Supporting Safe Exercise in the community

MND Study Day November 2023

Richard Pawsey

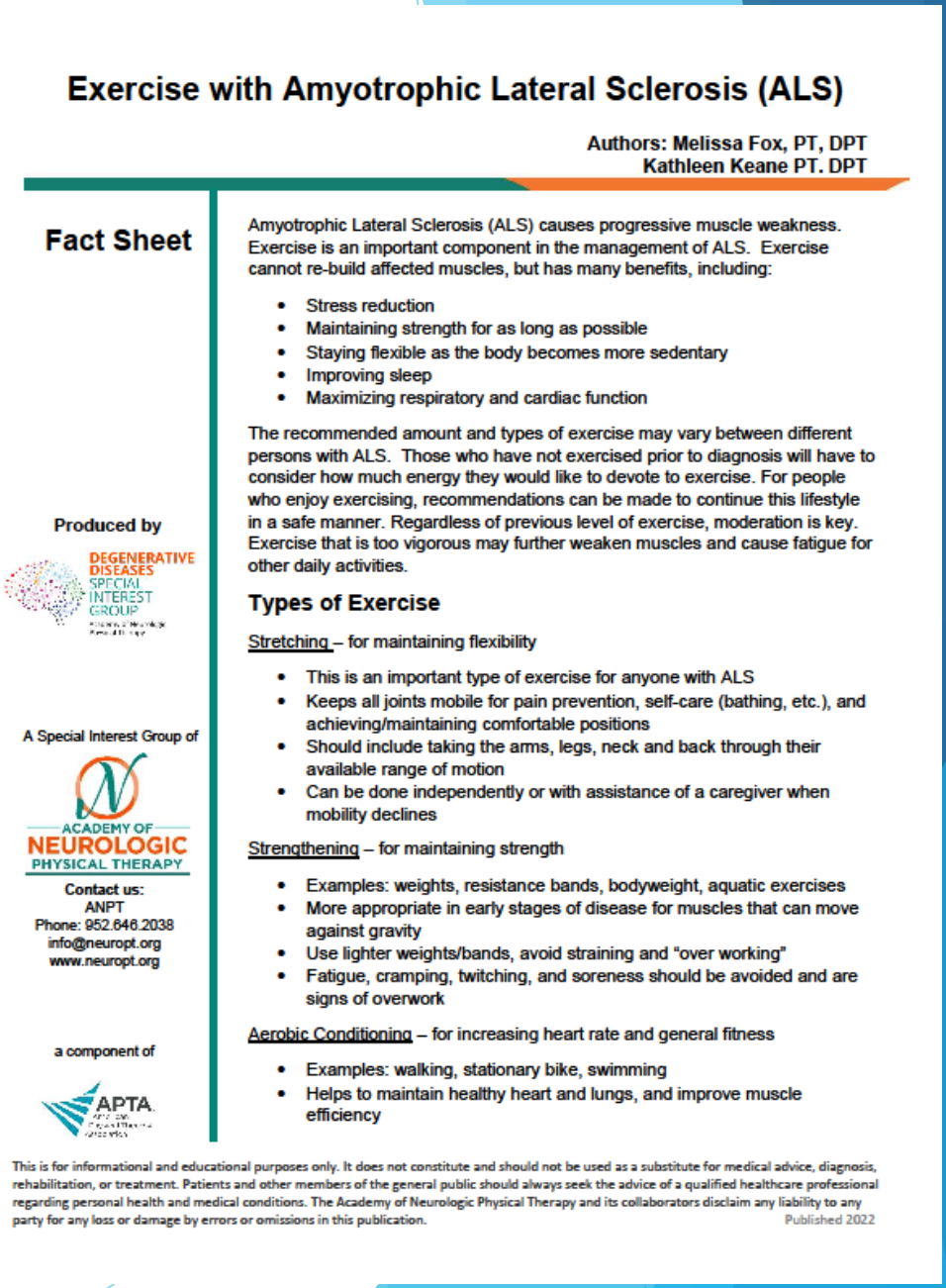
Physiotherapy Clinical Specialist

Stages of support

- **Give reassurance and education** to commence or continue exercising
- **Determine the confidence** to exercise in a variety of circumstances
- **Identify an accurate baseline** to gauge progress
- **Formulate an exercise plan** encompassing a variety of aspects
- **Monitor response and modify accordingly**

Educational resources

- Numerous resources available.
- The example shown was produced by the Academy of Neurologic Physical Therapy (authors-Melissa Fox & Kathleen Keane) in 2022
- Includes benefits of exercise, types of exercise and cautions



Exercise with Amyotrophic Lateral Sclerosis (ALS)

Authors: Melissa Fox, PT, DPT
Kathleen Keane PT. DPT

Fact Sheet

Amyotrophic Lateral Sclerosis (ALS) causes progressive muscle weakness. Exercise is an important component in the management of ALS. Exercise cannot re-build affected muscles, but has many benefits, including:

- Stress reduction
- Maintaining strength for as long as possible
- Staying flexible as the body becomes more sedentary
- Improving sleep
- Maximizing respiratory and cardiac function

The recommended amount and types of exercise may vary between different persons with ALS. Those who have not exercised prior to diagnosis will have to consider how much energy they would like to devote to exercise. For people who enjoy exercising, recommendations can be made to continue this lifestyle in a safe manner. Regardless of previous level of exercise, moderation is key. Exercise that is too vigorous may further weaken muscles and cause fatigue for other daily activities.

Types of Exercise

Stretching – for maintaining flexibility

- This is an important type of exercise for anyone with ALS
- Keeps all joints mobile for pain prevention, self-care (bathing, etc.), and achieving/maintaining comfortable positions
- Should include taking the arms, legs, neck and back through their available range of motion
- Can be done independently or with assistance of a caregiver when mobility declines

Strengthening – for maintaining strength

- Examples: weights, resistance bands, bodyweight, aquatic exercises
- More appropriate in early stages of disease for muscles that can move against gravity
- Use lighter weights/bands, avoid straining and "over working"
- Fatigue, cramping, twitching, and soreness should be avoided and are signs of overwork

Aerobic Conditioning – for increasing heart rate and general fitness

- Examples: walking, stationary bike, swimming
- Helps to maintain healthy heart and lungs, and improve muscle efficiency

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DEGENERATIVE DISEASES SPECIAL INTEREST GROUP
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Contact us:
ANPT
Phone: 952.646.2038
info@neuropt.org
www.neuropt.org
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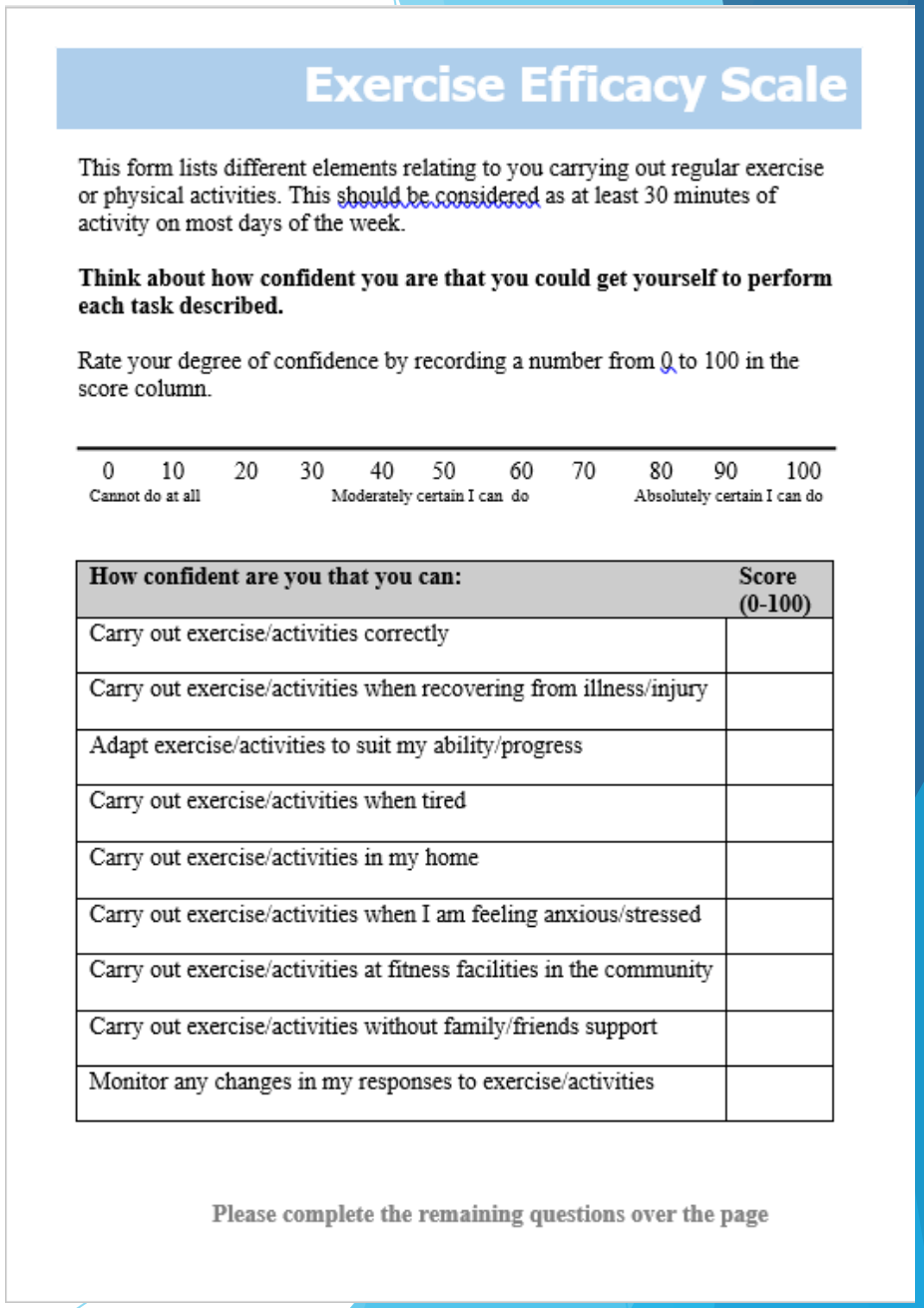
Explore exercise confidence

- Can use the Exercise Efficacy Scale or similar



Exercise Efficacy Scale

This form lists different elements relating to you carrying out regular exercise or physical activities. This should be considered as at least 30 minutes of activity on most days of the week.

Think about how confident you are that you could get yourself to perform each task described.

Rate your degree of confidence by recording a number from 0 to 100 in the score column.

0 10 20 30 40 50 60 70 80 90 100

Cannot do at all — Moderately certain I can do — Absolutely certain I can do

How confident are you that you can:	Score (0-100)
Carry out exercise/activities correctly	
Carry out exercise/activities when recovering from illness/injury	
Adapt exercise/activities to suit my ability/progress	
Carry out exercise/activities when tired	
Carry out exercise/activities in my home	
Carry out exercise/activities when I am feeling anxious/stressed	
Carry out exercise/activities at fitness facilities in the community	
Carry out exercise/activities without family/friends support	
Monitor any changes in my responses to exercise/activities	

Please complete the remaining questions over the page

Identify an accurate baseline

TRICALS Quick reference Isometric Strength Test Protocol (Supine Position)

Shoulder Flexion

The arm is lifted so the shoulder is flexed in 90 degrees relative to the trunk. The elbow is extended and the thumb is pointing upwards. The hand held dynamometer is placed just above the elbow joint on the lateral epicondyle of the humerus.

Elbow Flexion

The elbow is flexed to 90 degrees and the thumb is pointing upwards. The distal radius is palpated and the hand held dynamometer is placed lateral on that point, just proximal to the wrist joint. The evaluator is exerting a pulling movement. During this specific measurement is often occurs that the subject is sliding on the treatment table.
In this case the subject should be stabilised to ensure a reliable measurement. This can be done by asking the subject to bent the knee en rest with the foot on the treatment table. The evaluator can now stabilise the subject with his trunk and still perform the measurement as previously described.

Elbow Extension

The elbow is flexed to 90 degrees and the thumb is pointing upwards. The distal ulna is palpated and the hand held dynamometer is placed lateral on that point, just proximal to the wrist joint. The evaluator is exerting a pushing movement.
It is important that during the test the upper arm and elbow rest on the mattress of the treatment table.

Wrist Extension

Just as during the previous tests the elbow is flexed to 90 degrees and the thumb is pointing towards the ceiling. The back of the hand lies in the extension of the forearm. The fingers are bent into a fist if possible. With the contralateral hand -that is the hand that is not holding de hand held dynamometer- the evaluator grasps the palmar side of the forearm. The hand held dynamometer is placed just below the knuckles of the fingers on the back of the hand and the evaluator exerts a pushing movement.

- Example shown is part of the Tricals Protocol for measuring isometric strength using a hand-held dynamometer (HHD)

Formulate exercise plan

Flexibility

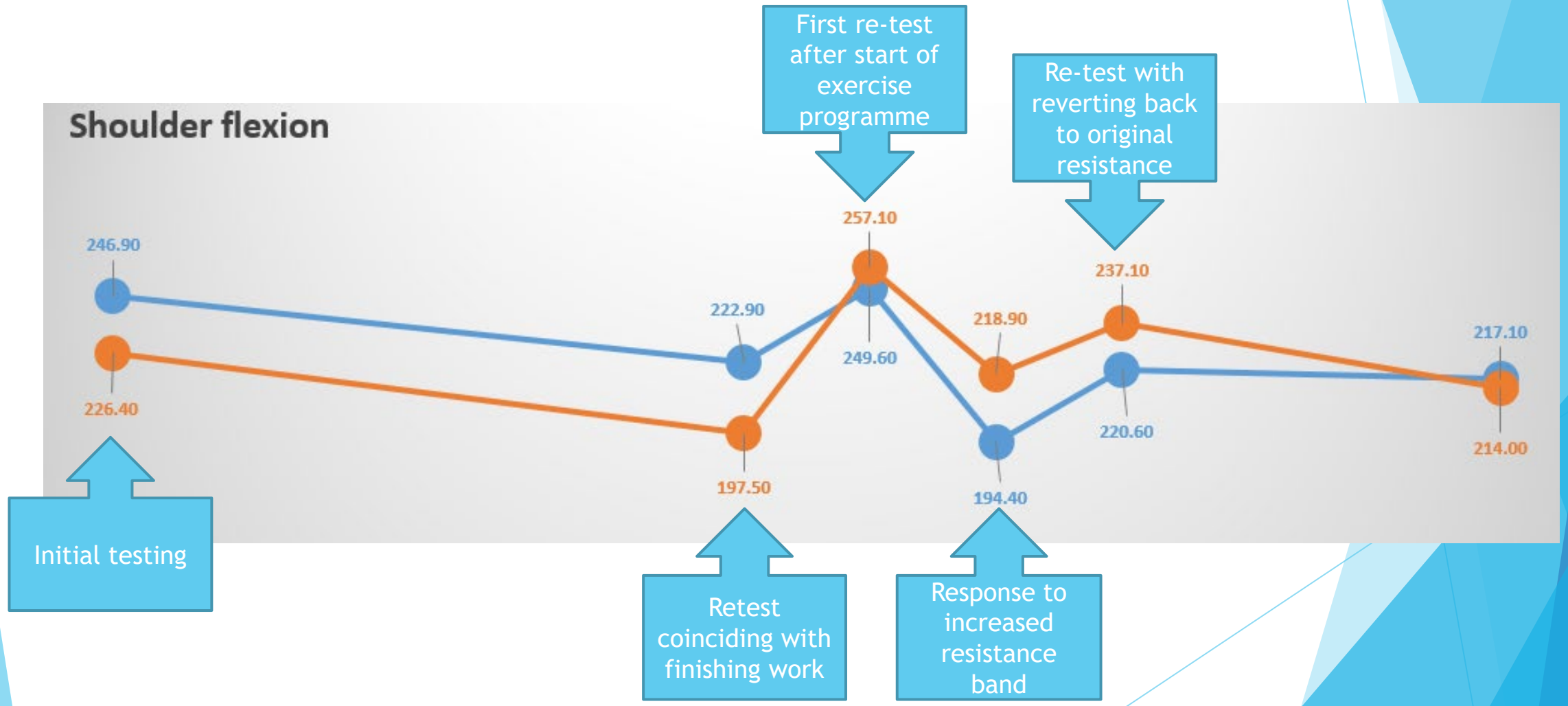
Endurance

Strength

Balance

Breathing

Monitor the response

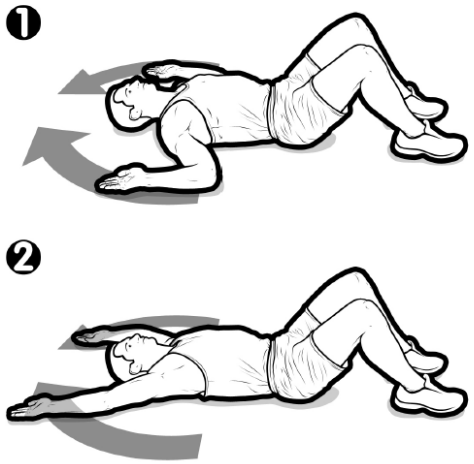


The Exercise Journal

-a resource

- Section 1-Education
- Section 2- Exercise Efficacy and support structure identified
- Section 3- Exercise descriptions-online resources
- Section 4- Weekly Timetable
- Section 5- Daily record & comment

RM
SHOULDER CONDITIONING



FLOOR ANGEL

Lie on the floor with knees bent, set shoulder blades back against the floor into neutral, upper arms are against floor and your hands pointing upwards (1). Rotate your arms maintaining upper arm contact, until your hands touch to floor behind your head (if possible). Slowly lower & repeat

SETS & REPS: 1x 12 FREQUENCY: Daily

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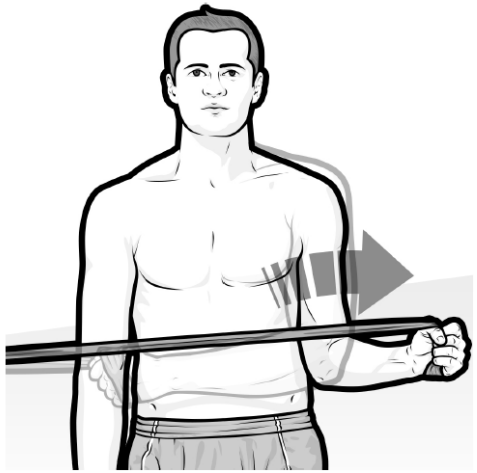
SHOULDER CONDITIONING



RESISTANCE BAND EXTERNAL ROTATION

Hold the resistance band with your thumb upwards, elbow at your side and bent to 90°. Start with your forearm across your body then rotate it outwards as far as you can. Return to the start position. Repeat.

SETS & REPS: 1 x 4-6 FREQUENCY: Twice a week

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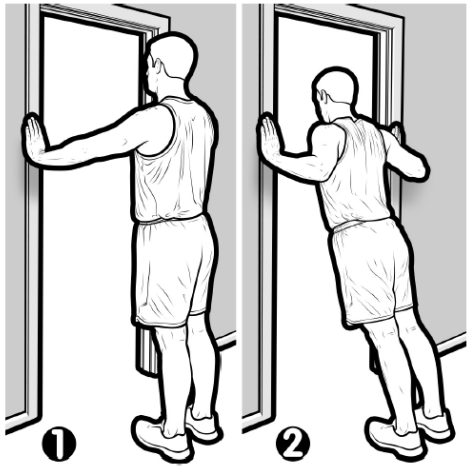
SHOULDER CONDITIONING



DOOR-FRAME PRESS-UP

Standing in a doorway with hands at chest height, elbows straight, keep shoulder blades back and down (1). Bend your elbows and lower your body until your chest is inline with your hands (2) then push back to the start position and repeat.

SETS & REPS: 1 x 8 FREQUENCY: Twice a week

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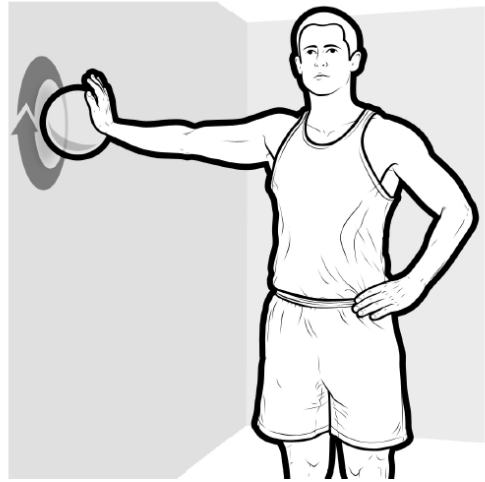
SHOULDER CONDITIONING



BALL ON THE WALL

Stand with your arm 90° away from your side with your hand on a small ball against the wall. Set your shoulder blade in a 'neutral' position and maintain it there as you move the ball in all directions on the wall. Repeat with the other arm.

SETS & REPS: x20 rotations FREQUENCY: Twice a week

Weekly Planner

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning	FLEXIBILITY CARDIO	FLEXIBILITY	FLEXIBILITY CARDIO	FLEXIBILITY CARDIO	FLEXIBILITY	CARDIO	
Afternoon		STRENGTH			STRENGTH		
Evening	DARTS		DARTS				

Exercise Log

Day & Date:

Exercise	*Reps*	*Done*	*Comments*
			Stretching
Shoulder rotator (floor angel)	*1x 12 reps*		
			Strengthening
Resistance band external rotation	*1x4-6reps*		
Resistance band extension	*1x4-6reps*		
Single arm abduction with band	*1x4-6reps*		
Door frame press-up	*1x8reps*		
Ball on the wall	*x20 rotations*		
			Endurance
Walking	*x20-30mins*		

The value of exercise

- Short presentation by Lynette