

697 Exercises Can Hurt or Help: Recommendations for Older Adults

Saturday, March 20, 2010: 10:15 AM-11:30 AM

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Conventions Center: 110
AAPAR/Council on Aging and Adult Development

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Each exercise in any program must be safe, have a purpose, and be the best option for the individual's needs. This session presents exercises to select, avoid, or modify, particularly when working with older adults. Best alternatives and reasons for these choices will be a focus of this program.

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697 Exercise Can Hurt or Help: Recommendations for Older Adults

Exercises must:

- Be safe
- Serve a purpose
- Be the best option
 - Client
 - Function
 - Time

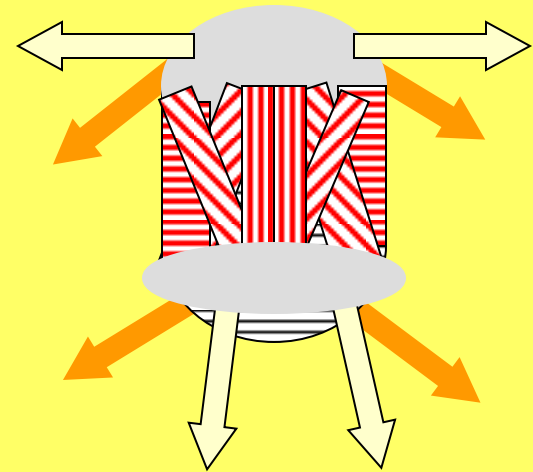
Posture

- Individual needs
 - Injury
 - FoF
- Guide
 - Tall (string)
 - Turtle
 - Goal posts

- Seated
 - Maintain Lumbar curve
 - Support
 - Activation
 - Feet on ground
 - Tall, turtle, goal

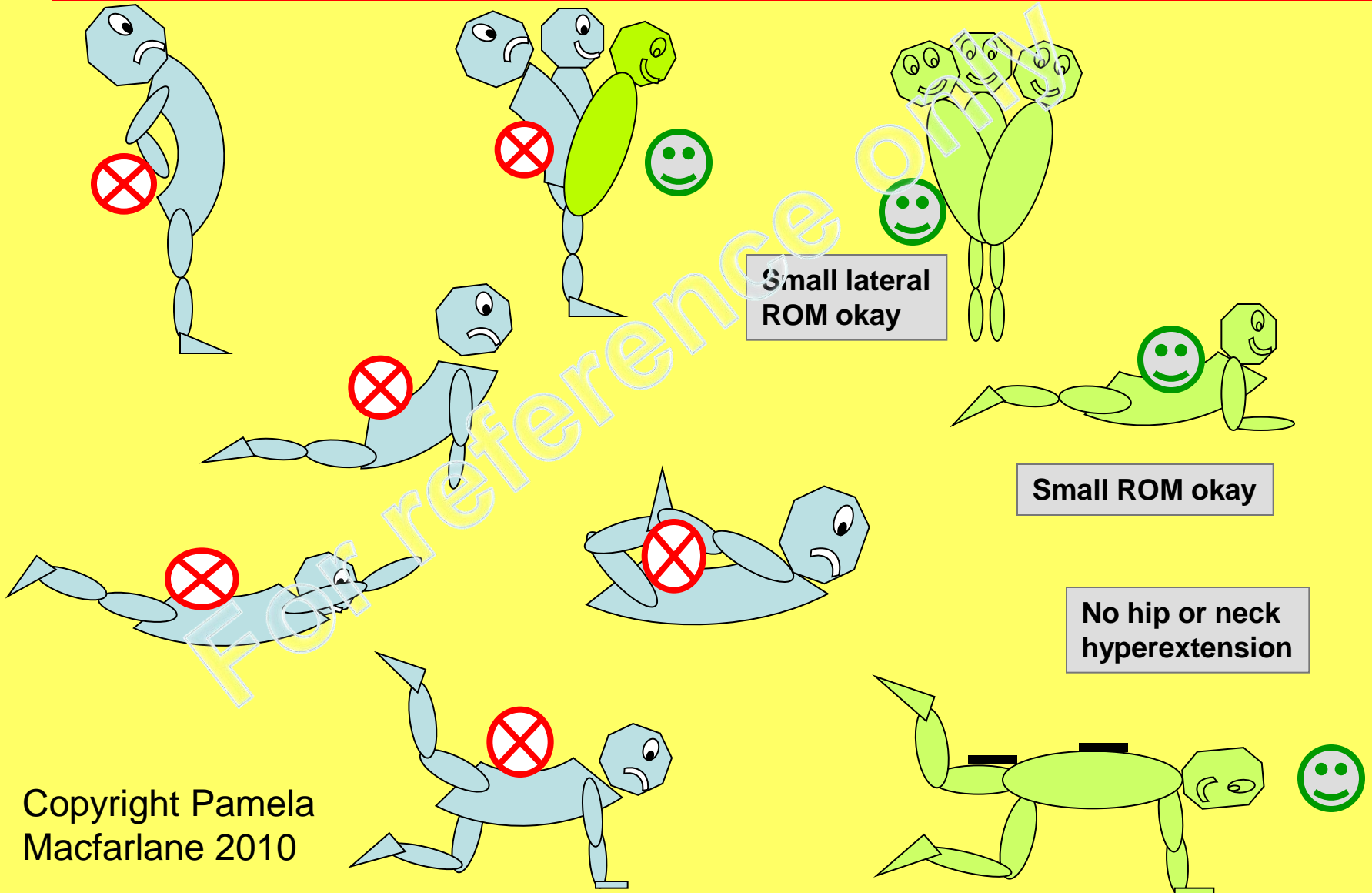
Setting the trunk muscles

- Core activation
 - Not suck in your gut
 - Breathe
 - Automatic
 - Activation and practice
 - Make it automatic
- “TICKLE-TIGHTNESS”



Very helpful for back protection for those with chronic or acute, or at risk

Contraindicated exercises: Back hyperextension



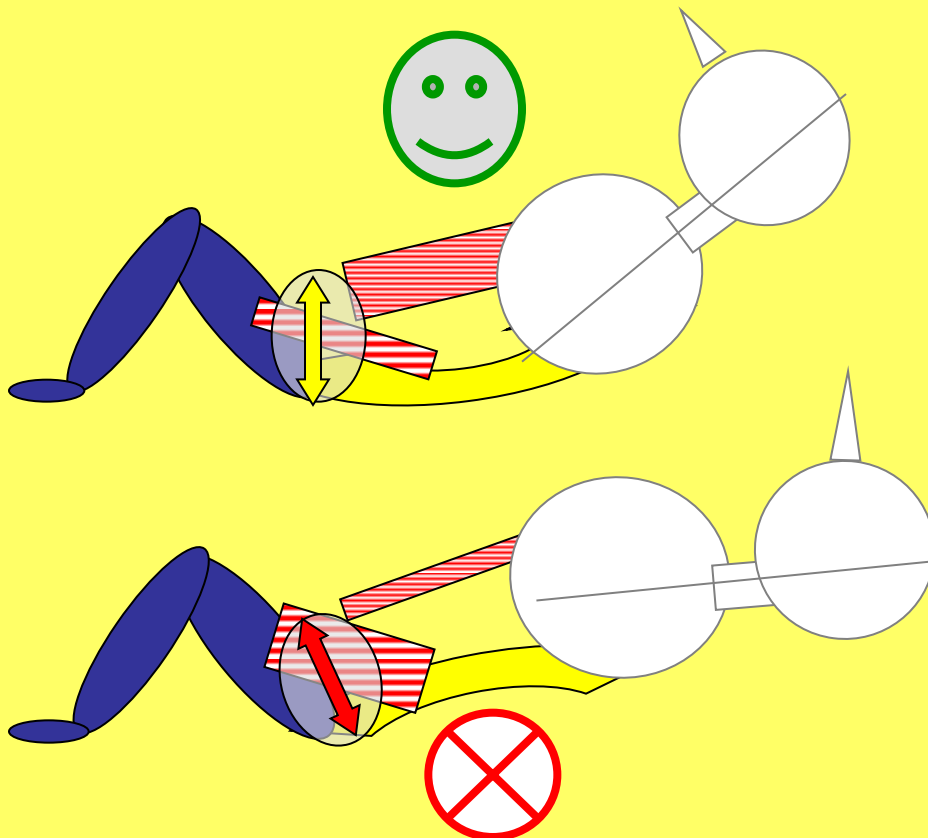
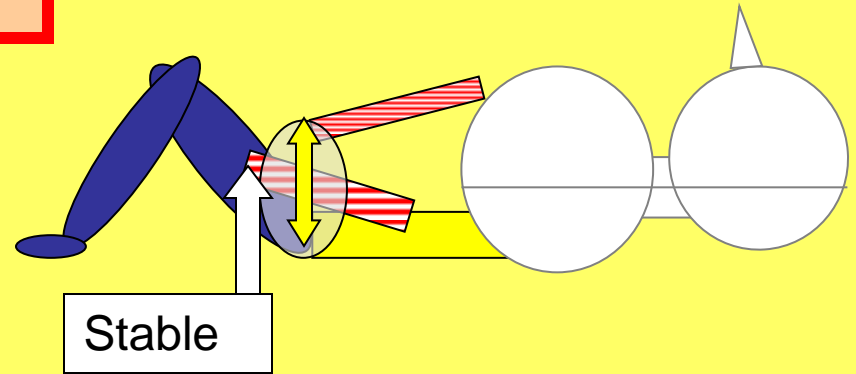
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Core stability

- To stabilize the lumbar spine
 - Any movements for those with back pain
- Hip/lumbar spine is fused
- Set core for following:
 - Quad exercise (knee high, hip flexion, etc)
 - Bending to pick up something
 - Get out of a chair
 - Lateral bending

Iliopsoas muscle

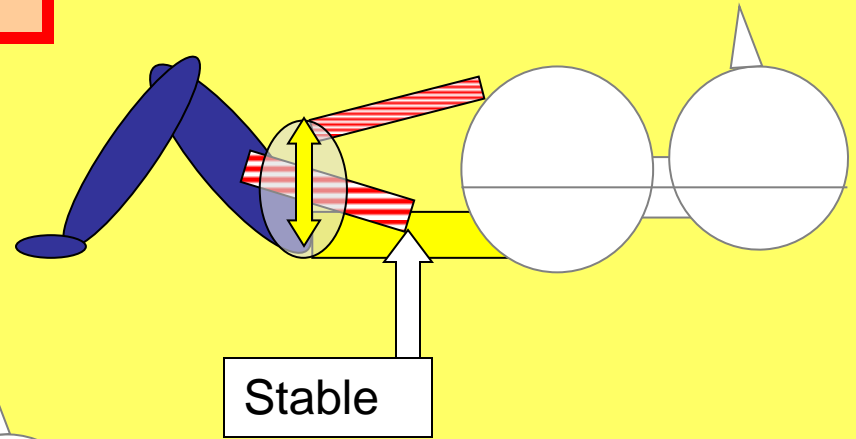
- Hip flexor
 - Can assist in raising the trunk up



Key cue in sit/curl up:
ribs should move closer
to hips
Back should NOT
hyperextend.

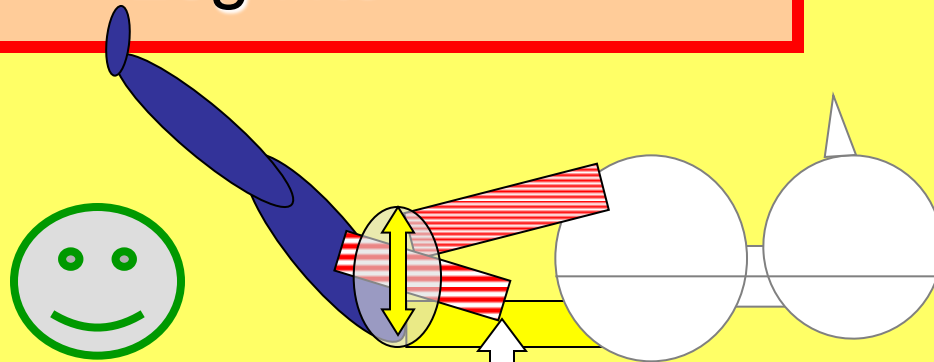
Iliopsoas muscle

- Hip flexor
 - Leg lifts

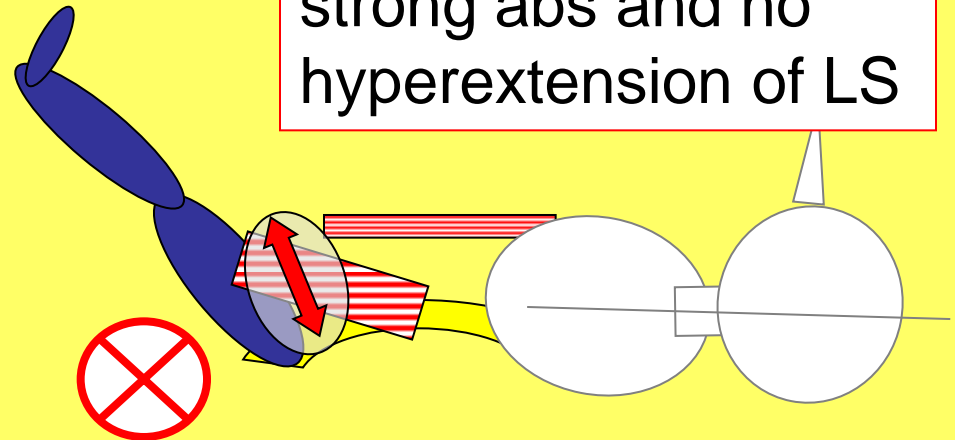


For double leg lifts to be safe:

strong abs and no hyperextension of LS

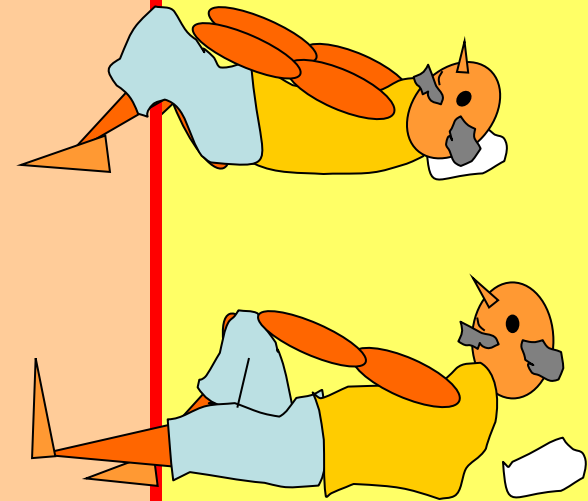


Requires strong abdominals to stabilize the hips

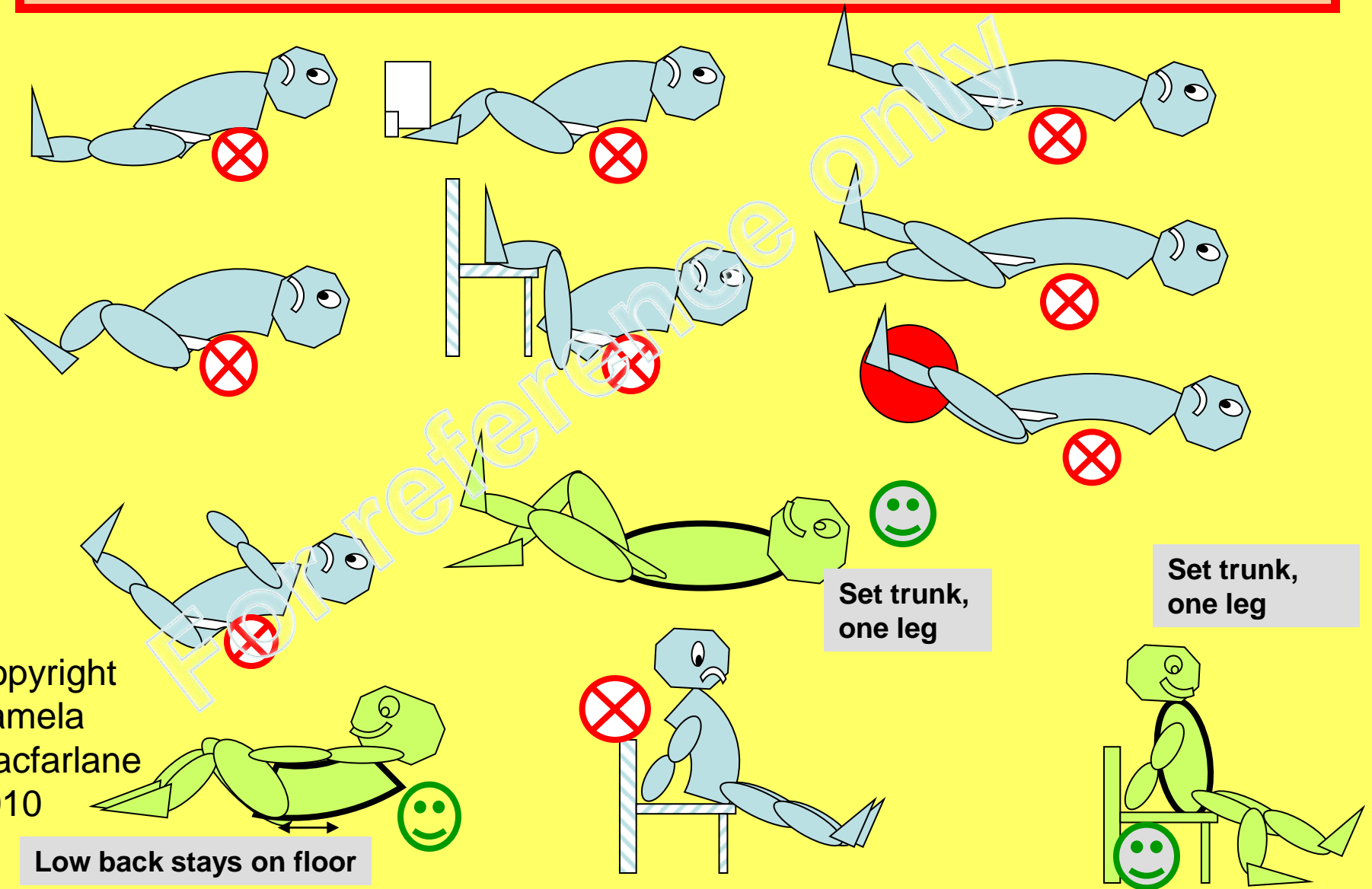


Strengthen the abdominals

- Curl-ups activate rectus abdominus
 - Avoid hyperextension.
 - One leg straight, one leg bent
 - Or both bent (not both straight)
 - “Set” abdominals
 - Curl up uses obliques & rectus abdominus
- Twisting curl ups use more obliques but increase lateral compression
- Hands over knees.



Contraindicated exercises: Back hyperextension



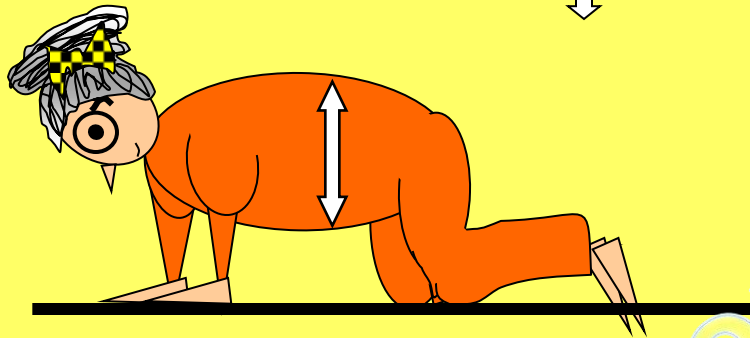
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Low back stays on floor

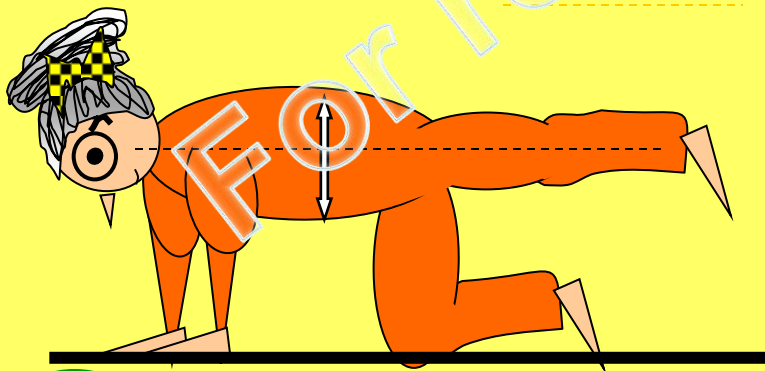
Set trunk,
one leg

Set trunk,
one leg

Hip extension (Tummy sucked in)

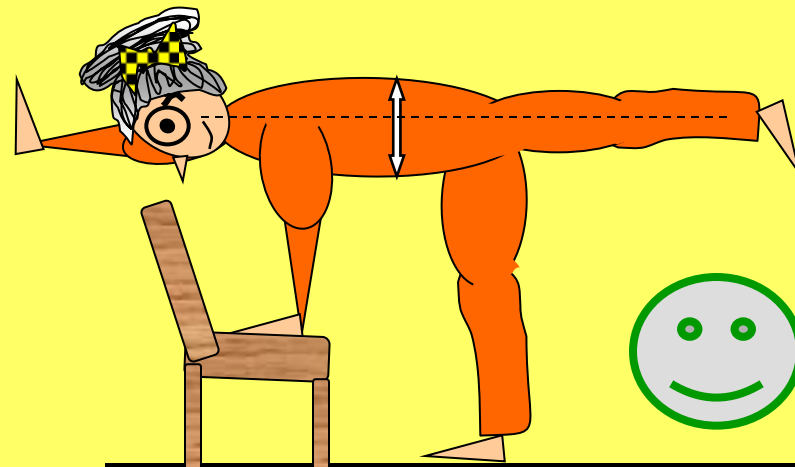
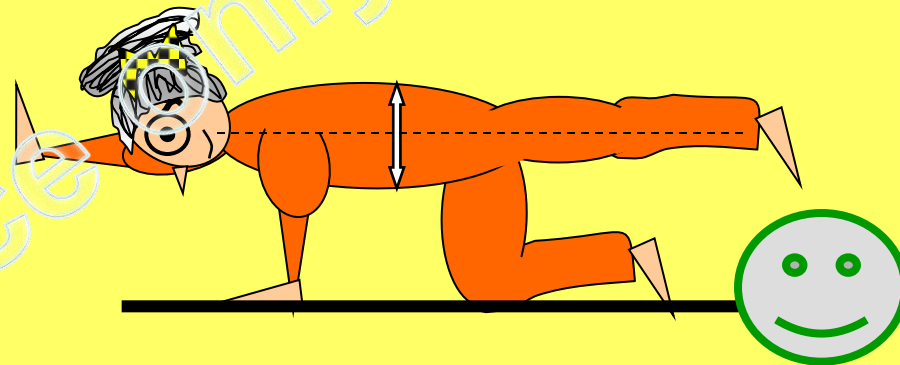


Back remains in extension
through out

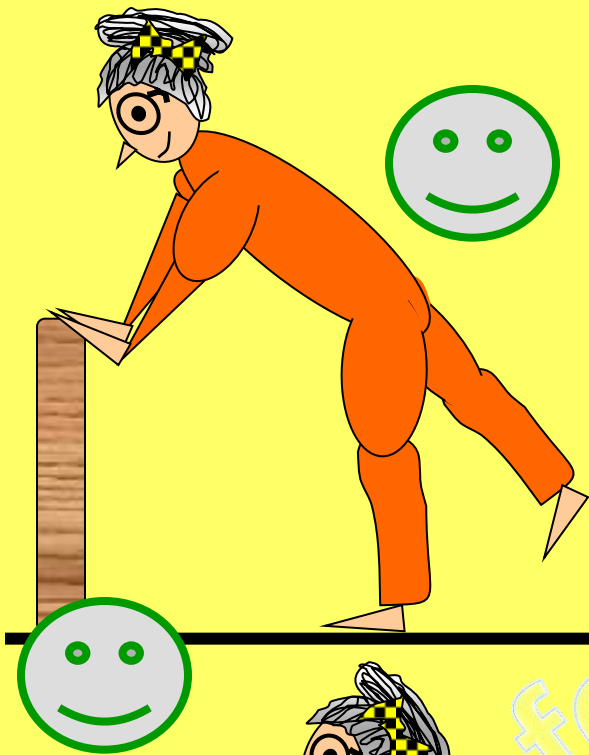


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Advanced hip extension "bird dog"

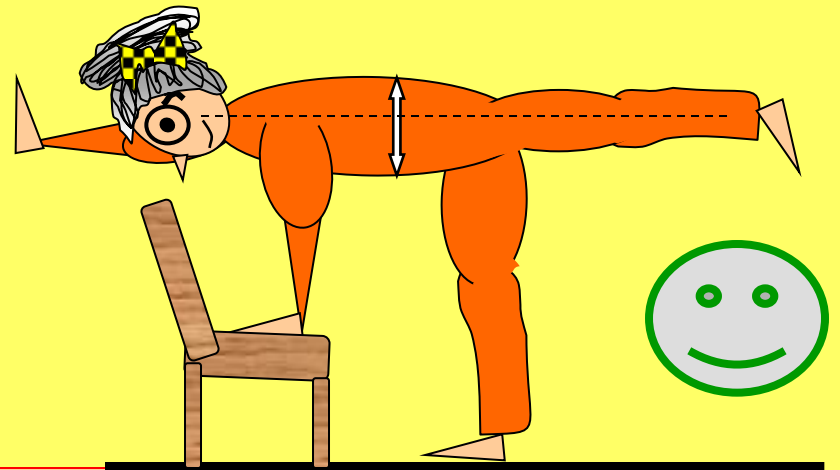
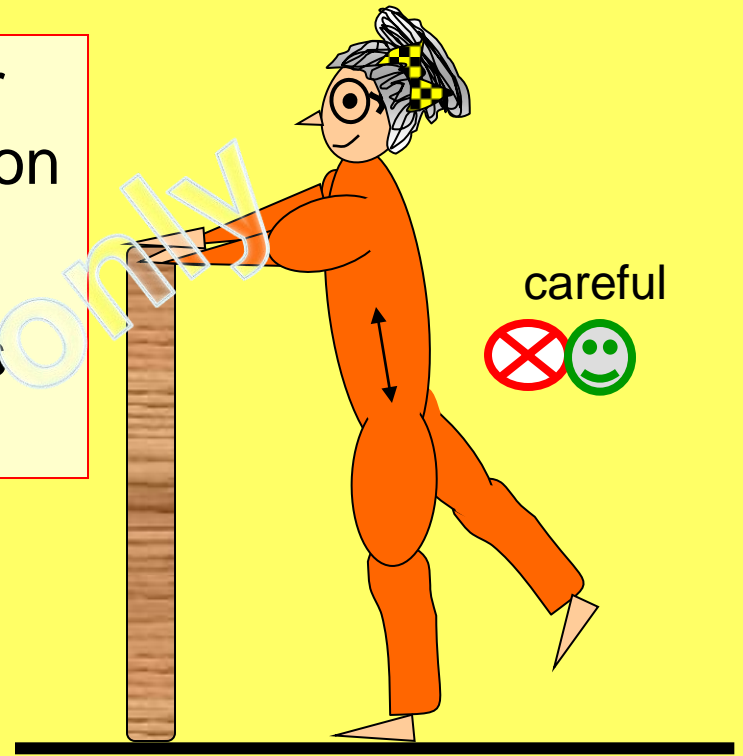


No neck or back hyperextension:
Keep head down, hip extended.



Watch put for hyperextension

Leaning forward gives greater ROM

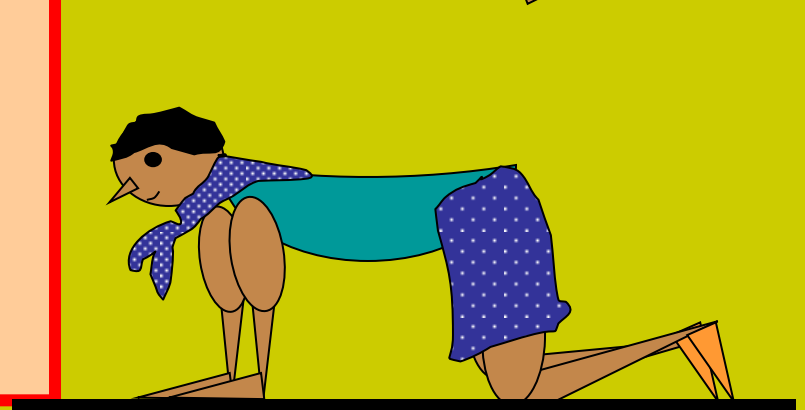
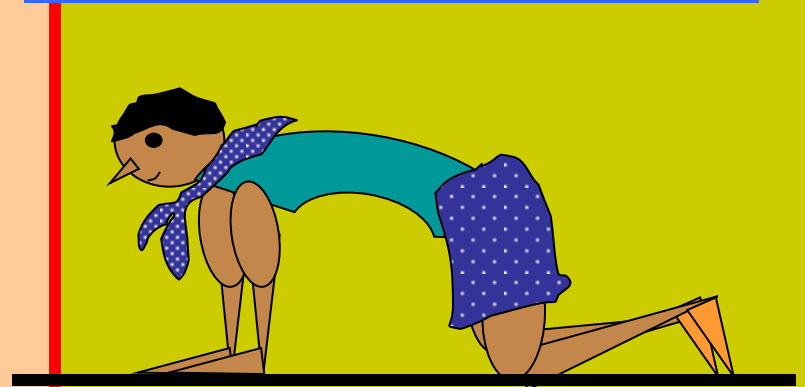


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Cat- camel “flossing” preventive/relief

- Include conscious bracing
- For motion.... **not a stretch**
- 5 or 6 shown to increase viscosity
- Limit ROM and avoid pushing

Camel and cat flossing
(do **not** push at limit of ROM)



EMERGENCY: Cauda equina syndrome

Bowel and bladder function changes

Pain down **both** legs

Pain in area that would touch a saddle

Avoid:

Standing toe touches

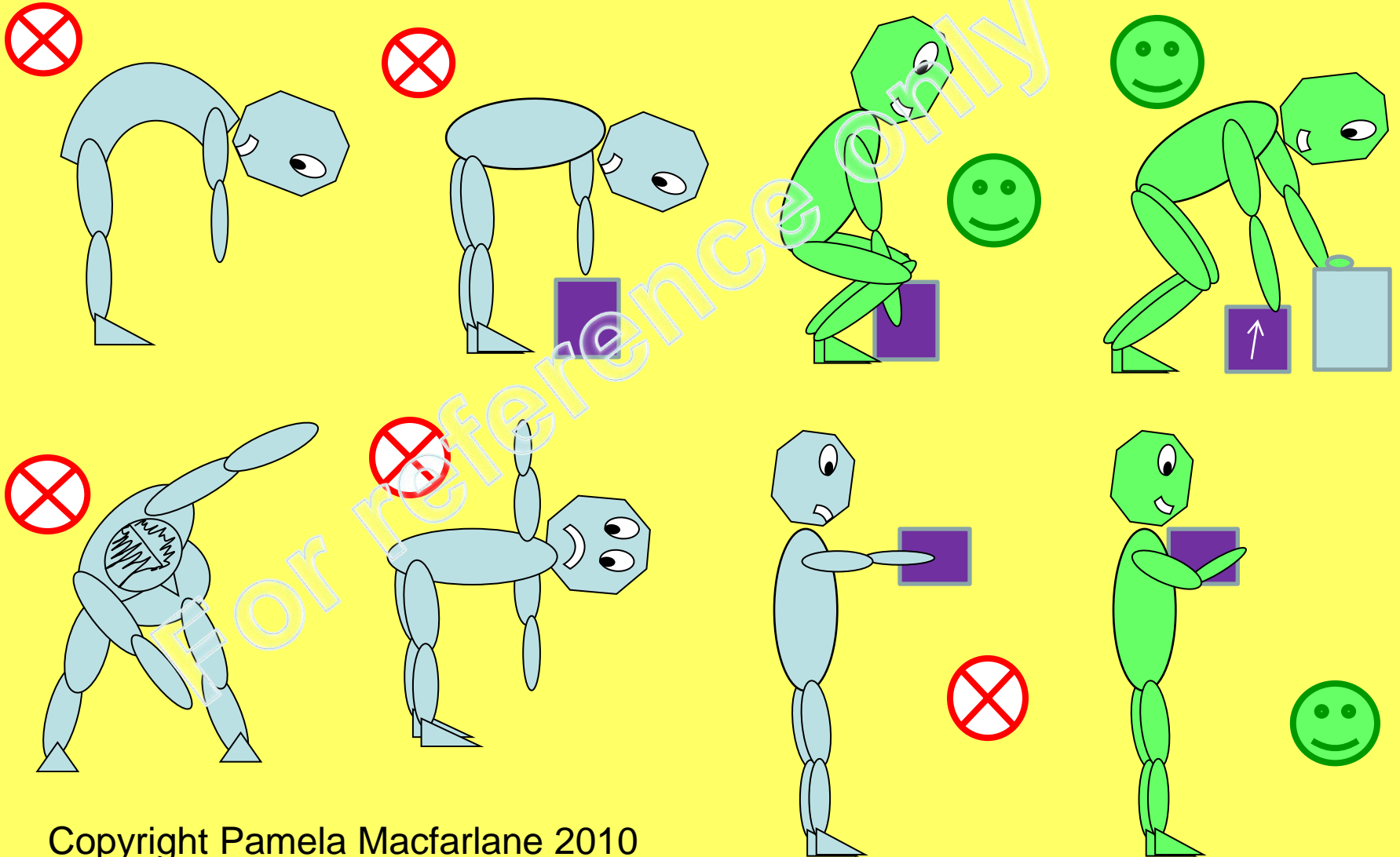
Windmills

Bending over to pick up

weight/any thing

(includes catching incorrectly)

Contraindicated exercises: forward lean

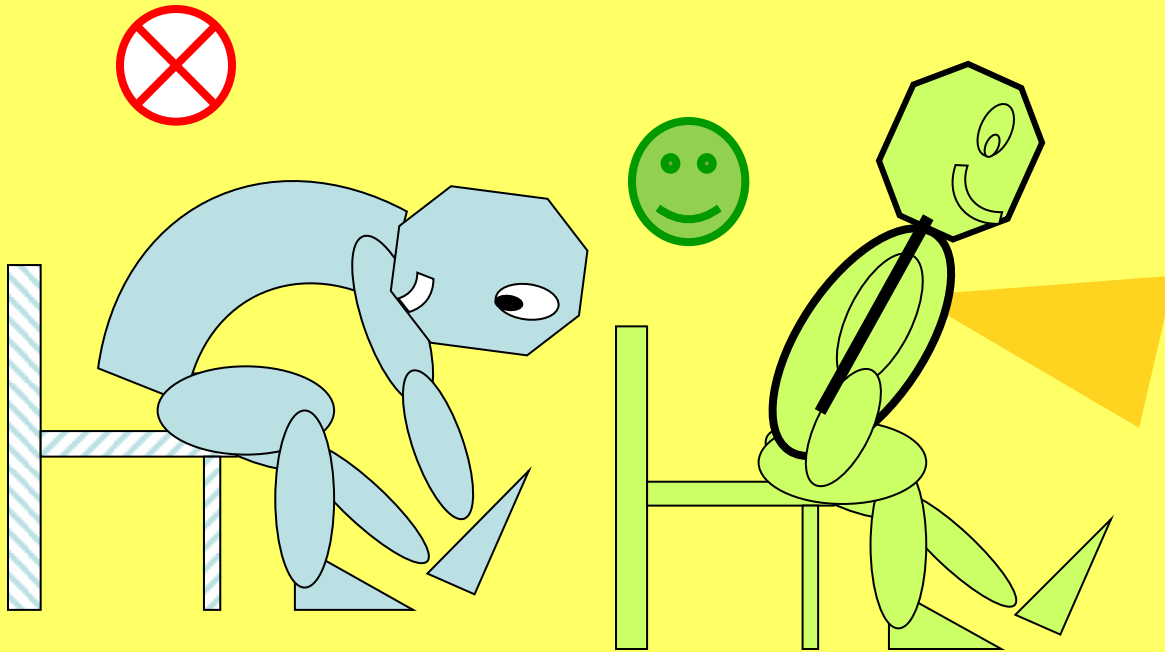


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Osteoporosis

- Avoid spine compression
 - Any weight on shoulders
 - Weighted squats, calf raisers
 - Catch medicine ball
 - Carrying a suitcase
- Avoid forward flexion
- No weighted twisting
- No max ROM

Contraindicated exercises: forward lean



Set trunk, back stays straight, lean with chest

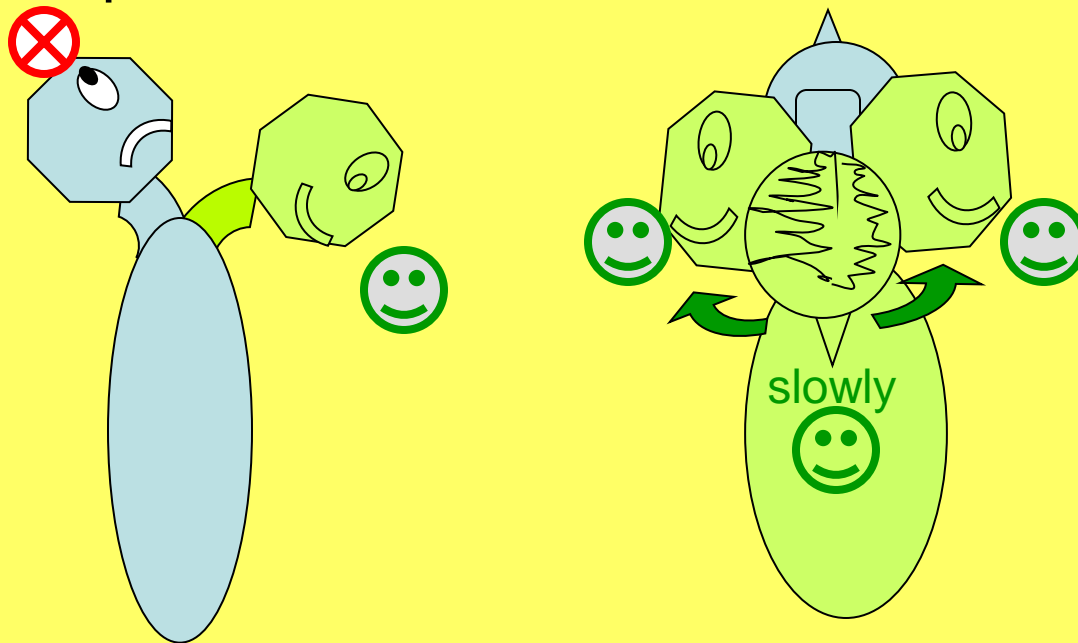
Seated stretch to the hamstrings for someone with OP

Contraindicated exercise: max neck hyperextension

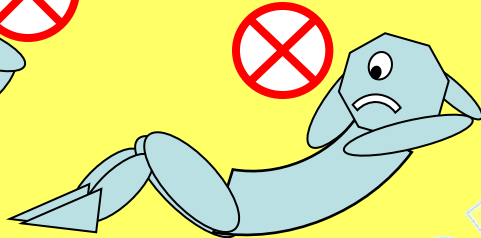
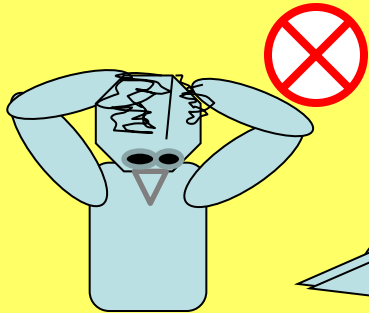
Carotid artery compression
plaque pressure
baroreceptor stimulation

Vestibular stimulation

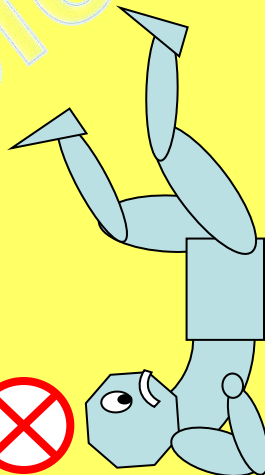
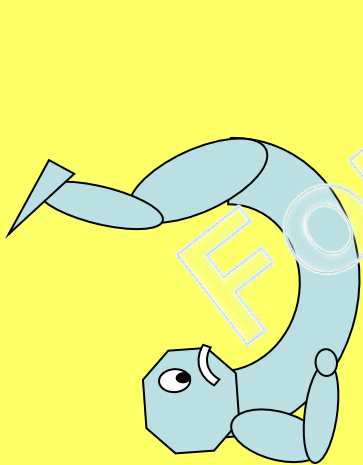
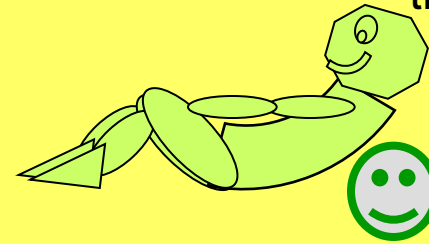
Compression of cervical vertebrae



Contraindicated exercises: neck forced flexion

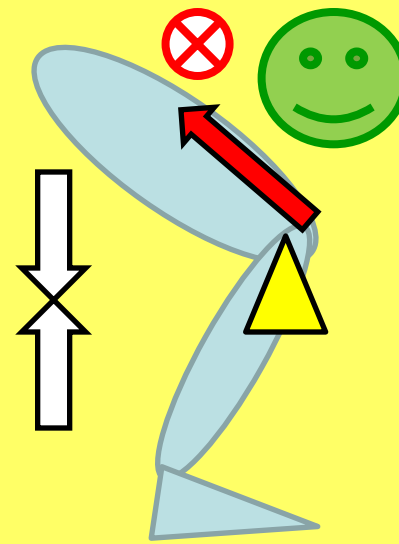


Hands on shoulders, ears or thighs

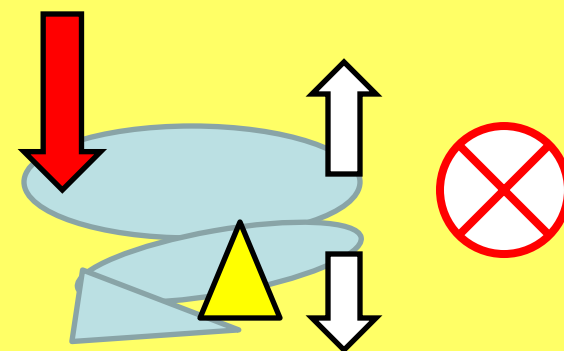
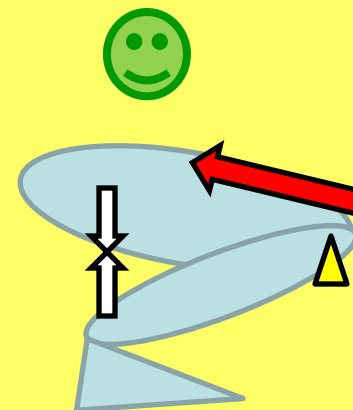


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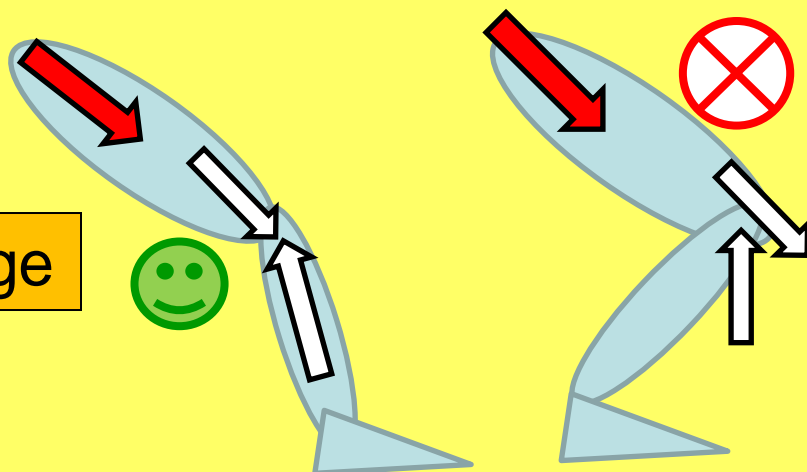
Knee protection: shear force, max flexion



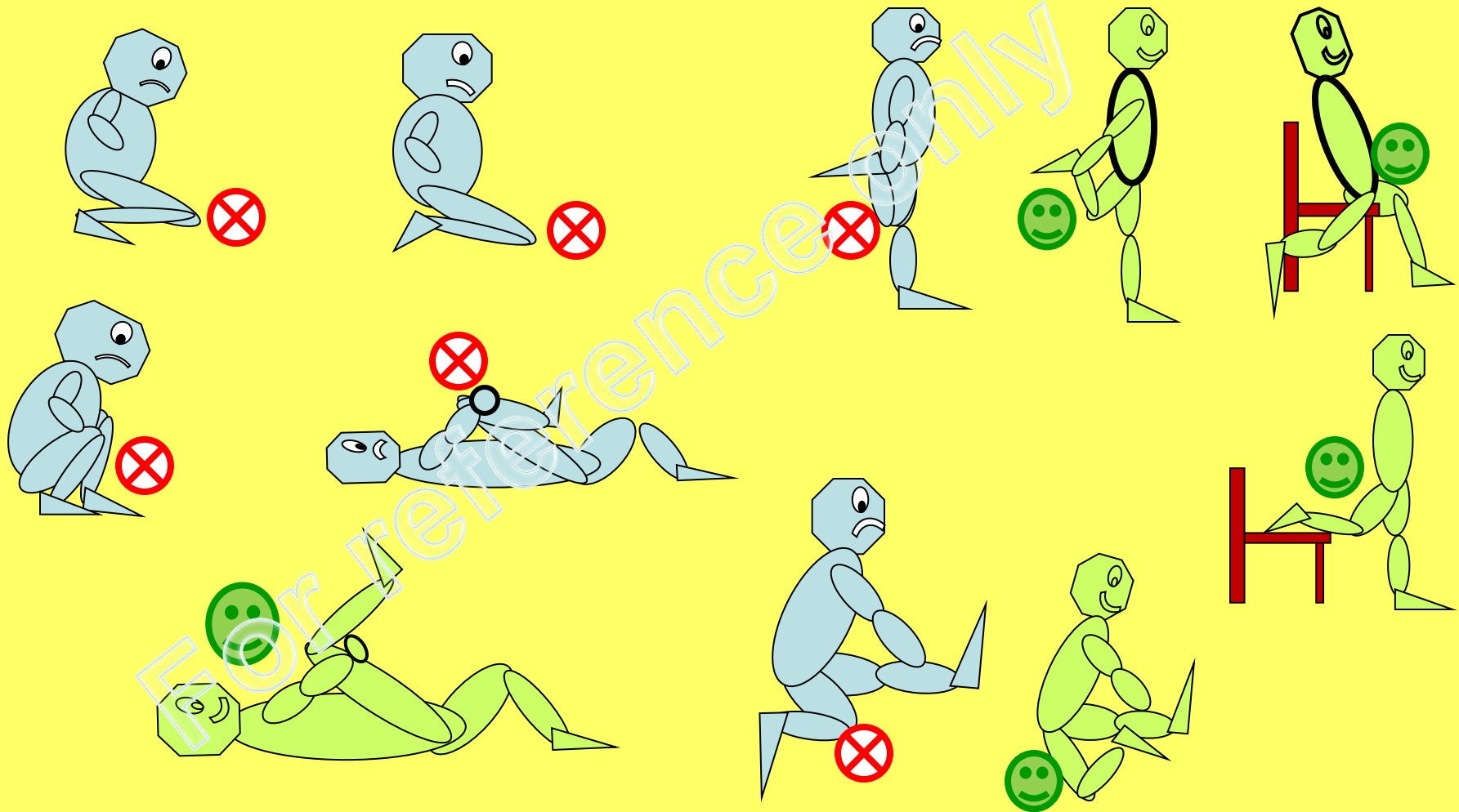
Squat



Lunge



Contraindicated exercise: knee compression



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Knee protection: tracking

Leg press
Bicycle
Stepper

Can make knee worse
May consider isometrics

WRIST

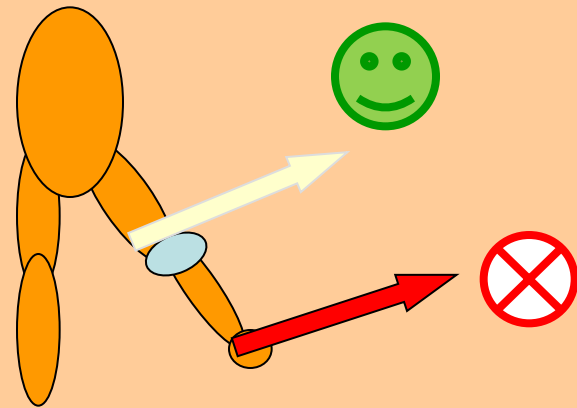
- Keep wrist in neutral unless unweighted or guided strengthening

Joint replacements?

For all surgery get the PT and/or doctor's recommendation

- **Knee:**

- Avoid extra torque
- Pain is the guide



- **Hip:**

- No flexion past 90 degrees
- No crossing the midline

Teach good mechanics

- Set core
- Strengthen lumbar extensors
 - Stationary “isometric” Superman
- Strengthen gluteus maximus
- Strengthen hamstring
- Teach to pick up a slipper
- Teach catching and throwing
 - May need to stabilize back if at risk.
- Seated hamstring stretch

Getting up from a chair

- Set core
- Shift to front of chair
- Feet positioned
- Set quads
- “1 2 3 up”
- Controlled seated

