Minnesota Physical Therapy Association Spring Conference 2015

Senior Athlete Fitness Exam SAFE

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SCHOOL OF HEALTH SCIENCES

National Senior Games Association

Objectives

Upon completion of this course, participants will:

- Report increased awareness of the NSGA, its goals and organizational structure
- Discuss the benefits of physical therapist involvement in NSGA events
- List the components of the screen and discuss why they were chosen for inclusion
- Demonstrate all components of the screen accurately
- Report comfort incorporating the screen into physical therapy student service-based learning
- Report awareness of the ongoing research efforts to improve the screen and how they can become involved

National Senior Games Association®

49 States

Local, State

Biennial Nationals

50 years old

State Requirements

National Senior Games Association

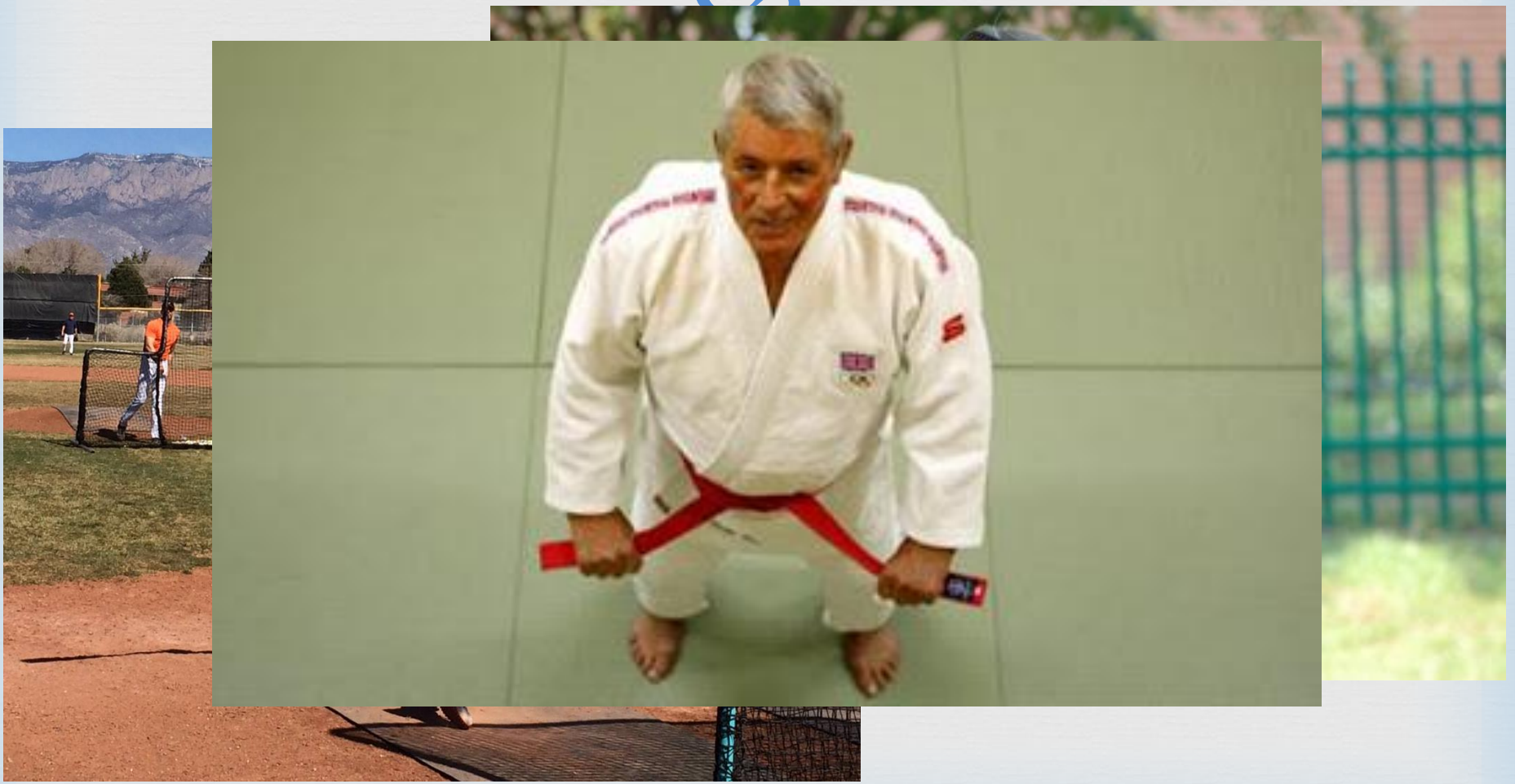
Qualifying for Nationals

Events

- Archery
- Golf
- Racquetball
- Table Tennis
- Badminton
- Horseshoes
- Road Race
- Tennis
- Bowling
- Pickleball
- Shuffleboard
- Track & Field
- Cycling
- Race Walk
- Swimming
- Triathlon
- Basketball*
- Softball*
- Volleyball*

* team events

Demonstration Sports



National Senior Games Association

- Formed in 1985.

- The vision: to promote healthy lifestyles for adults through education, fitness and sport.

YEAR	*LOCATION*	*# OF ATHLETES*
1987	St. Louis MO	2,500
1989	St. Louis MO	3,400
1991	Syracuse NY	5,000
1993	Baton Rouge LA	7,200
1995	San Antonio TX	8,200
1997	Tucson AZ	10,300
1999	Orlando FL	12,000
2001	Baton Rouge LA	8,700
2003	Hampton Roads VA	10,700
2005	Pittsburgh PA	10,500
2007	Louisville KY	12,100
2009	San Francisco CA	10,000
2011	Houston TX	10,100
2013	Cleveland, OH	10,881
2015	Minneapolis, MN	

National Senior Games Association

- A national association that works with state and federal agencies, colleges and universities to better understand and support healthy aging initiatives for seniors.

- An organization that partners with national leaders committed to senior health, wellness and quality of life.

National Senior Games Association

National Senior Games Association

- Committed to providing information to support education and research initiatives enabling senior athletes and others to be better informed about ways to ensure healthy aging.

www.nsga.org

National Senior Games Association

Values of APTA's Academy of Geriatric Physical Therapy

- Older people and aging as a positive event.
- Collaborative relationships with internal and external constituencies.
- Quality of life as enhanced throughout the lifespan by following principles of health promotion, prevention of disease, and appropriate rehabilitation intervention.

Senior Athlete Fitness Exam SAFE –background


National Center for
Senior Health & Fitness
NCSHF
National Center for
Senior Health & Fitness
Stay
NCSHF
National Center
Senior Health &


Health History
Cardio-vascular Health
Strength
Flexibility
Balance
SAFE

Date of birth: _____/_____/_____ **Age:**_____

Gender: _____**Male** _____**Female**

Medical History
(To the best of your knowledge, have you had, or do you have?)

	Yes	No	If yes, please explain.
Heart Disease			
High Cholesterol			Do you take medication for this?
High Blood Pressure			Do you take medication for this?
Stroke			
Breathing Problems			
Cancer			Type:
Diabetes			Type I or II?
Osteoporosis			

Have you had any of the following joint replacements? (circle R or L)

- ☐ **Hip** **(R) (L)**
- ☐ **Knee** **(R) (L)**
- ☐ **Shoulder** **(R) (L)**

Please list other relevant conditions or pain not mentioned above that may impact your screening results?

_____

_____

_____

Do you ever use a walking aid, such as a cane or walker?(circle one) YES NO

If yes, list device here _____,

how long have you been using this device?_____

Have you fallen in the past 12 months? (circle one) YES NO

If yes, how many times?_____

Have you experienced an injury in the past 12 months that related to or impacted your exercise? (circle one) YES NO

If yes, please list the injury(s) below.

Please list all Senior Games events (i.e. softball, 5K etc.) you are competing in this year.

_____

_____

_____

How many minutes per week do you spend performing cardiovascular exercise (i. running, walking, swimming)?

_____**minutes/week**

How many minutes per week do you spend performing strength training exercise (i.e. resistance with bands, weights or body weight)?

_____**minutes/week**

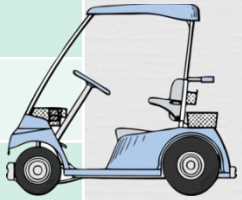
Please list the types of exercise do you spend the majority of your time (i.e. runnin swimming, tennis, lifting)?

_____

_____

Active Sport
Road Race (5K, 10K)
Tennis
Racewalking
Swimming
Cycling
Table Tennis
Track and Field
Volleyball
Triathlon
Basketball
Badminton
Softball
Raquetball
Pickleball

Leisure Sport
Bowling
Shuffleboard
Archery
Golf (with cart)
Horseshoes



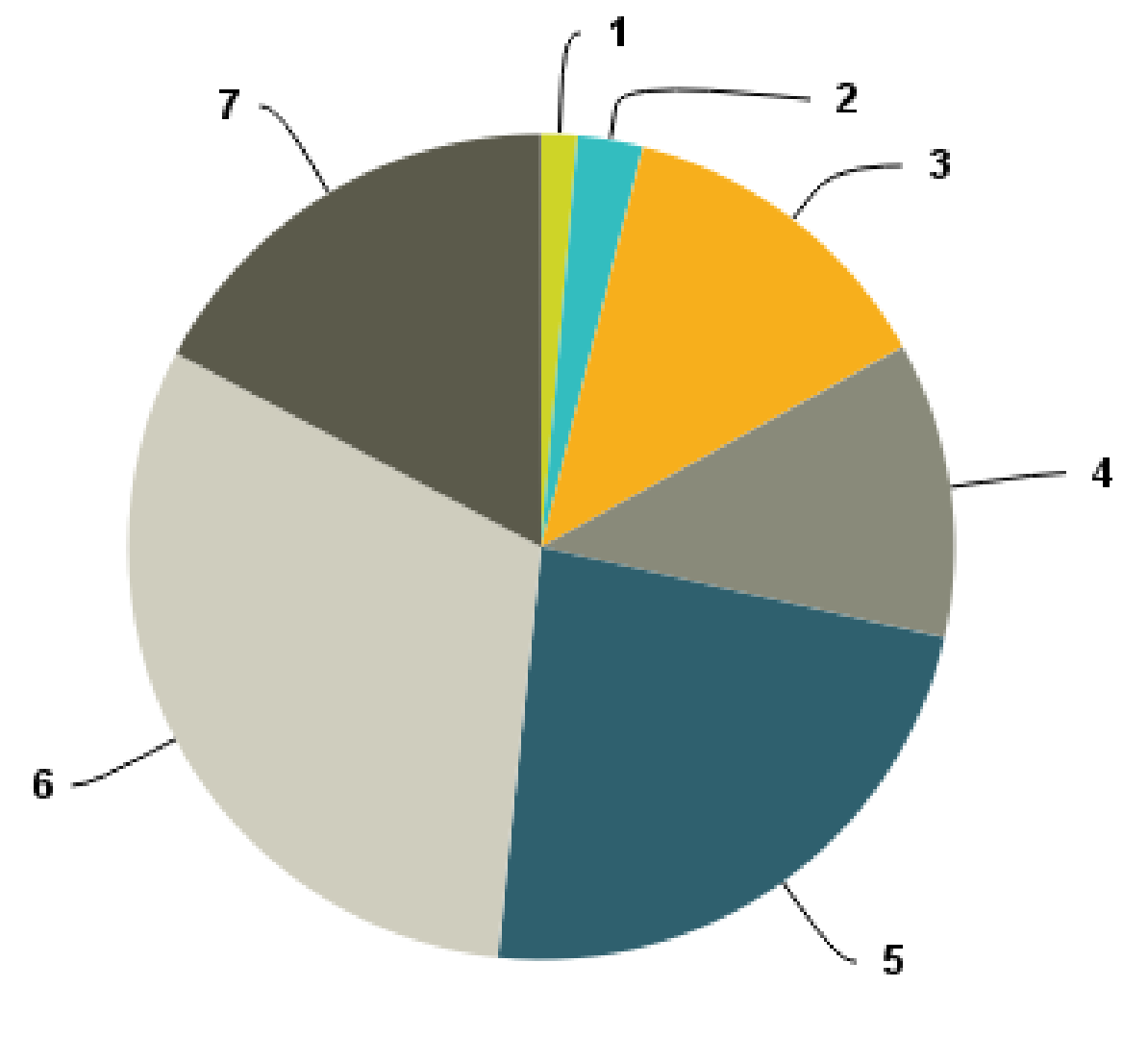
Cardiovascular exercise

3.57 to 5.15 hours/week.

Strength training

~ just under one hour/week.

Days per Week of Exercise



Cardiovascular Risk Factors

Heart Rate
Blood Pressure
Pulse oximeter saturation
Body Mass Index
Waist Circumference
Waist to Hip Ratio

Cardiovascular Risk Measures

- BMI has been supported as a good indicator of ADL function.[8]
- Waist circumference of ≥94 cm (37″) is supported as a good indicator of the risk for cardiovascular disease and type 2 diabetes in men 40-55.[9]
- Waist to hip ratio was found to a better measure of mortality risk in older adults (≥ 70).[10,11]

Heart Rate

- Collected from Blood Pressure Cuff
  - Confirmed with O2 Sat Monitor

Normal
60-100 beats/minute[3]

Blood Pressure[4]

	Normal	Pre-hypertension	Hypertension Stage 1	Hypertension Stage 2
Systolic	Less than 120	120-139	140-159	160 or higher
Diastolic	Less than 80	80-89	90-99	100 or higher

Pulse oximeter saturations (SpO_2) [5]

Normal	Below normal
Greater than 95%	90-95%

Body Mass Index

Underweight	Normal	Overweight	Obese
Less than 18.5	18.5-24.9	25-29.9	30 or greater

Waist Circumference

- Natural waist, most narrow aspect when viewed anteriorly
- Inelastic tape measure
- Measurement taken at eye level from the side

	Goal
Women	**35” or less**
Men	**40” or less**

Center for Disease Control and Prevention

Waist to Hip Ratio

- Largest aspect of hips (includes buttocks)
- Inelastic tape measure
- Eye level measurement from the side
- Waist/hip = ratio

	Goal
Women	**Less than 0.8**
Men	**Less than 0.9**

Center for Disease Control and Prevention

Lab

Pulse Ox

BP

HR

BMI

Waist Circumference

Waist to Hip Ratio

Strength Measures

Five Times Sit to Stand Test

Grip Strength

Five Times Sit to Stand Test

- Reliable and able to discern between functional levels.[25]
- Outperforms other measures as a predictor of falls in older adults.[21,22]
- Reliable and appropriate for amateur raters.[24]

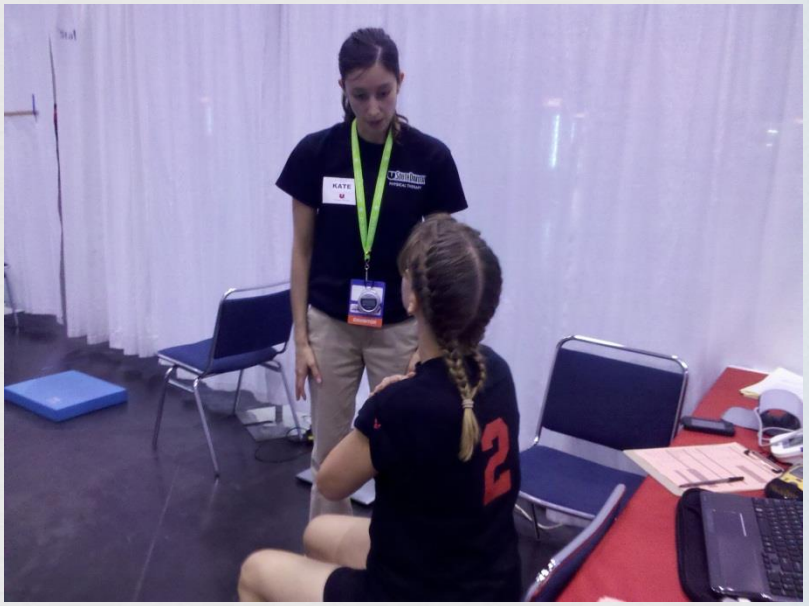
Grip Strength

- Able to measure between functional levels. Reliable. Recommended for screening high-functioning seniors.[25]
- Older-adults with lower grip strength appear to have a lower heath-related quality of life.[28]
- Predictive of mortality with 24 year follow-up.[29]

Five Times Sit to Stand Test

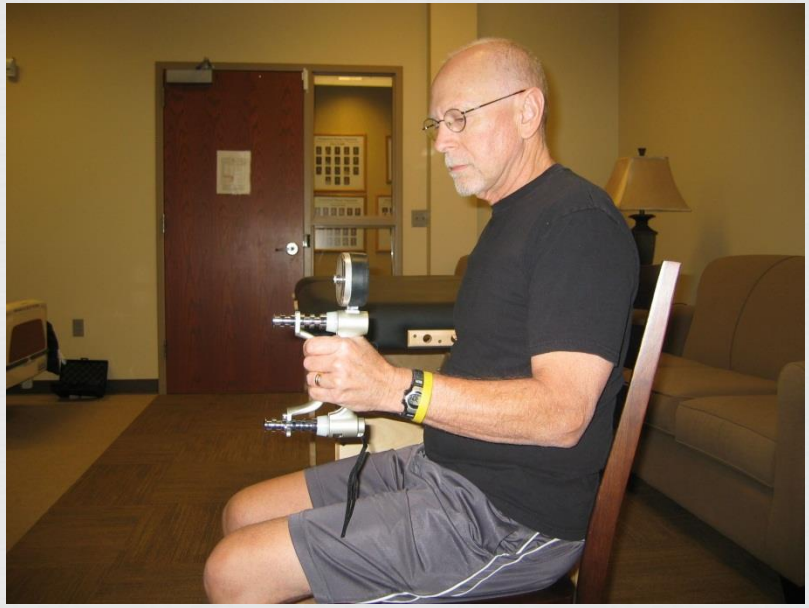
- Standard Chair
- Arms Crossed
- Time from "go" to final seated position after 5th stand.

Age	Goal
60+	Less than 10 seconds



Grip Strength

- Baseline dynamometer
- Grip setting 2
- Average of 3 trials
- Right and left hands
- Measured in kg



Grip Strength[27]

Age	Norms, dominant hand (mean in kg)	
	Men	Women
50-54	50.8	33.7
55-59	53.6	31.9
60-64	47.9	28.7
65-69	43	29.5
70-74	41.7	26.4
75-79	36.8	25
80-84	30.7	19.2
85+	22.4	16.9

Lab

5TSST

Grip Strength

Flexibility

Shoulder Flexion

Hip Extension

Dorsiflexion

Posture

Shoulder Flexion[12,13]

- Hooklying
- Standard Goniometer
- Method as per Norkin & White

Hip Extension[15,16]

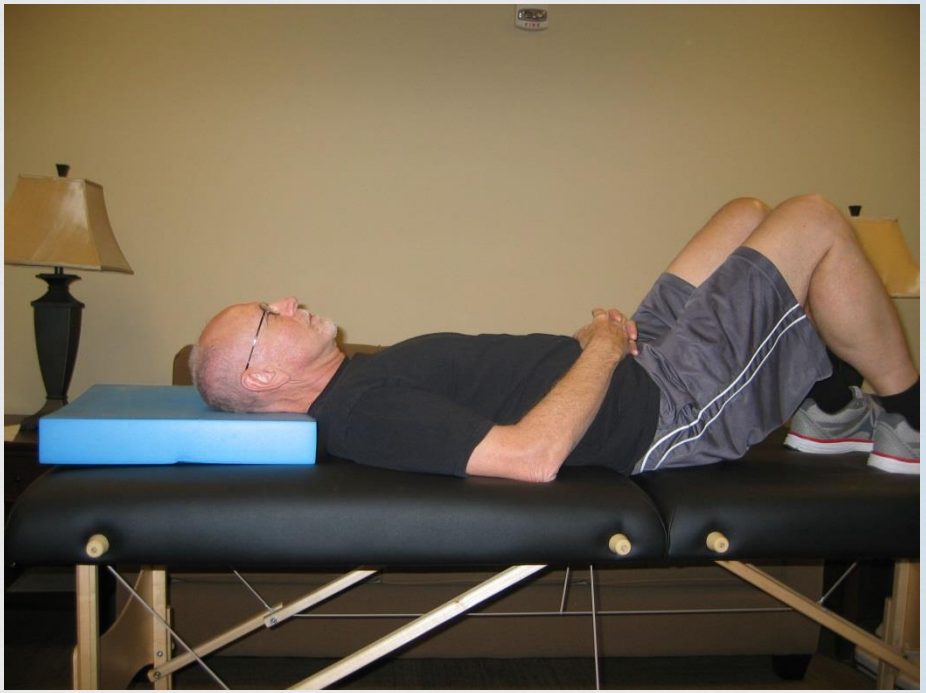
- Thomas Test
- Documented degrees of flexion from zero
- “0” if leg rests flat
- Method consistent with Clapis et. al.

Ankle Dorsiflexion[12]

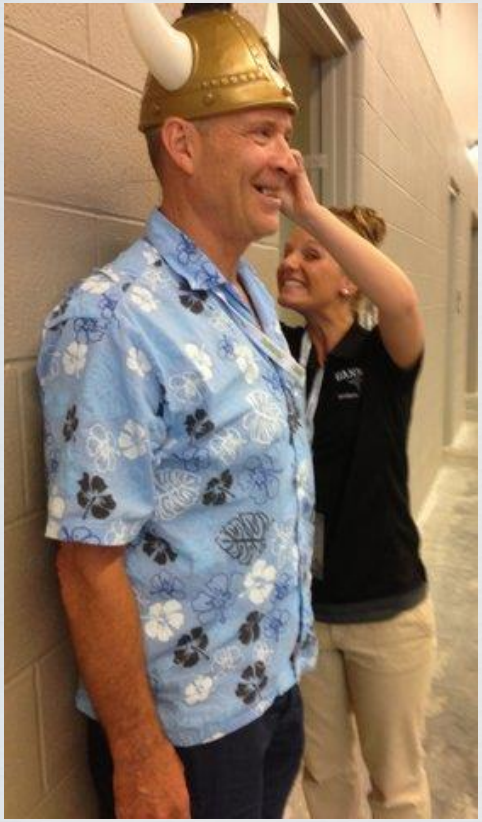
- Measured with the knee straight.
- Muscle length vs. joint ROM.
- Similar to methods by Norkin & White.

Posture

- For participants unable to lie flat for testing.
- One AirEx Pad was utilized, as needed, and documented.
- Documented “yes” or “no”.



Wall to Occiput



Lab

Foam Pillow

Shoulder Flexion

Ankle Dorsiflexion

Thomas Test

Wall to Occiput