 

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# **MAKE YOUR EXERCISE MATTER!**



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SQUAT



### **BACK SQUAT**

(Knees, Back, Shoulders)

The Movement • Barbell across back of shoulders, stiffen trunk
• Center weight over mid-foot
• Descend by sitting back



# MEDICINE BALL SQUAT

(Knees, Back)

The Mo vement • Hold ball close to body Center weight over mid-foot
 Descend by sitting back

† Performance - Keep back straight (no arch or rounding), elbows up | Injury Risk - Knees, hips and feet in line (not in or out) - Trunk and shins parallel, ball kept close - Feet flat, weight on mid-boot - Limit depth by low back posture (no rounding)

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# FRONT SQUAT

(Knees, Back, Shoulders)

The Movement • Create shelf with shoulders, elbows forwards
• Center weight over mid-foot
• Descend by sitting back

Performance - Keep back straight (no arch or rounding), elbows up
Injury Risk - Knees, hips and feet in line (not in or out)
Trunk and shins parallel
- Feet flat, weight on mid-foot
Limit depth by low back posture (no rounding)

SINGLE LEG SQUAT

(Knees, Back, Shoulders)

The Movement • Extend arms out front as counter-balance • Feet side by side, weight centered over mid-foot • Descend by sitting back

**ELEVATED SPLIT SQUAT** 

(Knees, Back, Shoulders)

Performance • Keep back straight (no arch or rounding)

Injury Risk • Knees, hips and feet in line (not in or out)

• Trunk and back thigh parallel

• Front foot flat, weight or mid-foot

• Prevent shoulders from rounding forwards



### **OVERHEAD SQUAT** 3

(Knees, Back, Shoulders)

vement • Barbell pressed overhead, wide grip, arms straight
• Center weight over mid-foot
• Descend by sitting back

### **VERTICAL JUMP** 6 (Knees, Back)

The Movement • Bent knees, arms back, slight bend in elbows
• Keep trunk stiff, extend hips, push through ground
• Sit back on landing

Performance - Keep back straight (no arch or rounding)
 Injury Risk - Knees, hips and feet in line (not in or out)
 Trunk and shins parallel
 Limit motion to vertical direction
 Limit do to vertical direction
 Limit depth by low back posture (no rounding)

# **PATTERNS**

### SPLIT SQUAT

(Knees, Back, Shoulders)

The Movement - Stagger feet (hip width), knees, hips and feet aligned

• Drop hips straight down, weight over mid-foot (front)

• Back knee bent, trunk and back thigh parallel

Performance • Keep back straight (no arch or rounding)

l njury Risk • Kness, hips and feet in line (not in or out)

• Trunk and back thigh parallel

• Front foot flat, weight on mid-foot

• Prevent shoulders from rounding forwards

# OVERHEAD LUNGE

10 (Knees, Back, Shoulders)

The Movement - Step forwards, bar overhead, knees, hips and feet in line
- Center weight over mid-foot (front), back knee bent
- Trunk and back thigh parallel, return to standing

Performance • Keep back straight (no arch or rounding)

↓ Injury Risk • Knees, hips and feet in line (not in or out)

K • Knees, hips and feet in line (not in
 Trunk and back thigh parallel
 Front foot flat, weight on mid-foot
 Prevent shoulders from rounding f

# STEP UP

(Knees, Back, Shoulders)

The Movement • Step up by pushing through box/bench with mid-foot
• Avoid initiating motion with non-stepping foot
• Reverse motion under control

Stepping foot flat, weight over mid-foor
 Trunk and front shin parallel
 Prevent shoulders from rounding forward.



# LUNGE

(Knees, Back, Shoulders)

The Movement • Step forwards, keep hips and feet alligned
• Center weight over mid-foot (front), back knee bent
• Trunk and back thigh parallel, return to standing

### BOUND **12**

(Knees, Back)

The Movement • Stand on one leg, knee, hip and foot aligned
• Bound in desired direction, land on same/opp
• Trunk and shin parallel

Trunk and shin parallel
 Limit depth by low back posture (no rou
 Weight on mid-foot, sit back on landing

PUSH

LUNGE



# DEADLIFT

(Knees, Back, Shoulders)

vement • Squat down, hips back, shoulders in front of barbell

• Maintain same trunk angle until barbell passes knees
• Center weight over mid-foot

Performance • Keep back straight (no arch or rounding)
Injury Risk • Knees, hips and feet in line (not in or out)
Grip floor with toes, feet flat
Keep load close (contact with legs)
Keep shoulders in front or in line with hands

# ROMANIAN DEADLIFT (RDL)

(Knees, Back, Shoulders)

vement • From standing, grasp barbell with overha • Maintain slight bend in knees • Bend over with hips (no motion in back)



# SINGLE LEG RDL

(Knees, Back, Shoulders)

Movement • Stand on one leg, knee, hip and foot aligned
• With slight bend in knee, bend over with hip
• Extend back leg and keep in line with upper body

**OVERHEAD PRESS** 

The Movement • Stand tall, feet approx. shoulder width
• Hands aligned with shoulders, press overhead
• Center weight over mid-foot

(Knees, Back, Shoulders)

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### PUSH-UP

16 (Back, Shoulders)

The Movement • Position hands chest level, approx. shoulder width
• Descend by "corkscrewing" floor with hands
• From bottom, push ground away

Performance • Keep back straight (no arch, rounding, twisting)

| Injury Risk • Shoulders down and back (no rounding)

• Do not reach with chin

• Limit depth by shoulder posture (no rounding)

# MOUNTAIN CLIMBER (Knees, Back, Shoulders)

The Movement • Stand tall, one foot elevated, knees, hips, feet alig • Weight evenly distributed, back knee slight bend • Hands aligned with shoulders, press overhead

Performance - Keep back straight (no arch, rounding, bending)
 Injury Risk - Shoulders down and back (no rounding)
 Grip floor with toes
 Grip barbelfdumbbell with thumbs wrapped
 Limit depth by shoulder posture (no rounding)



## **BENCH PRESS**

17 (Back, Shoulders)

The Movement • Position body on bench, feet flat on floor
• Begin with hands above shoulders
• Hands at chest level at bottom (curved path)

Performance - Keep back straight (no arch, rounding, twisting)

Injury Risk - Shoulders down and back (no rounding)

- Chin tucked, no bounce off cheel

- Grip barbell(cumbole with thumbs wrapped

- Limit depth by shoulder posture (no rounding)



# STANDING PRESS

(Knees, Back, Shoulders)

The Movement • Feet slightly wider than shoulders, forward lean
• Position hands at chest level
• Press hands forwards

Performance - Keep back straight (no arch, rounding, twisting)
Injury Risk - Shoulders down and back (no rounding)
Grip floor with toes
Grip load with thumbs wrapped
Limit motion by shoulder posture (no rounding)

# Performance - Keep back straight (no arch, rounding, bendir ↓ Injury Risk - Shoulders down and back (no rounding) • Crip floor with toes, feet flat • Crip barbell/whinbell with thumbs wrapped • Limit depth by shoulder posture (no rounding

SINGLE ARM PRESS

21 (Knees, Back, Shoulders)

The Movement - Adopt same position as two arm press
- Variation of push-up, bench press, overhead press, mountain climber and standing press

Performance • Keep back straight (no arch, rounding, twisting)
 Injury Risk • Shoulders down and back (no rounding)
 • Grip load with thumbs wrapped
 • Limit motion by shoulder posture (no rounding)

## PULL-UP

(Back, Shoulders)

The Movement - Begin from hanging position
- Pull body up until chin reaches hand height
- Hands shoulder width, facing into or away from body

Performance • Keep back straight (no arch or rounding)

↓ Injury Risk • Body stiff

• Ohin tucked, shoulders down and back

• Grip handles with thumbs wrapped

**BENTOVER ROW** 

(Knees, Back, Shoulders)

Performance • Keep back straight (no arch or roundin,

Injury Risk • Feet flat, weight centered over mid-foo

• Chin tucked, shoulders down and back

• Grip load with thumbs wrapped

• Elbows tucked into sides

## **PULL-DOWN**

(Back, Shoulders)

The Movement • From seated/kneeling, pull load to show • Pull elbows back and down • Rotate thumbs out while pulling

Performance • Keep back straight (no arch or rounding)
| Injury Risk • Body stiff
• Chin tucked, shoulders down and back
• Grip handles with thumbs wrapped



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### INVERTED ROW

(Back, Shoulders)

The Movement • From hanging position under barbell pull body up
• Position feet so chest touches barbell
• Feet approx. shoulder width, knees bent or straight

Performance • Keep back straight (no arch or rounding)

i Injury Risk • Lead with chest, avoid reaching with chin
• Shoulders down and back
• Grip barbell with thumbs wrapped
• Keen bins extended

SINGLE ARM ROW

(Knees, Back, Shoulders) The Movement - Adopt same position as two arm pull

Variation of pull-up, pull down, inverted row, standing row

Performance • Keep back straight (no arch or rounding ↓ Injury Risk • Feet flat, weight centered over mid-foot • Chin tucked, shoulders down and back • Grip load with thumbs wrapped • Elbows tucked into sides



The Movement • Hands positioned behind shoulders
• Knees slightly bent, lean forwards from hips
• Pull harhell in vertical direction to pavel





(Knees, Back, Shoulders)

The Movement • Feet slightly wider than shoulders
• Position hands at chest level (or slightly below)
• Pull hands towards chest (or slightly below)

Performance • Keep back straight (no arch or rounding i Injury Risk • Feet flat, weight centered over mid-foot • Chin tucked, shoulders down and back • Grip load with thumbs wrapped • Elbows tucked into sides



# MOVEMENT MATTERS!

- THE 7 KEY FEATURES -



KNEES

IN LINE

(Knee in line with hip/foot)

### What to Look For

- 1. Body from the front
- 2. Line from hip to toes
- 3. Position of knee in relation to line
  - · Medial to the line
  - · On the line
  - · Lateral to the line

## **Coaching Tips**

- > Grip the floor with the toes
- > Push the knees out
- > Point knees in direction of toes



# **MID-FOOT**

(Bodyweight over mid-foot)

### What to Look For

- 1 Rody from the side
- 2. Line through middle of foot
- 3. Position of weight in relation to line
  - . In front of the line (toes)
  - · On the line (arch)
  - · Behind the line (heel)

## **Coaching Tips**

- > Push through the floor
- > Grip the floor with the toes
- > Hinge at hips, lean forwards

OWER BACK



# **STRAIGHT**

(Normal low back curve)

## What to Look For

- 1. Body from the front, back or side
- 2. Two lines through hips/upper back
- 3. Distance between the two lines
  - · Closer than standing
  - · Same as standing
  - · Farther apart than standing

## **Coaching Tips**

- ➤ Stiffen trunk
- ➤ Let trunk move with hips
- > Dowel touches head, back, hips



# ALIGNED

(Hips and shoulders aligned)

# What to Look For

- 1. Body from the front, back or side
- 2. Two lines through hips/upper back
- 3. Alignment of the two lines
  - · Shoulders rotate more than hips
  - · Shoulders in line with hips
  - · Hips rotate more than shoulders

## **Coaching Tips**

- ➤ Use upper/lower body together
- > Rotate with hips
- > Practice with one hand



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# **DOWN**

(Shoulders away from ears)

### What to Look For

- 1. Body from the front, back or side
- 2. Two lines through ears/shoulders
- 3. Distance between the two lines
  - · Closer than standing
  - · Same as standing
  - · Farther apart than standing

### **Coaching Tips**

- ➤ Elbows down/close to body
- > Treat motions as push and pull
- > Hold shoulders back



# BACK

(Elbow and shoulder together)

### What to Look For

- 1. Body from the front, back or side
- 2. Line from shoulder to elbow
- 3. Movement at both ends of the line
  - · Move in opposite direction
  - · Move in same direction
  - · Only one end moves

### **Coaching Tips**

- > Rotate thumbs out when pulling
- > Pull shoulder blades together
- > Limit how far elbows pulled back

# SQUAT PATTERNS

Knees, Low Back, Shoulders



# **KEY FEATURES**

# Knees

- 1. In line with hips and feet (IN-LINE)
- 2. Bodyweight centered over mid-foot (MID-F00T)

# Low Back

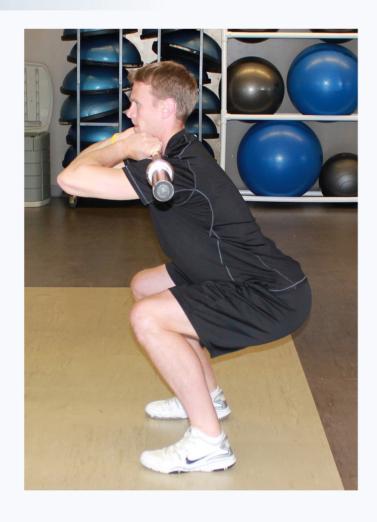
- 3. Normal low back curve (STRAIGHT)
- 4. Hips and shoulders aligned (ALIGNED)

# **Shoulders**

- 5. Shoulders away from ears (DOWN)
- 6. Elbows and shoulders move together (BACK)

# **COACHING TIPS**

- · Grip the floor with toes and keep the feet flat
- · Push the knees out
- · Hinge at the hips and sit back
- · Stiffen the trunk and lean forwards
- Push through the floor on the way up



# SQUAT PATTERN VARIATIONS



BACK SQUAT (Knees, Back, Shoulders)

To perform • Bar on back of shoulders Bar over mid-foot
 Bodyweight over mid-foot

Exercise • Bar position (high/low) Variations . Stance width

• Depth Coaching . Grip the floor with your toes Cue and prop up your arch

FRONT SQUAT (Knees, Back, Shoulders)

To perform • Bar on front of shoulders Bar over mid-foot
 Bodyweight over mid-foot

Exercise • Grip (clean/crossed arm) Variations • Dumbbells • Depth

Coaching • Initiate movement from the Cue bottom by lifting your elbows up



OVERHEAD SQUAT 3 (Knees, Back, Shoulders)

To perform . Wide grip, arms straight

Bar over mid-foot
 Bodyweight over mid-foot

Exercise • Grip width Variations . Stance width • Depth

Coaching . Squeeze the bar and try to Cue spread your hands apart (without actually moving)



MEDICINE BALL SQUAT (Knees, Back, Shoulders)

To perform • Ball close to body · Elbows under hands . Bodyweight over mid-foot

Exercise • Load position (close/far) Variations • Squat to press • Depth

Coaching • Grip the floor and push your Cue knees out



SINGLE LEG SQUAT (Knees, Back, Shoulders)

To perform • Stand on one leg Hold arms out front · Bodyweight over mid-foot

Exercise • Elevated foot position Variations • Position of load • Depth

Coaching . Reach forwards with your arms Cue and back with your hips while squatting down



VERTICAL JUMP (Knees, Back)

> To perform • Bodyweight over mid-foot • Slight bend in elbows Arms and legs together

Variations . Drop off box and jump Broad iump

Coaching • Swing your arms as fast as Cue possible to initiate motion

# **LUNGE PATTERNS**

# Knees, Low Back, Shoulders



# **KEY FEATURES**

# Knees

- 1. In line with hips and feet (IN-LINE)
- 2. Bodyweight centered over mid-foot (MID-F00T)

# Low Back

- 3. Normal low back curve (STRAIGHT)
- 4. Hips and shoulders aligned (ALIGNED)

# **Shoulders**

- 5. Shoulders away from ears (DOWN)
- 6. Elbows and shoulders move together (BACK)

# COACHING TIPS

- · Grip the floor with the toes of the lead foot
- · Push the knee out and adopt a wide stance
- · Align the trunk with the rear thigh
- · Stiffen the trunk and lean forwards
- Push through the floor on the way up



# **LUNGE PATTERN VARIATIONS**



- SPLIT SQUAT (Knees, Back, Shoulders)
- To perform Stagger feet (hip width)
  - Bodyweight over mid-foot
     Trunk in line with rear thigh
- Exercise Barbell
- Variations Trunk angle • Depth
- Coaching . Lean slightly forwards so that Cue your trunk is in line with your rear thigh



- **ELEVATED SPLIT SQUAT** (Knees, Back, Shoulders)
- To perform Elevate rear foot
  - Bodyweight over mid-foot
     Trunk in line with rear thigh
- Exercise Stride length Variations • Trunk angle
- · Rear foot height Coaching • Grip the floor with the toes

Cue of your front foot and push your knee out



- LUNGE (Knees, Back, Shoulders)
- To perform Step forwards/backwards Bodyweight over mid-foot
   Trunk in line with rear thigh
- Exercise Back lunge Variations • Walking lunge Sideways (lateral)
- Coaching Keep your bodyweight

  Cue centered over the middle of your front foot (back lunge)



- **OVERHEAD LUNGE** (Knees, Back, Shoulders)
- To perform Wide grip, arms straight
  - Bar overhead Step forwards/backwards
- Exercise Grip width
- Walking lunge
- Coaching Keep the feet about hip

  Cue width apart when stepping forwards



- STEP UP (Knees, Back, Shoulders)
- To perform Lean forwards, sit back Push through mid-foot Step up and down
- Exercise Barbell Variations • Step height • Trunk angle
- Coaching Lean slightly forwards and Cue keep your weight over the middle of the front foot



- 6 BOUND (Knees, Back)
- To perform Stand on one leg
  - Bound in desired direction · Land on same/opposite foot
- Variations Ninety degree turn • Depth
- Coaching Land softly by bending your Cue knee and sitting back

# **HINGE PATTERNS**

# Knees, Low Back, Shoulders



# **KEY FEATURES**

# Knees

- 1. In line with hips and feet (IN-LINE)
- 2. Bodyweight centered over mid-foot (MID-F00T)

# Low Back

- 3. Normal low back curve (STRAIGHT)
- 4. Hips and shoulders aligned (ALIGNED)

# **Shoulders**

- 5. Shoulders away from ears (DOWN)
- 6. Elbows and shoulders move together (BACK)

# **COACHING TIPS**

- · Grip the floor with toes and keep the feet flat
- · Keep the load in contact with the legs
- · Maintain trunk angle until load passes knees
- · Push through the floor on the way up
- · Reverse the lifting motion to lower



# HINGE PATTERN VARIATIONS



- **DEADLIFT** (Knees, Back, Shoulders)
- To perform . Bodyweight over mid-foot
  - Shoulders in front of hands
     Lean forwards, squat down

Exercise • Grip width Variations . Stance width • Depth

Coaching • Lean forwards and maintain Cue the same trunk angle until the load crosses your knees



- ROMANIAN DEADLIFT (Knees, Back, Shoulders)
- To perform . Bodyweight over mid-foot Shoulders in front of hands
   Bend over from hips

Exercise • Dumbbells Variations . Stance width • Depth

Coaching • Only go down as far as your Cue can while keeping your back straight



- SINGLE LEG RDL (Knees, Back, Shoulders)
- To perform . Stand on one leg Bodyweight over mid-foot
   Bend over from hip
- Exercise One arm Variations • Same/opposite arm/leg • Depth

Coaching . Push the raised heel away from Cue your head, making yourself as long as possible



- KETTLEBELL SWING (Knees, Back, Shoulders)
- To perform Bodyweight over mid-foot Bend over from hips

· Swing in arc motion Exercise • One arm

Variations • Depth Swing to snatch/clean

Coaching • Lean forwards and bend from Cue the hips, keeping the load close to your body



- CLEAN (Knees, Back, Shoulders)
- To perform Narrow grip, arms straight Shoulders in front of hands · Catch at shoulder height
- Exercise Catch in squat position Variations • High pull only
  • Starting height (hang)

Coaching • Create momentum with your Cue legs before pulling with your



- **SNATCH** (Knees, Back, Shoulders)
- To perform Wide grip, arms straight Shoulders in front of hands
- · Catch overhead

Variations . One arm

· Starting height (hang)

Coaching • Keep the bar in contact with Cue your legs as long as possible

# **PUSH PATTERNS**

# Knees, Low Back, Shoulders



# **KEY FEATURES**

# Knees

- 1. In line with hips and feet (IN-LINE)
- 2. Bodyweight centered over mid-foot (MID-F00T)

# Low Back

- 3. Normal low back curve (STRAIGHT)
- 4. Hips and shoulders aligned (ALIGNED)

# **Shoulders**

- 5. Shoulders away from ears (DOWN)
- 6. Elbows and shoulders move together (BACK)

# COACHING TIPS

- · Treat activities as push and pull
- · Rotate thumbs out when pulling to body
- · Keep the elbows close to the body
- · Stiffen trunk to prevent low back motion
- Use the lower body to increase momentum/stiffness







# PUSH PATTERN VARIATIONS



PUSH-UP (Back, Shoulders)

To perform • Hands at chest level

Elbows close to body
 Body moves as one unit

Exercise • Hand position Variations • Trunk angle

• Depth

Coaching . Stiffen your trunk and reach for Cue the floor with your chest instead of your chin



BENCH PRESS (Back, Shoulders)

To perform . Back on bench, feet flat

on floor
Hands above shoulders (top)
Hands at chest (bottom)

Exercise • Grip width

Variations • Trunk angle • Depth

Coaching . When pressing, push yourself Cue into the bench and away from the load



**OVEARHEAD PRESS** (Knees, Back, Shoulders)

To perform • Feet shoulder width

Hands above elbows
 Bodyweight over mid-foot

Exercise • Grip type (facing/neutral)

Variations . Use of lower body • Depth

Coaching • Pull your elbows in close to Cue your sides as you lower the load



Mountain Climber (Knees, Back, Shoulders)

To perform • One foot elevated • Bodyweight over mid-foot

· Hands above elbows

Exercise • Grip type (facing/neutral) Variations . Foot height (split squat) · Pressing angle

Coaching • Push your rear hip forward Cue and stiffen your trunk



STANDING PRESS (Knees, Back, Shoulders)

To perform • Bend knees, lean forwards
• Hands at chest height

· Flbows behind hands

Exercise • Split stance Variations • Pressing angle • Hand width

Coaching . Grip the ground with your toes Cue bend your knees and lean forwards



6 SINGLE ARM PRESS (Knees, Back, Shoulders)

To perform • Same position as two arms

· Elbows close to body . Hands in line with elbows

Exercise • Hand position

Variations • Foot width • Trunk/body angle

Coaching • Widen your feet to increase Cue your base of support and make you more stable

# **PULL PATTERNS**

# Knees, Low Back, Shoulders



# **KEY FEATURES**

# Knees

- 1. In line with hips and feet (IN-LINE)
- 2. Bodyweight centered over mid-foot (MID-F00T)

# Low Back

- 3. Normal low back curve (STRAIGHT)
- 4. Hips and shoulders aligned (ALIGNED)

# **Shoulders**

- 5. Shoulders away from ears (DOWN)
- 6. Elbows and shoulders move together (BACK)

# **COACHING TIPS**

- · Treat activities as push and pull
- · Squeeze the shoulder blades together
- · Keep the elbows close to the body
- · Stiffen trunk to prevent low back motion
- · Use the lower body to increase momentum/stiffness





# PULL PATTERN VARIATIONS



- PULL-UP (Back, Shoulders)
- To perform Hang from two hands
- Pull body up to hand height
   Elbows close to body
- Libows close to body

Exercise • Grip width

Variations • Overhand/underhand grip

• Assisted

Coaching • Squeeze the handle/bar as

Coaching • Squeeze the handle/bar as
Cue hard as possible while pulling
yourself up



- PULL-DOWN (Back, Shoulders)
- To perform Hands above head
- Pull hands to shoulder level
   Elbows close to body
- Exercise Seated/kneeling Variations • Grip type (facing/neutral)
- Trunk angle

Coaching • Tuck your elbows into your Cue sides and squeeze your shoulder blades together



- 3 INVERTED ROW (Knees, Back, Shoulders)
- To perform Hang from two hands
   Pull body up to hand height
   Elbows close to body
- Exercise Overhand/underhand grip Variations • Knees bent
- ariations Knees bent
   Trunk angle

Coaching • Keep your hips up and pull the Cue bar to chest level



- 4 BENTOVER ROW (Knees, Back, Shoulders)
- To perform Bend over at hips
   Bodyweight over mid-foot
  - Pull bar in vertical direction
- Exercise Overhand/underhand grip
- Variations Trunk angle • Split stance
- Coaching Grip the ground with your toes Cue bend your knees and lean forwards



- 5 STANDING ROW (Knees, Back, Shoulders)
  - To perform Bend knees and sit back
     Hands at chest height
     Flhows close to body
  - Exercise Seated row Variations • Split stance • Pulling angle
  - Coaching Rotate your thumbs out as you
    Cue pull the load towards your body



- 6 SINGLE ARM ROW (Knees, Back, Shoulders)
- To perform Same position as two arms • Elbows close to body
- Hands in line with elbows
- Exercise Hand position
  Variations Foot width
   Trunk/body angle
- Coaching Pull your elbow and shoulder
  Cue back at the same time