

A Day in our PAD Exercise Program

A Practical Review

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Objectives

- An overview of an existing PAD Exercise program
- Review of the basics: staffing, equipment, routine
- Review of patient care: FITT, education
- Practical advice for program development based on experience and history



Special thanks to Laura York, RN



- ▶ Foresight and vision into our PAD Rehab program
- ▶ Started our program in 2003



Our Setting

- Phase 3 Cardiac Rehab setting
- Off campus, across street from main hospital
- 2 structured classes and 1 Open Gym (self-structured) class per week
- Self-pay
- Staffed by Registered Nurses and Masters-prepared Exercise Physiologists (usually 1 RN/1 EP on floor)
- Case Management approach
- Required MD order
 - Stress test per MD discretion
 - Lipid Profile (<1 year old)



History/Progression of our PAD Program

Initially (2003):

- Orientation: health history, PAD assessment, graded treadmill PAD testing
- Exercised 2 times per week in a structured PAD only class
- Instructor-led stretching warm-ups/muscular strengthening/cool-downs
- Home exercise program to do on off days. Walking encouraged most days of week
- Education:
 - Classroom: Vascular Disease Pathophysiology
 - Exercise Therapy
 - Diet/Cholesterol
 - Foot/leg Care
- Specific PAD risk factors addressed 1:1 (smoking cessation, foot wear)



History/Progression of our PAD Program (cont.)

Presently:

- Exercises 3 times per week **within** our Phase 3 program
 - 2 structured classes
 - 1 Open Gym (self-structured) class per week
- Patient joins regular Phase 3 class for warm-ups /muscle strengthening, then performs own exercise protocol. Typically a seated recovery.
- Home exercise program to do on off days. Usually consists of home treadmill, walking around home/neighborhood/big box store.



History/Progression of our PAD Program (cont.)

Presently:

- Attends our Phase 3 education classes:
 - Anatomy/Physiology Arteriosclerosis Disease
 - PAD/Stroke
 - Heart Healthy Diet
 - Lipid Physiology
 - Hypertension
 - Stress
 - Weight Management
 - Heart Failure
 - Diabetes
 - Exercise
- Specific PAD risk factors addressed 1:1 (smoking cessation, walking program)



Typical Patient seen/referred

- Cardiac referral (Phase 2 graduate/outside referral) and upon health history, shown to have activity limited by PAD
- MD referral with classic PAD symptomology
- Self referral from information received at health fair/screening
- Post-PAD intervention-unsuccessful
- Post-PAD intervention-successful: reconditioning
 - May not qualify for reimbursable PAD Rehab if no longer symptomatic

If a true PAD patient ...think low functioning,
deconditioned, using assisted device



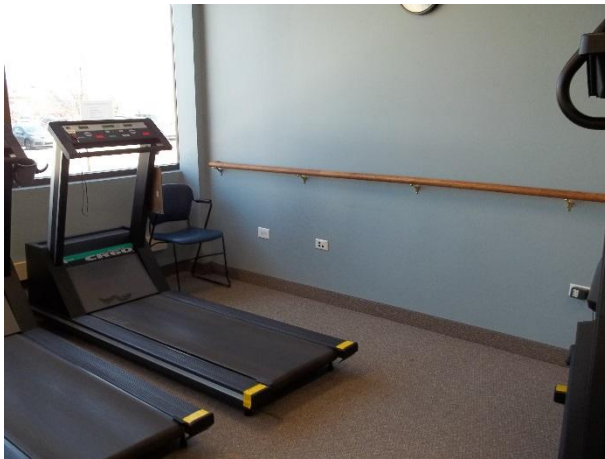
Orientation

- General Phase 3 Orientation
 - Phase 2 graduate/Group setting: Phase 3 program specifics, tour, paperwork
 - Outside referral/Individual: Health history, 6 minute walk test, Phase 3 program specifics, goal setting, paperwork
- PAD Specific Orientation/Individual
 - Done during original orientation or prior to first class
 - Claudication history, 6 minute walk test (noting stopping/resting times)
 - Do not do any graded exercise testing protocol
 - Resting ABI per staff discretion
 - Review of PAD walking protocol
 - Emphasizing a different kind of “rehab”...painful vs pain-free
 - What is their goal for PAD Rehab



Environment...Things to consider

- Low platform treadmill for ease to get on/off
- Chair located next to for rest periods
- Areas for holding on to for balance/fall prevention (treadmill railing/wall railing/etc.)
- Space for walker/cane



Environment...Things to consider (cont.)

- Easy accessibility to clipboard/training form and timer
- Close to restroom
- Posted claudication scale
- Reserve sign to save specific treadmill for patient



Intermittent Claudication Rating Scale

- 0 No claudication pain**
- 1 Initial, minimal pain**
- 2 Moderate, bothersome pain**
- 3 Intense pain**
- 4 Maximal pain, cannot continue**



Typical Day of Exercise

- One staff is scheduled for approximately 1 week to work 1:1 with patient
 - After 1:1 session, patient self-responsible for walk protocol and training form
 - Clinic staff assist when needed
- First session continuously tele-monitored
 - THR: 60-80% APMHR
- Resting vitals: HR/BP/rhythm check
- Warm-ups: Stretching, active
 - Patient specific: Seated if needed
- Walking program
 - Exercise vitals: HR/rhythm check/once weekly BP
- Cool Downs:
 - If done with walking protocol, joins Phase 3 cool-down portion
 - Seated rest



Typical Day of Exercise (cont..)

- Walking protocol
 - No cookie cutter speed/grade
 - Trial and error for speed/grade
 - **Speed:** A comfortable speed that allows for a 5-10 minute walking period; provokes pain enough to stop
 - Goal is about 2.0 mph speed initially, increasing based on patient's ability
 - **Grade:** Patient specific for goals. Do not want to deter speed/safety/pain onset
 - Once at speed goal, can increase elevation (0.5-1% increments) to provoke pain
 - **Pain scale:** Patient specific. 2-3 on scale.
Goal is to push to pain
 - **Rest periods:** Until pain is subsided
 - **Total walking time:** 30 minutes minimum,
Goal: 45 minutes
 - **Open gym day:** May choose non-weight bearing modalities to work on CV vs. PAD



Contraindications/Terminate of Exercise

Contraindications:

- Resting claudication pain
- PAD wounds not medically attended to
- Cardiac contraindications (rest SOB/chest pain/symptomatic HF/etc.)
- Elevated resting BP ($\geq 140/\geq 90$)
 - Seated rest/slow warm-up, recheck
 - MD order for new guideline if continuously over

Termination:

- Exceeds THR/safe limit
- Elevated exercise BP ($\geq 200/\geq 100$)
- Cardiac signs/symptoms (lightheaded/dizziness/chest pain/severe fatigue/etc.)
- Drop of SBP (>20 mmHg)



Documentation...our training form (cont.)

| | | | | | |
|-----------------|--------------------------|-----------------|-------|---------|-------|
| Date | Daily | 3/15/18 | | | |
| Weight | Weekly/Daily if HF | 175.2 | | | |
| Rest HR | Daily | 68 | | | |
| Rest BP | Daily | 112/64 | | | |
| Mode | | TM | TM | TM | NU |
| Wkld (spd/elv) | | 1.6/0 | 1.6/0 | 2.0/0.5 | L2 |
| Init Pain (min) | | 3:15 | 4:30 | 3:26 | --- |
| Max min | | 6:43 | 8:25 | 9:25 | 10:00 |
| Claud Scale | | 3 | 3 | 2 | 0 |
| Exercise HR | | 103 | 110 | 108 | 99 |
| Rest Time | | 4:15 | 3:45 | 3:50 | done |
| Exercise BP | Once Weekly or more if ↑ | 138/68 | | | |
| Recovery HR | Daily | 72 | | | |
| Comments | | Great day today | | | |

Initial Pain Time

Use treadmill timer

Maximum Time

Use treadmill timer

Heart Rates

pulse check/oximeter/device

Rest Time

Kitchen timer



Exercise Program...FITT

Frequency: PAD Exercise program: 3 times/week

Home: Encourage patient to continue walking on **most** non-rehab days

- Walking in a big box store. Shopping cart is great aid.

Intensity: Home: Can encourage to do using a “lower” pain scale

Time: Total 30-45 minutes

- Can be multiple “mini” sessions through the day.
10 minutes-morning/noon/night

Type: Cardiovascular-Walking preferred

- If not able to tolerate, can use a non-weight bearing modality

Muscle Strengthening-

- 2-3 times/week
- 6-12 exercises of major muscle groups
- 8-12 reps; 2-3 sets



Follow-up

- Case Management appointments to work on risk factors
- 6 minute walk test: 3 months/6 months/9 months/yearly
 - A great motivator or can be a great revealer



Results

| Patient | Pre-PAD 6MWT Distance (feet) | Post-6MWT | % Change |
|---------|------------------------------|-------------------------------|--------------|
| Jackie | 455' | 3 mos.: 910' | 455' / 50.0% |
| Phil | 650' 2 stops/CS-3 | 3 mos.: 940' No stops/CS-2 | 290' / 30.9% |
| Pat | 1442' | 6 mos.: 1778' | 336' / 18.9% |



Ultimate Goals

- IMPROVE QUALITY OF LIFE
- Patient specific
- Functional
 - Refer to patient goal
 - Increase in peak walking distance
 - Improve pain free walking distance
- Physiological/mechanical improvement
 - Improving muscle metabolism/functioning/strength
 - Improving endothelial functioning
 - Improved walking biomechanics
 - Reduce CV risk factors



Thank you...

Here's.....Susan Bauman on PAD Reimbursement

