

# UNASSISTED MUSCLE STRENGTHENING AND CONDITIONING SYSTEM FOR QUADS

## UPPERTONE



Complete operation of Uppertone system can be performed without hand grip strength.  
Enables quadriplegics to achieve and maintain independence through unassisted  
rehabilitation in the home or facility.

### ABOUT UPPERTONE

UPPERTONE was designed by a quad who had searched, without success, for equipment that allowed completely unassisted upper-body and aerobic rehabilitation, as well as conditioning, to improve and maintain functional independence. Such gains not only allow quads to function at full potential, but also prevent further complications and hospitalizations. Thus, as the accompanying charts show, UPPERTONE's *sixteen* exercises help quads with such problems as transfers, wheelchair propulsion, joint pain, lung capacity, and muscle spasticity.

Although the prototype model was first displayed at the 1990 Los Angeles Abilities Expo, UPPERTONE is still the *only* machine on the market that allows quads to exercise and rehabilitate themselves *truly independently*. It does not require wrist cuffs. Its unique design and features allow quads to move around and between its three stations, as well as vary resistance, without assistance.

Because of these features, UPPERTONE is currently being used at rehabs, hospitals, colleges, universities, fitness centers and access centers, as well as private residences, around the world.

Because quads can use UPPERTONE without constant supervision, it saves institutional customers money. At the same time, because of the sense of independence it fosters, UPPERTONE provides psychological as well as physical rehabilitation. Finally, because UPPERTONE allows quads to exercise all upper-body muscles, as well as providing aerobic conditioning, it replaces multiple machines, saving both space and money.

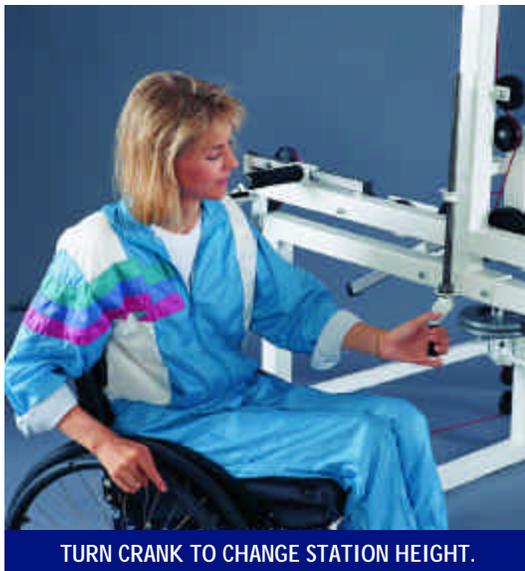
The many men and women who choose UPPERTONE do so for a variety of reasons. Some purchase it because their physicians prescribe it for rehabilitation without the costs of a physical therapist. Some are interested in improving or maintaining their daily functioning, appearance, sexuality, and general health. Others use it to improve their performance in sports, through aerobic and strength conditioning. But all of them have one thing in common. They love the feeling of independence UPPERTONE gives by allowing them to exercise as and when they please, without having to depend on anyone else!

## WHY UPPERTONE IS UNIQUELY FOR QUADS

- Complete Independent Function — Controls are designed so that they can be adjusted without gripping. This allows quads to make all necessary adjustments, such as station height, station width, and resistance, unassisted. Users can thus move between UPPERTONE's stations and do all sixteen exercises by themselves from their manual or power wheelchairs.
- Unique Variable Resistance System — Designed specifically for quads, this thoughtfully conceived system allows users to vary resistance without having to add or remove weights. In addition, users can adjust resistance from 4 lbs to 100 lbs in any desired increment, rather than the five and ten pound increments required by other exercise equipment. This meets the needs of those users who must measure improvements in small, rather than large, increments.
- Two Weight Sets — UPPERTONE is designed so that resistance is set independently for each upper-body side. This provides increased muscle group isolation, and allows people to compensate for differences in strength between the two sides.
- Unique Foam Padded Lever System — Allows all exercises to be performed without gripping. It also guides the arms through the full range of motion, thereby allowing the user to maintain a balanced, stable position in the wheelchair.
- Foam Covered Back Support System — Stabilizes and ensures that manual wheel chair users do not tip over backwards.



TO CHANGE RESISTANCE SETTING,  
SIMPLY SLIDE WEIGHTS ALONG TRACK.



TURN CRANK TO CHANGE STATION HEIGHT.

- Adjustable Station Heights — Heights of all exercise stations can be adjusted in very small increments. This allows people of any height, in manual or power wheelchairs, to use UPPERTONE. These small adjustments to station height can also be used to adjust the amount of emphasis that is placed on the different muscles that are being strengthened during any exercise. This makes it possible to correct for the imbalanced strength in interrelated muscles that often accompanies quadriplegia.
- Adjustable Station Width — Distances between shoulder and hand positions can be independently adjusted for each side in very small increments. This allows people of different builds to use UPPERTONE. These small adjustments to station width can also be used to adjust the amount of emphasis that is placed on the different muscles that are being strengthened during any exercise. This also makes it possible to correct for the imbalanced strength in interrelated muscles that often accompanies quadriplegia.



DELTOID PRESS



BICEP CURL (Palm Up)



ROWING



SEATED CHEST PRESS

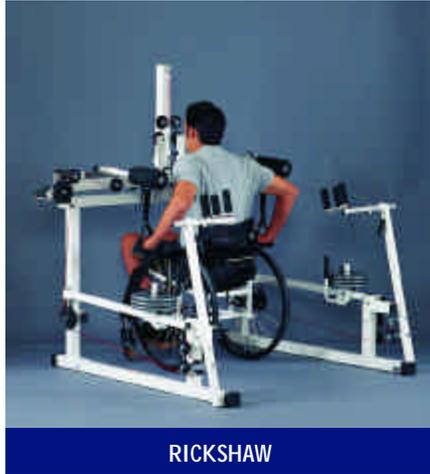


LAT PULL



SHOULDER EXTERNAL ROTATION

**Photographs do not show all the 16 exercises in the chart.**

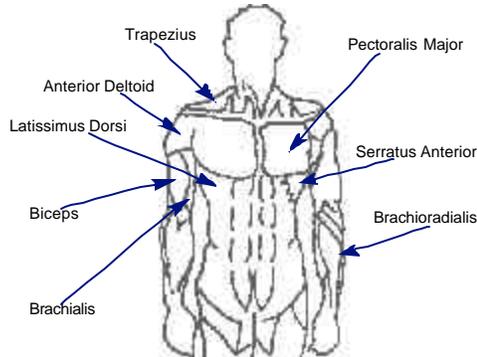


RICKSHAW

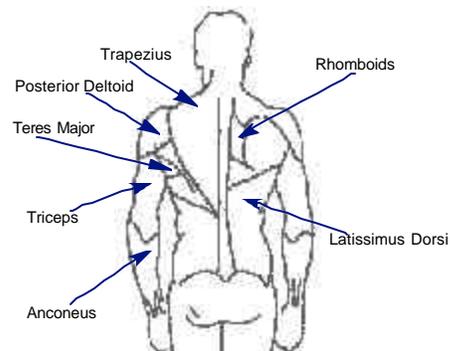


TRICEP EXTENSION

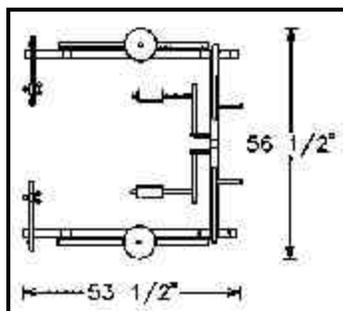
ANTERIOR MUSCLES<sup>1</sup>



POSTERIOR MUSCLES



1. Minor, interior, and subportions of muscles are not shown above.



SPECIFICATIONS\*

- Frame** — 11 gauge 2" square steel tubing for rigidity, strength, durability, and long life.
- Cable** — Galvanized steel, vinyl covered aircraft cable. Vinyl coating prevents corrosion, equipment wear, keeps out dirt and grit, and seals in lubricant for long life.
- Pulleys** — Impact resistant nylon with sealed steel ball bearings for smooth low friction operation.
- Bearings** — Oil impregnated self-lubricating, maintenance free, bronze bearings at all pivot points. Oil impregnation prevents metal to metal contact through a cushion of oil, ensuring long life.
- Pads** — High density non-absorbing neoprene foam padding for comfort, hygiene and easy cleaning.
- Finish** — Chip resistant electrostatic powder coat for attractive appearance, durability, and corrosion free long life.

\*Specifications are subject to change at manufacturer's discretion.

WARRANTY

The frame carries a lifetime warranty against manufacturing defects and bending or warping under normal use. All other parts carry a limited five year warranty against defects in workmanship and/or material under normal use and service.

Limits and Exclusions

There are no express warranties except as listed above. GPK Inc. shall not be liable for incidental or consequential damages resulting from the use of this product, or arising out of any breach of this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages or how long an implied warrant lasts, so the above exclusions or limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

## The Sixteen Exercises That Can Be Performed on UPPERTONE and Their Benefits

Exercise	Muscles Strengthened	Functional Benefits	Postural Benefits	Comments
Deltoid Press <sup>2</sup> (palm down)	<b>Middle deltoid</b> <sup>1</sup> , Pectoralis major (clavicular), Anterior deltoid, Supraspinatus, Upper and lower trapezius.	Self care activities, Loading and unloading wheelchair, Lifting objects.	Broad shoulders.	
Deltoid Press <sup>2</sup> (palm up)	<b>Anterior deltoid</b> , Pectoralis major (clavicular), Middle deltoid, Supraspinatus, Upper and lower trapezius.	Same as above.	Broad shoulders.	Compared to palm down, palm up deltoid press compensates for weak triceps by emphasizing front of shoulder.
Bicep Curl <sup>2</sup> (palm up)	<b>Biceps</b> , Brachialis, Brachioradialis, Pronator teres.	Self care activities, Loading and unloading wheelchair, Lifting objects.	Shapes and isolates biceps.	
Bicep Curl <sup>2</sup> (palm down)	<b>Brachioradialis</b> , Biceps, Pronator teres.	Transfer activities such as repositioning legs.	Shapes and isolates biceps.	Emphasizes different portion of biceps than palm up bicep curl.
Rowing <sup>2</sup>	<b>Posterior deltoid</b> , Rhomboids, Latissimus dorsi, Infraspinatus, Teres major and minor, Middle trapezius.	Balance strong anterior deltoid muscles, Open manual doors, Wheelchair sports, Pulling activities, Transfers, Wheelchair propulsion.	Broad shoulders, Reduced slouch, Square shoulders.	Grip widths adjust relative emphasis on posterior rhomboid and posterior deltoid muscles. Strengthening the posterior deltoid balances the relatively stronger anterior deltoids of manual wheelchair users.
Lateral Shoulder Raise <sup>2</sup> (palm up)	<b>Anterior deltoid</b> , Pectoralis major (clavicular), Middle deltoid, Biceps, Supraspinatus, Upper and lower trapezius.		Defines and isolates neck.	
Lateral Shoulder Raise <sup>2</sup> (palm down)	<b>Middle deltoid</b> , Pectoralis major (clavicular), Supraspinatus, Upper and lower trapezius.			
Seated Chest Press <sup>3</sup> (wide grip)	<b>Pectoralis major</b> , Anterior deltoid, Coracobrachialis, Serratus anterior, Pectoralis minor, Subscapularis, Triceps.	Driving and braking, Wheelchair propulsion, Transfers, Pressure relief.	Broad chest.	Low reps and high weights build strength, improving ability to push wheelchair up ramps and uphill. Low weights and high reps build endurance, improving aerobic capacity.
Seated Chest Press <sup>3</sup> (narrow grip)	<b>Triceps</b> , Anterior deltoid, Coracobrachialis, Serratus anterior, Pectoralis major and minor, Subscapularis.	Same as above.	Broad chest.	Narrow grip changes emphasis to triceps from pectoralis.
Lat Pull <sup>3</sup>	<b>Latissimus dorsi</b> , Pectoralis major (sternal portion), Pectoralis minor, Posterior deltoid, Rhomboids, Teres major.	Pressure relief, Transfers.	V shaped upper body, Reduced slouch.	
Shoulder External Rotation <sup>3</sup>	<b>Infraspinatus, Posterior deltoid</b> , Rhomboids, Teres minor.	Counteract tight internal rotators, Transfers, Pressure relief.		Particularly useful for developing transfer ability for those with no or very weak triceps, and for counteracting the tight internal rotators caused by wheelchair propulsion.
Shoulder Internal Rotation <sup>3</sup>	<b>Subscapularis</b> , Teres major, Latissimus dorsi.	Transfers.		
Rickshaw <sup>3</sup>	<b>Latissimus dorsi</b> , Lower trapezius, Pectoralis minor, Subclavius, Teres major, Triceps.	Transfers, Pressure relief.		Standard exercise for developing transfer ability.
Front Shoulder Pull <sup>3</sup>	<b>Posterior deltoids</b> , Latissimus dorsi, Teres major, Triceps.	Wheelchair sports, Pulling activities, Transfers.		
Shoulder Shrug <sup>3</sup> (downward)	<b>Lower trapezius</b> , Latissimus dorsi, Teres major, Pectoralis minor.	Transfers, Pressure relief, Wheelchair propulsion		
Tricep Extension <sup>4</sup>	<b>Triceps</b> , Anconeus.	Reaching overhead, Transfers, Pressure relief, Wheelchair propulsion.	Add size and definition to triceps.	Helps in developing ability to reach overhead.

1. Highlighting indicates the major muscles emphasized. 2. Most C5 and all C6's and below should be able to perform this exercise. 3. Some C5, most C6, and all C7's and below should be able to perform this exercise. 4. Some C6, most C7, and all C8's and below should be able to perform this exercise.

General	Specific to Quads	Psychological
<p>Improved: Strength Muscle Tone Endurance Cardiovascular function Circulation Weight control More restful sleep Skin tone Bowel and bladder function Performance in sports Physical fitness</p>	<p>Improved: Transfer ability Range of motion Joint strength integrity Functional mobility and daily activities Lung capacity Balance</p> <p>Reduced Risk of: Joint pain Muscle spasticity Fatigue with ADL's Pressure sores Over-use injuries Tendinitis Cardiovascular disease Osteoporosis and loss of bone density Injury due to imbalanced strength in interrelated muscles</p>	<p>Improves: Self-Esteem and body image Confidence and relationships Appearance</p> <p>Increases: Motivation Range of activities Independence</p>

**Note:** You should consult a physician or a physical therapist before beginning any exercise program. The physician or therapist can help you determine the most appropriate and SAFE exercise program for your level of injury and needs.

*It has affected both my strength and endurance immeasurably. I feel stronger and all around physically fit. It has also helped me feel my appearance is more attractive. Everyone tells me I look better.*

Tres Sansom, Wylie, TX

*UPPERTONE is easier to use for those with significant arm/hand weakness than other equipment that requires wrist cuffs, assistance to change resistance, or requires securing the wheelchair in some way.*

Christy Young, Physical Therapist,  
San Diego, CA

*UPPERTONE helped me excel on the quad rugby court.*

John Squires, Barberton, OH

*I think it is an excellent idea.*

Sandra Baldwin, Technology Consultant,  
North Carolina Assistive Technology Project,  
Greenville, NC

*People have reported decreased spasticity and fatigue with activities of daily living.*

Sherry Santee, Physical Therapist, Center for  
Disability Related Resources, Tuscon, AZ

*It feels good to be able to workout once again. My therapist says that my sitting balance looks much better since I have been using the machine.*

Joe Pierce, El Paso, TX

*Increases upper body strength, which usually carries over for functional activities like wheelchair mobility and transfers.*

Sharon Russo, Physical Therapist,  
Fishersville, VA

*I feel like a machine; UPPERTONE has improved my strength, endurance and confidence in propelling my wheelchair.*

David Lytle, Kent, OH

*Improved my sexuality.*

J.H., FL

## ACQUIRING UPPERTONE

**Payment Plans.** Customers may purchase UPPERTONE with cash, check, or credit card. We can also arrange payment plans for qualified customers.

**Lease Plans.** Lease plans are available for those customers who prefer to lease UPPERTONE.

**Insurance.** Because of its benefits, insurance companies usually cover UPPERTONE when prescribed by a physician. Veterans and their dependents have purchased UPPERTONE through the VA and CHAMPUS.

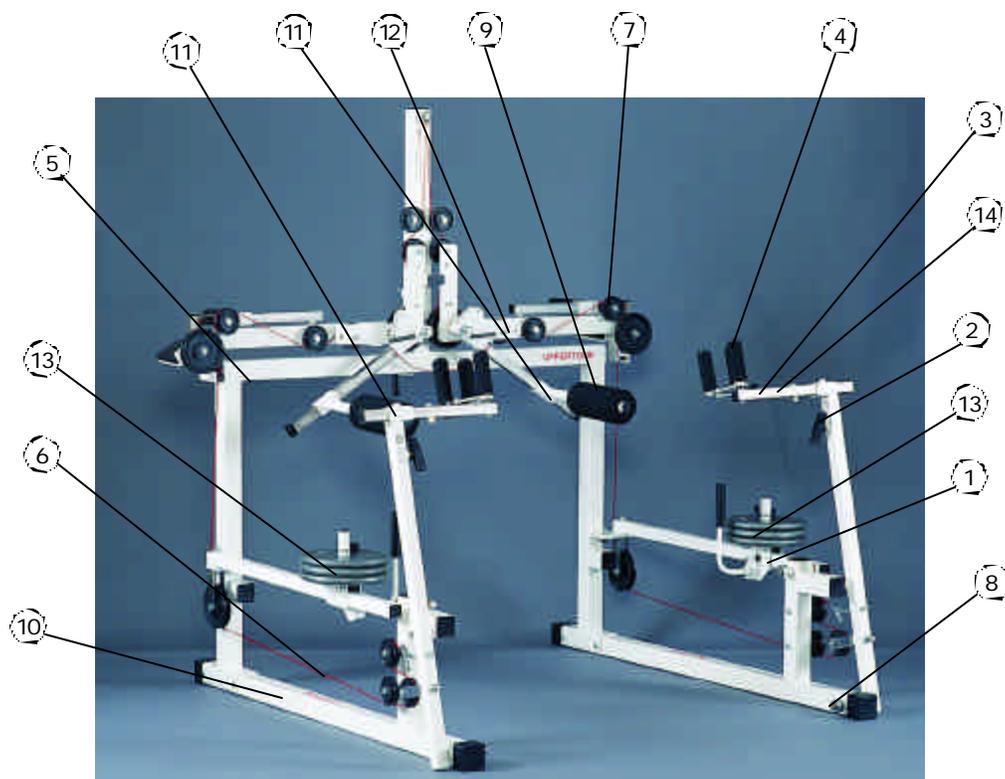
**Bank Loans.** You may be able obtain a bank loan to purchase UPPERTONE, particularly since some banks have special loan programs for people with disabilities.

**SSI P.A.S.S.** If you are preparing to work and receive SSDI, you may be able to purchase UPPERTONE by setting aside money under the P.A.S.S. program. Under this program the money you set aside does not count towards the income limits for receiving SSI. Consequently you may be able to purchase UPPERTONE without any cost to you. If you like, we can send you more information about this program.

**Public Facilities.** Since the Americans with Disabilities Act requires organizations to provide equal access to all individuals, our customers have successfully approached their fitness clubs, recreational facilities, and schools or colleges to purchase UPPERTONE. If you prefer, we are willing to contact such facilities on your behalf.

**Philanthropic Associations.** Some of our customers have acquired UPPERTONE with the help of philanthropic or volunteer associations. We would be more than happy to provide you with a list of associations in your area that might be helpful. You could contact them and determine whether or not they can help you. We would, of course, be more than happy to assist you in any way we can.

## UPPERTONE'S QUAD FRIENDLY FEATURES



1. Versatile adjustable resistance system.
2. Knob to adjust lever arm height.
3. Stainless steel arm.
4. Foam padded adjustable wrist restraint lever system.
5. 11 gauge 2" square steel tube frame.
6. Galvanized steel, vinyl covered, aircraft cable.
7. Impact resistant nylon, sealed, steel ball bearing pulleys.
8. Oil impregnated self-lubricating, maintenance free, bronze bearings.
9. High density non-absorbing neoprene foam padding.
10. Chip resistant electrostatic powder coat finish.
11. Width adjustment collars.
12. Adjustable height station.
13. Independently set left and right weights.
14. Arm slides in and out for easy entry and exit.

Manufactured in the U.S.A.



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