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CONSERVATIVE EXERCISE RECOMMENDATION FOR IMPINGEMENT OF THE SHOULDER:

INTRODUCTION

The purpose of the exercise program below is to more effectively treat shoulder impingement. This problem can be both anatomical and kinesiological in nature. It is best treated when any kinesiological disturbances are corrected first. This is usually accomplished by muscle balancing and specific muscle training. This includes rest at the appropriate time (relative rest) and the use of nonsteroidal anti-inflammatories. Proper training of the rotator cuff muscles for balance to provide good scapulohumeral rhythm and conditioning of the rotator cuff and scapular muscles is critical.

An anatomic limitation to this program may be an underlying instability either anterior/posterior or multidirectional. This must be considered when designing and following this impingement exercise program.

This rehabilitation program is designed in phases. Each phase has a list of goals to be attained during that phase and there are concomitant precautions in each phase to avoid the inability to achieve the goals set for each phase. Along with the goals and precautions are some suggested exercises in order to achieve the goals within the limits of the precautions.

PHASE I: Acute Phase

Goals:

* Limit pain (relative rest - avoiding provocative activity)
* Restore any lost motion
* Restore function to achieve ADL's for personal hygiene (if limited)

Treatment Recommendations:

* Ice
* Sling, if necessary
* E-Stim
* Gentle mobilization - Grade I, Grade II
* Nonsteroidal anti-inflammatories

Precaution:

* Relative rest is important - elimination of rest pain should be achieved quickly

PHASE II: Subacute Phase

Goals:

* Restore full motion
* Restore good glenohumeral & scapulohumeral rhythm
* 4/5 strength of upper extremity muscles including scapular muscles

Treatment Recommendations:

* Start with active range of motion below shoulder level
* Add isometrics below shoulder level
* Theraband & light resistive activities below shoulder level
* Specific focus for internal & external rotators
* Active motion above shoulder level when strong resisted strength below 90 is present
* Progress strengthening overhead from active to slight active to lightweight active resistive range of motion
* Specific muscle training for weak muscles
* Upper extremity training - resistive fist & wrist work, forearm, elbow work should all be included
* UBE or other upper extremity ergometer
* Water resistive activities

Precautions:

* All active & resistive motion should be muscle specifc
* All exercises that cause translation towards the direction of laxity should be avoided, specifically at their end ranges
* Isometrics may need to be altered in position as to not aggravate any instability

PHASE III: Strengthening Phase

Goals:

* Achieve 5/5 strength in all shoulder girdle muscles including distal extremity muscles
* Full painfree range of motion
* Full painfree resistive range of motion
* Negative apprehension
* Negative Neer
* Negative Hawkins Sign
* Perfect symmetrical scapulohumeral rhythm

Treatment Recommendations:

* Continue with all of the exercises
* Progress resistance below horizontal
* Progress resistance to overhead & above horizontal
* Add resistance to scapular exercises & strengthening
* Work on quality of motion, not just resistive training
* Work on balance of the rotator cuff muscles
* Add trunk strengthening in both lower extremities training
* Start sport specific/work specific activities
* Weight bearing upper extremity
* Water resistive activities
* Manual mime resistance as though working against a mirror image through both upper extremities to work trunk

Precautions:

* Do not forget entire body

* Avoid any ballistic activities or end ranges of motion that would facilitate an underlying instability

PHASE IV: Criteria for return to regular wok/sport

Goals:

* Full painless range of motion
* 5/5 strength in all upper extremity & scapular muscles
* Normal scapulohumeral rhythm with & without resistance
* Good trunk strength
* Good lower extremity strength
* Able to complete throwing sport specific or work tasks without pain, signs of instability, or impingement
* Good endurance of all upper extremity trunk & lower extremity musculature

Precautions:

* It should be noted that time frames for these phases & overlap time frames for these phases cannot be given. It is based on exercise intensity, pain, underlying instability, acute vs. chronic condition, length of time immobilized, performance & activity

* Rehabilitation should be progressive, always achieving a pain free state & always acutely aware of any underlying instabilities goal directed towards achieving a functional limb without aggravating any underlying instability or anatomical limitations.