VersaTrainer®

by BOWFLEX®



Owner's / Assembly Manual

Preface

Congratulations on your new fitness program. In choosing resistance training, you've chosen a fitness program that can enhance your flexibility, increase muscle endurance, power and strength; offer both aerobic and anaerobic exercise; and improve your sports performance-on the tennis court, on the basketball court, or in the last leg of a road race. And in choosing the VersaTrainer[®], you've chosen the most advanced resistance training equipment of its kind.

patented Power Rod® unit provides dynamic, progressive resistance - the smoothest on the market today. Because the rods are unaffected by inertia, you can't throw the weight - and lose the benefit of the exercise - as you can with a free weight. For the same reason, the VersaTrainer® challenges the muscle throughout the movement, maximizing your gains. Meanwhile, the cable pulley system allows a free range of movement, which develops muscle flexibility, endurance and power, as well as strength.

Work the middle and upper body, put on muscle or take off weight; work with five or up to 210 pounds. The VersaTrainer® adapts to your capacity, your needs, and your goals smoothly and quietly, without the clanking of stacked weights. Exercise quickly and easily, without the complicated adjustments and equipment changes typical of other gym equipment. That's because the VersaTrainer® is an exercise in great design. Its



We are sure that these and other features of the VersaTrainer[®] will enhance your fitness and your enjoyment. To help you get started, this manual includes fitness information that will help you define your goals. We hope you'll take a look and plan your moves accordingly. To get the best results and keep your machine in peek operating condition, carefully read and follow the guidelines presented in this manual.

ATTENTION

THIS SYMBOL APPEARING THROUGHOUT THIS MANUAL MEANS PAY ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED!

A Word of Warning About Exercise

Always obtain a physical exam from your physician or health care professional before beginning any exercise program. If at any time during exercise you feel faint, dizzy, short of breath, or experience chest pain, stop exercising immediately! If the condition persists, you should consult your physician or health care professional before resuming exercise activities.

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Important Safety Precautions

IMPORTANT SAFETY INSTRUCTIONS

The following definition applies to the word "Warning" found throughout this manual:

⚠ WARNING

Used to call attention to POTENTIAL hazards that could result in personal injury or loss of life.

PRIOR TO USING THIS EQUIPMENT, OBSERVE THE FOLLOWING WARNINGS.



- Read and understand the Owners Manual prior to using this machine.
- Read and understand all Warning Labels on this machine.
- Keep children away from this machine and / or supervise them closely if they are near the machine or present during its operation. This machine is not suitable as a children's toy. There is a natural tendency for children to want to play on exercise equipment and parents and other in charge of children should be aware of their respective responsibilities. Moving parts that may appear to present obvious hazards to adults may not appear to do so to children. Keep the Power Rod resistance rods bound when they are not in use to immobilize the machine.
- Consult a physician prior to commencing an exercise program. If, at any time, you feel faint or dizzy, or experience pain, stop and consult your physician.
- Inspect this machine for loose parts or signs of wear.
 Pay special attention to Cables and Belts and their connections. Do not use if found in this condition; contact Nautilus Customer Service.
- This machine is designed for a User's Weight Limit of xxx pounds ((xxx/2.2) kilograms.) Do not use if you are over this weight.

- This machine contains moving parts. Use Caution. Do not wear loose clothing or jewelry.
- Set up and operate this machine on a solid level surface.
- This machine is for Consumer use only
- Do not use additional means to increase the resistance (lifting load) of this machine
- Be sure that the Selector Hook is correctly attached to the Rod End
- Set up the machine so that there is a free area around the machine of 7' x 9' (2.1 m x 2.7m) of free space for safe operation of the Bowflex[®] VersaTrainer[®] home gym. Keep third parties out of this area when the machine is in use
- Operate the machine in the manner described in this manual. It can be hazardous to over-exert yourself during exercise
- Make sure that all positional adjustment devices are securely engaged.

- When hooking up Power Rod® unit do not position any body parts directly over the top of the rods. Position yourself to the side while attaching rods.
- Never attempt to exercise with more resistance than you are physically able to handle.
- Keep cables and Power Rod® unit bound with rod binding strap when not in use.
- Before exercising, make sure the cable pulley system is properly secured, properly attached, and in perfect working condition.
- All exercises in this manual are based on the calibrated resistance and capacity levels of the Bowflex® VersaTrainer® home gym. Exercises not in this manual are not recommended by Nautilus, Inc.



To reduce the injury to persons, always fasten tie downs and lap belt before exercising.

Safety Warning Labels

The following safety warnings are located on the Bowflex® VersaTrainer® exercise machine. Please read all safety precautions and warning information prior to using your product. Be sure to replace any warning label if damaged, illegible, or missing. If you need replacement labels, please call a Bowflex Representative at (1-800-628-8458).

NEED LOCATION AND TEXT OF ALL WARNING LABELS.



VersaTrainer® Benefits

Power Rod® Unit

- Provide progressive and continuous resistance, which challenges the muscle throughout the movement, and helps minimize joint and ligament shock.
- Develop both positive and negative contractions for balanced conditioning.
- Develop muscle endurance and power, as well as strength.
- Allow you to tailor your program to your needs; general conditioning, aerobic training, specific training for specific sports, body building and rehabilitative work.

Cable Pulley System

- Allows for free range of motion to assist in developing muscle flexibility.
- Functions smoothly and quietly.

Independent Hand Grips

- Allows for both unilateral and bilateral development, enhances coordination, body symmetry alignment and posture, and will not allow strong side to compensate for weak side.
- Can be gripped or worked with relaxed or open palm, allowing persons with limited grip to workout more easily and allow you to isolate specific muscles and motions and address specific needs.
- Address sport related skills such as the tennis backhand or overhand throw, as well as the physical demands of daily living, such as transferring, and curb jumps.

Total Exerciser Concept

- Varied exercise positions help you meet your individual exercise goals.
- Adapts to all ages and injury or skill level.
- Provides a wide range of exercise options, which increases exercise variety and quality.

User Friendly Design

- Requires no transfers.
- Compact.
- Easily adjustable, allows you to spend more time exercising.

TWO KINDS OF EXERCISE

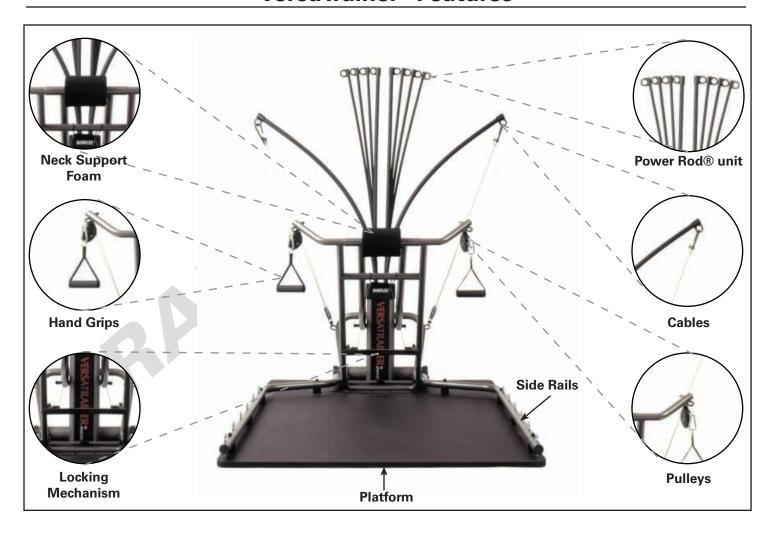
You are no doubt familiar with one form of exercise, aerobic: aerobic activity is movement that is fueled with oxygen. Its opposite, anaerobic activity, is fueled without oxygen. Aerobic activities focus on the slow, enduring fibers of the muscle. The more you condition a muscle for endurance and tone using low resistances and high repetitions the more efficient the muscle becomes at using oxygen and the firmer and tighter it becomes. Increased muscle endurance improves and complements cardiovascular development, but it is not the same thing. Think of the difference between circuit training on the VersaTrainer[®], which can be aerobic, and anaerobic activity that helps improve both muscle and cardiovascular endurance, versus pushing a long distance which focuses mostly on the cardiovascular system.

Every muscle also contains fast twitch fibers which are fueled by stored energy (glycogen). These fibers relate to speed and power and they're quick to fatigue. When building a muscle, you are working the fast twitch fibers to failure; the muscle responds by overcompensating and grows larger.

All exercise conditions the muscles aerobically or anaerobically, and all exercise conditions the heart to some extent.

For overall conditioning - for health, fitness, and a balance of strength, endurance, and power - it's important to consider both aerobic and anaerobic exercise as you define your goals and choose your exercise program.

VersaTrainer® Features



VersaTrainer® Specifications

Throughout this manual, all references to the left or right side and to the front or back are made as if you are facing the VersaTrainer[®] machine, ready to exercise.

The dimensions and general specifications for the BowFlex® VersaTrainer® exercise machine are as follows:

Physical Dimensions

Length: 6 feet Width: 4 feet Height: 6 feet Weight: 200 pounds Shipping Weight: xxxxxx

Parts and Hardware Guide

Contents of Box One:

- ✓ One VersaTrainer® Base Assembly
- ✓ Two Posters
- ✓ One Owner's/Assembly Manual
- ✓ One Video
- ✓ One Foam Neck Support
- ✓ One Bolt Bag

Containing:

- Four (4) #12 x 3/4" Pan Head Screws
- One (1) Allen Wrench, Short Arm 5/16"
- One (1) 3/8" x 3-1/4" Bolt
- ✓ One Belt Bag

Containing:

- Two (2) Tie Down Straps
- One (1) Lap Belt

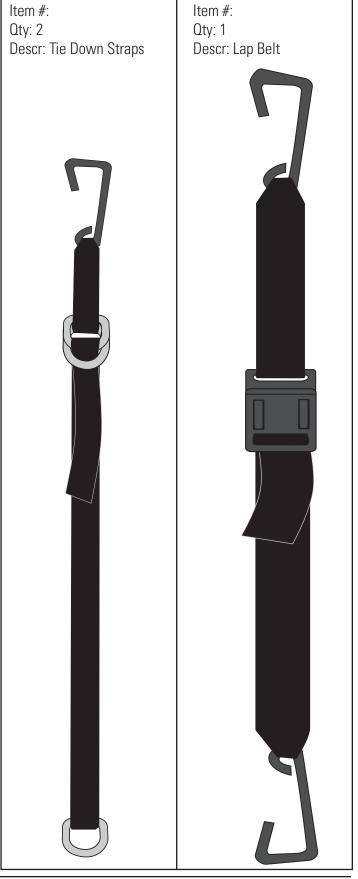
Contents of Box Two:

✓ One Power Rod[®] Assembly

Bolt Bag Parts Guide:



Belt Bag Parts Guide:



Assembly Guide

TOOLS NEEDED:

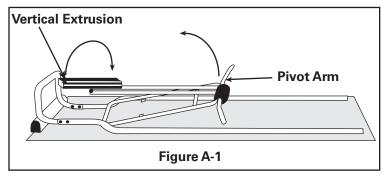
Phillips Head Screw Driver 5/16" Allen Wrench (included)

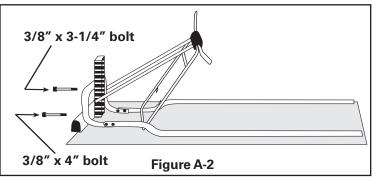
NOTE: Set-up of VersaTrainer® may require two people.

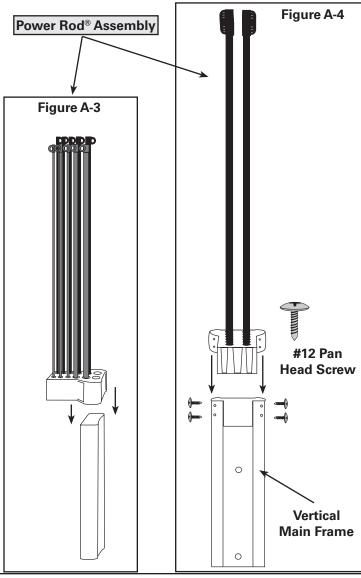
- **STEP 1:** Rotate extrusion to upright position (see Figure A-1).
- **STEP 2:** Lift pivot arm until extrusion screw holes align (see Figure A-1).
- **STEP 3:** Tighten pre-placed 3/8" x 4" bolt in bottom hole (see Figure A-2).
- **STEP 4:** Place 3/8" x 3-1/4" bolt into top hole and tighten (see Figure A-2).
- **STEP 5:** Tighten all bolts securely using enclosed Allen wrench.
- **STEP 6:** Slide Power Rod® Assembly onto top of vertical main frame (see Figure A-3). Make sure that it is all the way on so that the holes on each side line up.
- **STEP 7:** Secure the Power Rod® Assembly to the main frame by tightening four of the #12 x 3/4" Pan Head screws through the four holes (two on each side) on the black Power Rod® Assembly (see Figure A-4).
- exercise machine, it is VERY IMPORTANT to tighten all screws and bolts, and visually inspect the VersaTrainer® machine. Make sure that your VersaTrainer® machine has been assembled correctly and securely, and that there are no loose, or unattached parts prior to use.



Failure to visually check and test assembly before use could jeopardize your health.







Using Your Machine

Power Rod® Resistance

Power Rod[®] units are made from a special composite material. Your Power Rod[®] rods are sheathed with a protective black rubber coating. Each rod is marked with its weight rating on the rod cap.

Adjusting and Understanding the Resistance

The Bowflex® VersaTrainer® home gyms come with 210 lb. (95.25 kg) of resistance {one pair of 5 lb. (2.25 kg) rods, two pairs of 10 lb. (4.5 kg) rods, one pair of 30 lb. (13.5 kg) rods, and one pair of 50 lb. (22.5 kg) rods}.

Hooking the Power Rod® Rod to the Cables

You may use one rod or several rods in combination to create the desired resistance level. To hook multiple rods up to one cable, simply bend the closest rod toward the cable and place the cable hook through the rod cap. Then, hook up the next closest rod.

Hooking up the most forward rod prevents rods from crossing over the top of one another.

Safety Precautions

When hooking up the Power Rod® rods, do not position any portion of your body directly over the tops of the rods. Remain to the side while connecting and disconnecting the Power Rod® rods from the cables.

When You Are Not Using Your Bowflex® VersaTrainer® Home Gym

Disconnect the cables from the Power Rod® rods when you are not using your Bowflex® VersaTrainer® home gym.

Use the rod binding strap included with your machine to bind all the rods together near the middle to top of the rod pack. This keeps them neat in appearance and makes your Bowflex® VersaTrainer® home gym as compact as possible.



To reduce the injury to persons, always fasten tie downs and lap belt before exercising.

CARE OF THE VersaTrainer®

The VersaTrainer® design uses very few moving parts, therefore the machine needs minimal maintenance. The following are some areas you will want to check and maintain to keep your VersaTrainer® exercise machine in good working condition.

- 1 Pulleys: The pulleys may develop some noise or squeaks with use. If noise occurs simply spray some silicon or other lubricant on the pulley. This should eliminate any noise.
- **2 Rod Caps:** The rod caps are attached to the rods with screws. Check screws periodically and tighten as needed.
- 3 Power Rod® Rods: The Power Rod® rods should always be bundled together when not in use. Binding the Power Rod® pack together extends the life of the rods (see Figure 3-1).
- **4 General:** Before using your VersaTrainer[®] check all fasteners to be sure none has loosened with use. Tighten as needed.



Figure 3-1



CAUTION

Prolonged direct exposure to sunlight will cause the Power Rod® rods to deteriorate.

ADJUSTING THE RESISTANCE

Select your resistance. Resistance levels are marked on the rod caps. You will see one 5 pound rod pair, two 10 pound rod pairs, one 30 pound rod pair, and one 50 pound rod pair. You may use one rod or several rods in combination to create the desired resistance.

- **STEP 1:** Hook up one side at a time.
- **STEP 2:** Bend one or more rods toward the pulley, making sure not to criss-cross them (see Figure 2-1).
- **STEP 3:** Hook the cable clip onto the rings at the ends of the rods (see Figure 3-1).
- **STEP 4:** Now hook up the other side. You may use two different resistances on the two sides.

Make sure you understand the nature of resistance training and your current level of fitness before working with the VersaTrainer[®] exercise machine. In general, start with lower resistances appropriate for your capacity and your goals.



Figure 2-1

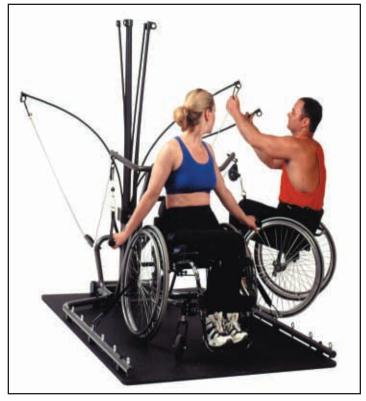


Figure 3-1

STANDARD CHAIR POSITIONS

Facing the Power Rod® unit: (See Figure 1)

Back to the Power Rod® unit: (See Figure 2)

Side at 90% to the Power Rod® unit:

(See Figure 3)

Figure 1

Side at 45% to the Power Rod® unit:

(See Figure 4)





To reduce the injury to persons, always fasten tie downs and lap belt before exercising.





ADJUSTING PULLEY HEIGHT

Adjusting the height of the pulleys is simple. If you follow these general guidelines:

To adjust pulley height:

- **STEP 1:** Keep Power Rod® rods under tension when raising or lowering pulley frame as this will help offset the weight of the frame.
- **STEP 2:** With casters facing foot plates lock wheel locks to ensure stability.
- **STEP 3:** Grasp handle as shown in Figure 3-1, pulling upward to release locking mechanism.
- **STEP 4:** Adjust pulley height to desired level. Release hand grip to engage locks (see Figure 4-1).
- **STEP 5:** Release the handle if you feel unstable as locking mechanism will automatically stop the pulley frames downward motion.

STEP 6: IMPORTANT!

Be sure locks are engaged before exercising.

These and all other safety tips will help to ensure a safe and satisfying workout. If you are in any way unsure of the techniques presented please contact Nautilus, Inc.



Figure 3-1



Figure 4-1

STRAPPING TIPS

The strapping suggestions presented here are guidelines only since all wheelchairs vary in design and size. Adjustments to suit your chair will be necessary.

- 1 ALWAYS lock the brakes on your wheelchair.
- **2 - ALVAYS** secure your chair using the chair tie-down straps and lap belt (when possible). See Figures 1 and 2.
- **3 DO NOT** exercise in a chair that is not equipped with functioning wheel locks.



Figure 1: Attach straps to chair.

A DANGER

To reduce the injury to persons, always fasten tie downs and lap belt before exercising.



Figure 2: Attach hooks to side rail.



STRAPPING TIPS CONTINUED

To ensure a safe and satisfying workout always attach lap belt before exercising. Grasp hook and attach to side rail eyelet then attach opposite side, clip belt together and tighten. Lap belt should be tightened until snug, but not tight enough to restrict circulation.

To attach perform the following steps:

STEP 1: Grasp hook and attach to one side of the side rail eyelet (see Figure 1-1).

STEP 2: Perform Step 1 on other side.

STEP 3: Clip lap belt together and tighten (see Figure 3-1).



To reduce the injury to persons, always fasten tie downs and lap belt before exercising.



Figure 1-1: Attach hooks to side rail.

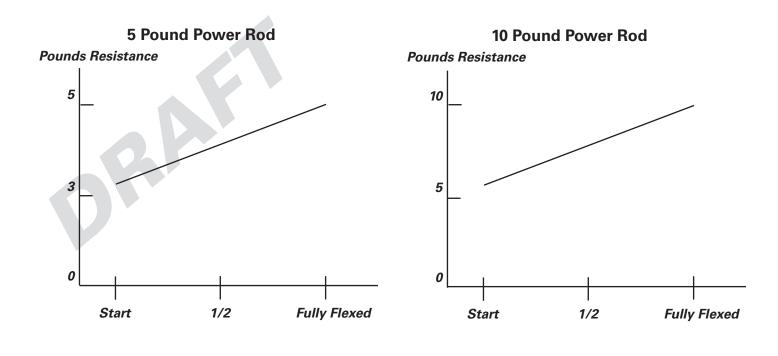


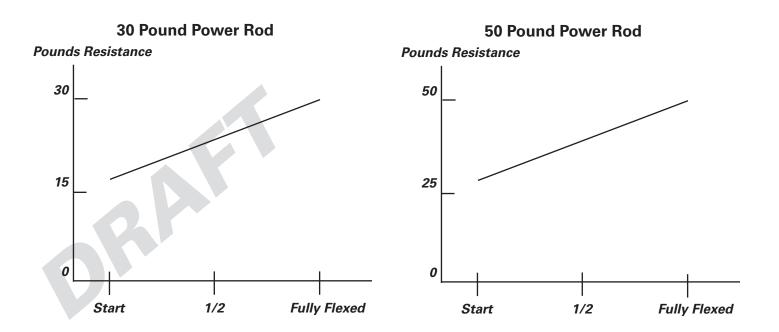
Figure 3-1: Fasten lap belt together.

POWER ROD RESISTANCE

Power Rod® unit begin at approximately 65% of resistance indicated on rod and progress to indicated resistance when fully flexed.

See the following resistance examples:





SAFETY TIPS

- 1. Never release the hand grips when rods are under tension.
- 2. Keep out of the path of the Power Rod® rods when exercising, and make certain that observers also stand clear of the VersaTrainer® machine while it is in use.
- 3. Before exercising be sure tie downs and lap belt are secure.
- 4. Periodically check all fasteners to make sure none has loosened with use. Tighten as necessary.
- 5. Always check your exercise equipment before using.
- 6. Always keep casters facing footrests while exercising.
- 7. If you feel unstable or unsafe while exercising stop and consult your health professional.



Before beginning any exercise program, consult your physician or health professional.

Only he or she can determine the exercise program that is appropriate for your particular age and condition. If you experience any light-headedness, dizziness, or shortness of breathe while exercising, stop the exercise and consult your physician.

Get Ready, Aim, Train

Your body will do what you train it to do. That's why it's important to define your goals and focus on those goals. Do you want to look better? Feel better? That might require some body building and/or aerobic conditioning. Do you want to play a more consistent tennis game? That might require increased muscle endurance, greater muscle power, and aerobic conditioning.

Here are some fitness components that will help you define your goals and choose your fitness program:

MUSCLE STRENGTH is the maximum force that you can exert against resistance at one time. Your muscle strength comes into play when you jump a curb or wheel up a steep ramp. It is developed when a localized muscle is worked both positively (concentric) and negatively *eccentric) at a resistance great enough so that you can perform only five to eight repetitions of the exercise before the muscle fails. Each set of five to eight repetitions is followed by a rest interval that typically runs three times longer than the set. Later, between exercise sessions, the muscle overcompensates for the stress, and usually increases in both strength and size.

MUSCLE ENDURANCE is the ability to perform repeated contractions. It comes into play when you're wheeling around campus or pushing in a road race. Endurance training addresses the slow twitch, endurance muscle fibers which are dependent on oxygen for energy. To develop muscle endurance, use low resistances and high repetitions -- about 15 to 20 repetitions in each set, three sets to each exercise.

MUSCLE POWER is the combination of muscle strength and the speed of the movement. Power training relates to the development of sport skill pattern. To achieve muscle power, start with light resistances; then determine the desired speed of the skill pattern and train at the speed; finally, gradually increase resistance while still maintaining the desired speed. You will find that a medium resistance and a medium number of repetitions, usually six to ten, will generally train the fast twitch muscle fibers for power. A good example for a muscle power exercise is the Resistance Aided Punch.

FLEXIBILITY is the ability of a muscle or group of muscles to move the joint through a full range of motion. Flexibility comes into play when you execute an overhand serve, shoot a basket, or just reach for a dropped pencil. It is the cooperative movement of a opposite muscle groups. When a muscle contracts, its opposite muscle group must relax for the action to occur. Increased flexibility means an increased range of movement, made possible by this simultaneous contracting and relaxing. Good flexibility will protect the body from injury.

CARDIOVASCULAR ENDURANCE is the ability of the heart and lungs to supply oxygen and nutrients to exercising muscles over an extended period of time. It comes into play when you push your chair for a long distance or play a long game of basketball and it is a critical component of overall fitness and health. The exercise must be sustained for at least 12 minutes to be truly cardiovascular intensive. Any exercise program should be supplemented with cardiovascular training, such as the Power Push on the VersaTrainer® exercise machine.

BALANCED STRENGTH and ALIGNMENT is the result of equal strength development in all parts of the body. It comes into play in your sitting posture and in your ability to perform just about any activity safely and effectively. An over-development of the chest in combination with an underdevelopment of the back will round the shoulders. You want a balance of muscle strength in front an back (anterior and posterior); center and both sides (medial and lateral); and rotation. In addition, you need (when possible) a balance between your middle, upper and lower body.

ANATOMY OF A WORKOUT

For a safe, satisfying, and effective workout, plan to follow this progression:

• Warm-up: two-to-three minutes,

• Stretching: three-to-five minutes,

• Workout: 20-to-60 minutes,

Cool down: three-to-five minutes, and

Relaxation: two minutes.

EXERCISE IN YOUR MINDS EYE

With concentration and visualization, you can approach your workout with a positive, constructive attitude that will facilitate and enhance your exercise.

A good mental pre-workout routine is to sit, take a couple of deep breaths, and relax for two minutes. Focus on what you are about to do and think about the benefits you will incur.

The warm-up is continuous exercise that gradually increase the body temperature and blood flow to the muscle fibers.

We recommend that you warm-up using the Power Push as it is a very natural motion for people who use wheelchairs.

The workout portion of your fitness routine is the series devoted to your particular goals. We've developed many exercises for your to choose from so designing your program should be easy. Before you actually do an exercise the first time, review and thoroughly read all the information on the exercise. You may also want to close your eyes and perform the exercise; this technique will help you to rely on your kinesthetic sense (your sense of muscle position and movement). Using your kinesthetic sense can help you fine tune your form and develop greater muscle control.

The cool-down is an essential part of the exercise routine. The cool-down gradually reduces the level of exercise intensity so that blood does not accumulate in one place, but continues to circulate at a decreasing rate.

We recommend the Power Push exercise for the cool down. Remember to gradually move yourself into a relaxed state.

After you workout and cool-down, relax again. Sit quietly and focus on your exercise goals. Feel the blood flow through your muscles and feel the fatigue. Finally, after a few minutes, take a cool shower to bring your body temperature down.

CHOOSING A RESISTANCE

BowFlex recommends that you start with a light resistance and gradually increase the resistance until you can perform only the desired number of repetitions before the muscle fatigues. Remember, learning and using proper form and technique while exercising is as important to your workout as the amount of resistance you work with.

DESIGNING YOUR OWN PROGRAM

You may want to design your own personal program, specifically geared to your goals and lifestyle. Designing a program is easy, as long as you take care to follow these guidelines:

Understand fitness and its components.

Improperly designed programs can be dangerous. Take some time to review this manual as well as other fitness guides.

Know your current fitness level.

Before you start any fitness program, you should consult a physician who will help you determine your current capabilities.

Identify your goals.

Goals are critical to choosing and designing an exercise program that fits and enhances your lifestyle. But so is strategy: it's important not to rush the process and try to accomplish too much too soon -- that will lead to setbacks and discouragement. Instead, set a series of smaller, achievable goals.

Select complementary exercises.

Be sure to pair exercises that address compound joint movements and single joint movements; in addition, look for exercises that address complementary muscle groups. For instance, when working a pushing muscle, such as the pectorals, include the complementary pulling muscle, the latissimus dorsi. And finally, review your selection to make sure that these exercises will, in fact, help you achieve your goals.

Put first things first.

At BowFlex, we believe in priority training. Work those muscle groups that need the most training first; you're fresher at the beginning of your workout and will naturally focus better on them.

Remember your cardiovascular component.

Any fitness program must contain a cardiovascular fitness component to be complete. So, complement your resistance training with aerobic exercise: such as wheeling, or playing basketball.

Use your time wisely.

Design your program so that a minimum number of chair positions are required. Group your exercises by chair/pulley positions. For example, if your program includes the Chest Fly, Tricep Press, Abdominal Crunch, Seated Row and Bicep Curl be sure to perform the Bench Press, Abdominal Crunch, Tricep Press and Chest Fly exercises in sequence before changing your chair position to perform the remaining exercises.

Taking the first step.

When beginning your program, remember to use the first couple of weeks to condition your body. Your muscles, ligaments and tendons will all need this time to prepare for the more intense workouts ahead. Don't move too fast as you may become sore and this can lead to a lack of interest and cause you to stop exercising. So, be patient. Remember, Rome was not built in a day.

SAMPLE WORKOUT

The following program is presented as an example only. Before beginning any exercise program it is important that you consult your physician or health professional.

The following program is used for general conditioning. The whole routine can be performed in approximately 45 minutes. You should take 45-75 seconds of rest time between sets. When doing the sets you should experience fatigue in the muscle on the last 3 reps of the final set. If fatigue does not occur increase the resistance on all the sets.

	Exercise	# of sets	# of reps	
Chest	Bench Press	2	10-15	
	Chest Fly	2	10-15	
Tricep	Tricep Press 2		10-15	
Abdominals	Abdominal Crunch	2	10-15	
Shoulder	Shoulder Press	2	10-15	
	Front Shoulder Raise	2	10-15	
Bicep	Bicep Curl	2	10-15	
Back	Seated Row	2	10-15	
	Reverse Fly	2	10-15	

Notice that the exercises in this sample workout have been arranged by chair/position sequence to accommodate a minimum number of chair positions, allowing you more time to exercise and less time changing positions. Also please note that for each muscle group worked its opposing muscle group receives equal work in order to maintain proper muscle balance and body symmetry.



Before beginning any exercise program, consult your physician or health professional. Only he or she can determine the exercise program that is appropriate for your particular age and condition. If you experience any light-headedness, dizziness, or shortness of breathe while exercising, stop the exercise and consult your physician.

CHEST EXERCISES

Bench Press

BENEFIT: This is the best exercise for developing overall upper body strength, as well as for firming and shaping the muscles of the chest and the front shoulders. Low resistance tones the chest and high resistance strengthens and defines the upper body. This sequence uses a pushing motion found in sports such as basketball.

PULLEY POSITION: Shoulder level.

BODY PLACEMENT: Back to Power Rod® unit, neck resting on support foam. Lock-down system secured.

STARTING POSITION: Keeping arms horizontal, grasp the handles, palms facing down, draw arms forward. A slight stretch across the chest (pectoral region) will be felt.

EXECUTION: Push handles away from chest extending arms directly in front of the chest. The wider apart the handles are, the greater the isolation in the chest. The closer together the handles are, the more work is performed by muscles on the back of the arm (triceps).

BREATHING TECHNIQUE: Breathe out on the push and breathe in on the return.



Incline Press

BENEFIT: This exercise develops the muscle fibers of your upper chest and strengthens your front shoulders. Great sport-specific conditioning exercise for basketball or tennis.

PULLEY POSITION: Shoulder Level.

STARTING POSITION: Back to Power Rod® unit. Lock-down system secured.

BODY PLACEMENT: Same position as for Bench Press. Keeping arms horizontal, grasp the handles, palms facing down. A slight stretch across the chest (pectoral region) will be felt.

EXECUTION: Starting in the same position as for the Bench Press; push handles in a similar fashion, except that handles should end up over the eyes. Greater isolation will be felt in upper fibers for the pecs.

BREATHING TECHNIQUE: Breathe out on the push and breathe in on the return.

COMPLEMENTARY EXERCISES: Seated Row.



START



FINISH



START



FINISH

CHEST EXERCISES

Decline Press

BENEFIT: This version for the traditional Bench Press maximally develops the lower fibers of the chest, while toning and firming the entire area. Great exercise for road racing.

PULLEY POSITION: Shoulder Level.

BODY PLACEMENT: Back to Power Rod® unit. Lock-down system secured.

STARTING POSITION: Same position as for Bench Press.

EXECUTION: Starting as you would for the Bench Press, except now elbows will be tilted slightly upwards. Push downward toward the knees and away from the chest, keeping handles shoulder width apart.

BREATHING TECHNIQUE: Remember to exhale when pushing away and inhale when returning to start position.

COMPLEMENTARY EXERCISES: Seated Row.



START



FINISH

Close Grip Bench Press

BENEFIT: Though this exercise resembles the Bench Press, the close positioning of the handles isolates the chest and the triceps at the same time. You may want to alternate performing a Close Grip Bench Press with the Bench Press.

PULLEY POSITION: Shoulder Level.

BODY PLACEMENT: Back to Power Rod® unit, neck resting on support foam. Lock down system secured.

STARTING POSITION: Same position as for Bench Press.

EXECUTION: Push the handles away from the chest, touching the handles together when arms are fully extended. This isolates the triceps and develops greater strength in the back of the arms.

BREATHING TECHNIQUE: Breathe out on the push and breathe in on the return.

COMPLEMENTARY EXERCISES: Seated Row.



START



FINISH

CHEST EXERCISES

Chest Fly

BENEFIT: This is the exercise that develops a fuller chest and front shoulders, as well as strengthening, defining and increasing muscle size. A medium resistance will enhance your range of movement.

PULLEY POSITION: Shoulder Level.

BODY PLACEMENT: Back to Power Rod® unit. Lock-down system secured.

STARTING POSITION: In the same position as Bench Press, reach straight back and grasp handles, palms facing away from Power Rod® unit.

EXECUTION: Keeping arms straight, wrists and elbows slightly bent and lower than the shoulders, pretend you are hugging a barrel in a circular motion. Palms will be facing each other directly in front of the chest in the finish position. Use control throughout this exercise to achieve a full range of motion.

BREATHING TECHNIQUE: Exhale on the fly motion and inhale when returning to starting position.

COMPLEMENTARY EXERCISES: Reverse Fly and Seated Row.

START



FINISH

Chest Pull

BENEFIT: A great exercise for isolating the side muscles of the chest similar to doing a Chest Fly. Emphasis of this exercise is different from the Forehand Drive.

PULLEY POSITION: Shoulder I evel.

BODY PLACEMENT: Side to Power Rod[®] unit at 90 degree angle. Lock-down system secured.

STARTING POSITION: Grasp handle in front of the body with arm closest to Power Rod® unit palm facing out.

EXECUTION: Keeping torso erect and elbow slightly bent, drive the arm across the body.

BREATHING TECHNIQUE: Breathe out on the drive and breathe in on the return.

COMPLEMENTARY EXERCISES: Cross Body Pull.

START

Shoulder Press

BENEFIT: This is the best exercise for isolating, strengthening, toning and shaping the muscles on the top of the shoulder. Shoulder flexibility is enhanced because the movement addresses the top of the joint.

PULLEY POSITION: Mid-back.

BODY PLACEMENT: Back to Power Rod® unit. Lock-down system secured.

STARTING POSITION: Keep the lower back straight. Grasp handles with palms facing away from the machine. Raise handles to should level, keep elbows close to the body.

EXECUTION: Press handles straight up while breathing out. Perform this movement under control at all times. When returning to start position bring arms down as far as possible in order to achieve a full range of movement and remember to breathe in.

BREATHING TECHNIQUE: Breathe out on the push and breathe in when returning to the start position.

COMPLEMENTARY EXERCISES: Back Shoulder Extension.



START



FINISH

Upright Row

BENEFIT: This exercise is great for developing the muscles over the shoulder joint for fuller, stronger shoulders.

PULLEY POSITION: Lowest level. Pulleys inverted.

BODY PLACEMENT: Facing Power Rod[®] unit. Lock-down system secured.

STARTING POSITION: Grasp handles with palms facing away from the Power Rod® unit. Keep the back relaxed. Bring body to upright position.

EXECUTION: Draw the handles up toward the shoulders, keeping elbows wide so that upper arms are horizontal and in line with shoulders. At peak level, the back and upper shoulder muscles should be completely contracted; always maintain a straight trunk and neck.

BREATHING TECHNIQUE: Breathe in when pulling up and breathe out when returning to start position.

COMPLEMENTARY EXERCISES: Shoulder Raise.

START

Shoulder Raise

BENEFIT: This exercise develops strength and increased range of movement in the shoulder joint and adds muscle definition and firmness to the front of the shoulder as a complement to the Back Shoulder Extension. It is a great exercise for basketball, tennis or any endurance sport.

PULLEY POSITION: Lowest Level.

BODY PLACEMENT: Back to Power Rod® unit. Lock-down system secured.

STARTING POSITION: Reach back and grasp both handles, palms facing the Power Rod® unit, arms straight at the sides.

EXECUTION: Keeping your arms straight and initiating the action with the front of the shoulder, lift the handles upward to shoulder level or above.

BREATHING TECHNIQUE: Breathe out on the lift upward, breathe in when slowly returning to start position.

COMPLEMENTARY EXERCISES: Upright Row.



START



FINISH

Arm Raise

BENEFIT: Same as for Front Shoulder Raise, performing the exercise with a single arm allows for greater isolation of the deltoid and shoulder.

PULLEY POSITION: Lowest level.

BODY PLACEMENT: Side to Power Rod® unit. Lock-down system secured.

STARTING POSITION: Grasp handle in front of body with arm nearest the Power Rod® unit. Keep arm extended, elbow slightly bent and palm facing the floor. Use opposite arm to stabilize the torso.

EXECUTION: Drive the hand straight up toward the ceiling keeping palm facing down. Do not lean forward when performing this exercise.

BREATHING TECHNIQUE: Breathe out when raising the arm and breathe in when returning to start position.

COMPLEMENTARY EXERCISES: Back Shoulder Extension.

START

Back Shoulder Extension

BENEFIT: This exercise firms and tightens the back of the shoulders and arms while strengthening and shaping the upper arms for enhanced appearance. Great conditioning for swimming or basketball.

PULLEY POSITION: Shoulder Level.

BODY PLACEMENT: Facing Power Rod® unit.

Lock down system secured.

STARTING POSITION: Grasp handles with palms facing down.

EXECUTION: Keeping arms straight and initiating the movement in the back of the shoulders, pull the handles down and back. Your range of movement will determine how far back you can pull the handles.

BREATHING TECHNIQUE: Breathe out as you pull the handles back and breathe in as you slowly return to the start position.

COMPLEMENTARY EXERCISES: Shoulder Extension.



START



FINISH

Cross Body Pull

BENEFIT: Excellent exercise for developing the muscles of the back of the shoulder. Also a very specific exercise to racquet sports.

PULLEY POSITION: Shoulder level.

BODY PLACEMENT: Side to Power Rod[®] unit at 90 degree angle. Lock-down system secured.

STARTING POSITION: The chair will be in the same position as the Chest Pull except closer so that the full range of motion can be achieved. Using hand away from the Power Rod® unit, grasp the handle in front of the body. Palm facing rods. Arm will be extended and elbow slightly bent.

EXECUTION: Drive the arm away from the Power Rod® unit, keeping elbow slightly bent and torso erect. You may want to stabilize your body by resting the free arm on the pulley lever bar.

BREATHING TECHNIQUE: Breathe out on the drive motion and breathe in when returning to start position.

COMPLEMENTARY EXERCISES: Chest Pull.

FINISH

START

Shoulder Shrugs

BENEFIT: This great shoulder warm-up also tones the muscles of the upper back and neck. Increased shoulder stability enhances posture and helps prevent injury.

PULLEY POSITION: Lowest Level.

BODY PLACEMENT: Facing Power Rod[®] unit. Lock-down system secured.

STARTING POSITION: Grasp handles, palms facing in toward body. Sitting erect the cables should be under tension.

EXECUTION: Roll your shoulders forward, up and back slowly. Maintain an erect position and keep shoulders under control.

BREATHING TECHNIQUE: Breathe naturally, exhaling on the completion.



START



FINISH

Inward Rotation

BENEFIT: Great exercise for strengthening the rotator cuff or that area on top of the shoulder. This exercise is used predominantly in shoulder injury rehabilitation and also to strengthen the shoulder muscles that are used in hitting a tennis ball or throwing any type of ball.

PULLEY POSITION: Mid-body level.

BODY PLACEMENT: Side to Power Rod[®] unit at 90 degree angle. Lock-down system secured.

STARTING POSITION: Grasp forward handle with hand closest to the Power Rod® unit. Draw upper arm in until flush with torso, lower arm bent at 90 degree angle. Use free hand to stabilize upper part of working arm.

EXECUTION: Rotate the arm across the torso until it touches the elbow of the opposite side. Perform this exercise in a slow and controlled manner.

COMPLEMENTARY EXERCISES: Outward Rotation.



START



FINISH

Outward Rotation

BENEFIT: This complementary exercise to the Inward Rotation will also strengthen the muscles of the back of the shoulder. To maintain muscle balance, perform both Rotation exercises.

PULLEY POSITION: Mid-body Level.

BODY PLACEMENT: Side to Power Rod[®] unit at 90 degree angle. Lock-down system secured.

STARTING POSITION: Grasp forward handle with opposite hand. Draw the arm in until flush with torso. Use free hand to stabilize upper part of working arm.

EXECUTION: Relax arm across torso. Drive the lower arm out and away from the Power Rod® unit until beyond torso.

COMPLEMENTARY EXERCISES: Inward Rotation.



START



FINISH

Resisted Tennis Serve

(SPORTS FOCUS)

BENEFIT: This is a great sports-specific exercise that duplicates the movement of the arm when serving a tennis ball. Also increase flexibility in the muscles of the shoulder and strengthens the muscles in the pectoral region and front of the shoulder.

PULLEY POSITION: Variable: Shoulder-to-highest level.

BODY PLACEMENT: Back to Power Rod® unit at 45 degree angle. Lock-down system secured.

STARTING POSITION: Grasp handle with working arm. Arm will be extended and held in a similar position as when serving a tennis ball.

EXECUTION: In a motion very similar to serving a tennis ball, drive the hand out and down toward the floor. Be sure to move in a speed specific pattern similar to the same speed as when serving a tennis ball.

COMPLEMENTARY EXERCISES: Reverse Fly Seated Row.

START

Backhand Drive

(SPORTS FOCUS)

BENEFIT: This exercise develops muscle strength and tone in the back of the shoulders and upper arms, so you can complement your forehand drive with an equally strong backhand stroke. Your posture is improved, your range of movement is enhanced making this an essential workout for players of racquet sports.

PULLEY POSITION: Shoulder Level.

BODY PLACEMENT: Back to Power Rod® unit at 45 degree angle. Lock-down system secured.

START

STARTING POSITION: In the same starting position as the Forehand Swing. Reach across the body with the arm away from the Power Rod® unit, grasping handle with palm facing inward. Keep the arm straight but elbow slightly bent. Be sure to keep torso and upper body stationary.

EXECUTION: Pull the arm across and away from the body at shoulder level, initiating the movement from the back of the shoulder. The exercise is similar to a tennis backhand. Remember to use appropriate speed and resistance when training sport-specific.

BREATHING TECHNIQUE: Exhale on the drive and inhale on the return.

COMPLEMENTARY EXERCISES: Forehand Drive.

FINISH

Forehand Drive

BENEFIT: This is the best exercise on the VersaTrainer® machine for enhancing the forehand stroke for racquet sports and basketball. This side arm motion develops muscle strength, power and endurance in the chest and front shoulder, and increases the range of movement from the trunk, through the shoulder, elbow and wrist.

PULLEY POSITION: Shoulder level.

BODY PLACEMENT: Back to Power Rod® unit at 45 degree angle. Lock-down system secured.

START

STARTING POSITION: Grasp the handle with the arm closest to the Power Rod® unit, palm facing away from the Power Rod® unit. Bend the elbows slightly. Sit far enough out so that the arm is slightly extended toward the Power Rod® unit and cable is under some tension.

EXECUTION: Drive the arm horizontally across the body and up toward the opposite shoulder. Initiate the motion from the trunk followed by the shoulder, elbow, and wrist. Remember to keep a slight bend in the elbow and wrist. When performing for a sport specific movement, remember to train "speed specific". Match your resistance and speed to the skill pattern.

COMPLEMENTARY EXERCISES: Backhand Drive.

Bicep Curl

BENEFIT: This popular exercise is used for isolating and developing the bicep (upper arm). For tone and definition, use light resistance. For size and strength use high resistance.

PULLEY POSITION: Shoulder Level.

BODY PLACEMENT: Facing Power Rod[®] unit. Lock-down system secured.

STARTING POSITION: Grasp the handle in front of the body and bring the torso to an erect position. Arm will be extended down with palm facing upward.

EXECUTION: Draw the lower arm up toward the upper arm keeping torso stationary. When you reach the top, pause for one-second and return slowly to the start position.

BREATHING TECHNIQUE: Breathe out on the curl-up and in when returning to start position.

VARIATION: Peak Bicep Curl. Excellent exercise for building the ball portion of the bicep.

EXECUTION: Performed in same manner as Bicep Curl but wrist is bent at 60 degree angle in starting position.

COMPLEMENTARY EXERCISES: Tricep Kickback and Tricep Press.

Long Cable Curl

BENEFIT: This is a primary exercise for isolating the muscles of the bicep as well as firming and toning the forearm. Great exercise to provide extensive isolation in the muscles of the bicep.

PULLEY POSITION: Lowest level. Pulleys inverted.

BODY PLACEMENT: Facing Power Rod[®] unit. Lock-down system secured.

STARTING POSITION: Grasp handles, palms facing up, arms extended. Bring the trunk upright and stationary.

EXECUTION: Pull handles up, curling the lower arms toward the upper arms. Concentrate on the front of the arms and maintain a stable back and arm position. Keep elbows stationary.

BREATHING TECHNIQUE: Breathe out when pulling up toward the upper arm and breathe in when returning to start position.

COMPLEMENTARY EXERCISES: Tricep Kickback and Tricep Press.



STAR1



FINISH



START



FINISH

Reverse Curl

BENEFIT: This exercise strengthens the upper forearm and uses a reverse grip to isolate the forearm, particularly the branchialis muscles. This exercise will also enhance grip strength.

PULLEY POSITION: Lowest Level.

BODY PLACEMENT: Facing Power Rod® unit.

Lock down system secured.

STARTING POSITION: Grasp one handle in front of the body, palm facing down. Bring the torso to an erect position and hold it stationary with the opposite hand.

EXECUTION: Curl the back of the forearm or wrist up toward the upper arm. Perform deliberately; concentrate on forearm.

COMPLEMENTARY EXERCISES: Tricep Kickback and Tricep Press.



START



FINISH

Wrist Extension

BENEFIT: This is a superb exercise for developing the back forearm and the muscles of the wrist. To enhance backhand skill patterns for sports like tennis and racquetball, use moderate resistance and speed.

PULLEY POSITION: Lowest level. Pulley inverted.

BODY PLACEMENT: Facing Power Rod® unit with working arm aligned with pulley. Lock down system secured.

STARTING POSITION: Grasp handle and rest forearm on the legs, palms facing down.

EXECUTION: Draw the back of the hand toward the back of the lower arm. Perform slowly and deliberately.

COMPLEMENTARY EXERCISES: Wrist Curl.



START



FINISH

Wrist Curl

BENEFIT: This exercise develops tones and firms the front forearm and enhance grip strength. You will gain muscle power and endurance by performing high repetitions with low resistances.

PULLEY POSITION: Lowest Level with cable inverted.

BODY PLACEMENT: Facing Power Rod[®] unit. Lock-down system secured.

STARTING POSITION: Same position as for Wrist Extension except palms are facing up.

EXECUTION: Curl the fingers and hands toward the forearm. (NOTE: opposite hand can be used to stabilize forearm.)

COMPLEMENTARY EXERCISES: Wrist Extension.



START



FINISH

Tricep Kickback

BENEFIT: Great exercise for toning, firming or developing the muscles on the back of the upper arm (tricep). The movement isolates the triceps for maximum development of strength, endurance, and range of movement.

PULLEY POSITION: Shoulder level.

BODY PLACEMENT: Facing Power Rod[®] unit. Lock-down system secured.

STARTING POSITION: Lean forward grasping handle. With the opposite hand, brace yourself on the pulley lever arm. Draw the upper arm back until it is level with the torso keeping lower arm relaxed.

EXECUTION: Drive the arm down and back behind the body keeping the elbow stationary.

BREATHING TECHNIQUE: Breathe out on the push and breathe in on the return to start position.

COMPLEMENTARY EXERCISES: Bicep Curl and Long Cable Curl.





FINISH

Tricep Press

BENEFIT: This exercise isolates, firms and tones the back of the upper arm (triceps). In addition, the elbow extensors are strengthened and the joint stabilized - which helps to prevent injury.

PULLEY POSITION: Shoulder Level.

BODY PLACEMENT: Back to Power Rod® unit. Lock-down system secured.

STARTING POSITION: Same as for Bench Press except grasp handles and push arms straight to about shoulder level directly away from the chest. Holding elbows still, draw hands back until level with ears.

EXECUTION: Keeping upper arms stationary, slowly relax the lower arms toward the upper arms. Once full range of motion is felt, push the handle away from upper arm. Work arms separately or simultaneously.

BREATHING TECHNIQUE: Exhale on the push, inhale on the return.

COMPLEMENTARY EXERCISES: Long Cable Curl and Bicep Curl.

VARIATION: Work only one arm using free arm to stabilize working arm.



START



FINISH

French Press

BENEFIT: This exercise isolates, firms and shapes the back of the upper arm, as well as increasing muscle strength and size.

PULLEY POSITION: Shoulder level.

BODY PLACEMENT: Back to Power Rod® unit. Lock-down system secured.

STARTING POSITION: Grasp handle, lifting elbow toward the ceiling.

EXECUTION: Keeping upper arm stationary, extend your lower arm at the elbow, straight toward the ceiling. Remember to keep the back erect at all times. Lower the forearm all the way to get a full range of movement.

BREATHING TECHNIQUE: Breathe out when extending the forearm, and breathe in when returning to start position.

COMPLEMENTARY EXERCISES: Long Cable Curl and Bicep Curl.

START

Power Push

BENEFIT: A great overall exercise for all muscles of the upper body. This exercise works the muscles of the back, triceps and biceps. Done with light resistance and greater repetitions this exercise can become aerobic and muscle endurance will be enhanced. A good sport-specific exercise for those involved in road racing. Duplicates the motion of pushing a chair.

PULLEY POSITION: Shoulder Level.

BODY PLACEMENT: Facing Power Rod[®] unit. Lock-down system secured.

STARTING POSITION: Grasp both handles palms facing in. Place hands on wheel rim even with hips.

EXECUTION: Move hands in a circular motion forward, down and then back, similar to propelling the chair forward when road racing. Be sure to finish with the arms locked back. You may wish to keep your head down or tucked to mimic the exact motion used when road racing.

COMPLEMENTARY EXERCISES: Resisted Dips.



START



FINISH

Resisted Dips

BENEFIT: This exercise is very specific to wheelchair users working the muscles on the back of the arm, the shoulder muscles and the muscles of the lower pectoral region. Great exercise for sports such as road racing, basketball or tennis. Also excellent strengthening exercise for transfers.

PULLEY POSITION: Highest level.

BODY PLACEMENT: Back to Power Rod® unit. Lock-down system secured.

STARTING POSITION: Grasp handles and pull hands to hip level, palms facing in.

EXECUTION: Keeping torso stationary, push the handles down toward the axle of the wheel or directly toward the floor, palms facing the body.

BREATHING TECHNIQUE: Breathe out on the push and breathe in on the return to start position.

COMPLEMENTARY EXERCISES: Long Cable Curl and Bicep Curl.



START



FINISH

Resisted Punch

BENEFIT: This exercise enhances aerobic endurance and performed with low resistance and high repetition is excellent for developing muscle endurance. As your speed and strength increase, you will see an increase in muscle power - making this an essential exercise for martial arts enthusiasts, fencers and others who use pushing skills in their daily activities.

PULLEY POSITION: Lowest Level.

BODY PLACEMENT: Back to Power Rod® unit. Lock-down system secured.

START

STARTING POSITION: Grasp handle with thumbs on inside of handle and fingers on the outside. The cables will now be on the inside of arms. Draw the handles until arms are at 90 degree angle to the upper body.

EXECUTION: Extend or punch at chest level. Palm will finish facing down toward the floor. Keep the wrist firm and stabilize the middle body by contracting the abdominals and/or using the chest belt at all times. You may wish to alternate your hands or do both simultaneously.

BREATHING TECHNIQUE: Breathe out on the punch and in on the return.

VARIATION: Perform exercise with pulleys at mid-back level.

FINISH

ABDOMINAL EXERCISES

Resisted Abdominal Crunch

BENEFIT: The abdominals are responsible for the movement and rotation of the upper torso. The Resisted Abdominal Crunch will help tone, firm and strengthen the muscles of the entire region of the abdominals. By using resistance with this exercise it will help to tone and firm the muscles of the abdominals to a much greater degree.

PULLEY POSITION: Variable: Shoulder-to-Highest Level.

BODY PLACEMENT: Back to Power Rod® unit. Lock-down system secured.

STARTING POSITION: Move out slightly from the cable pulley system. Reach overhead or behind and grasp the handles drawing the arms to the chest with palms facing down toward the floor, arms bent. Cable will ride over the tops of the shoulders.

EXECUTION: Keeping the head and neck straight, crunch forward until chest comes in contact with the legs.

BREATHING TECHNIQUE: Exhale when crunching forward and inhale when returning to start position.

COMPLEMENTARY EXERCISES: Seated Row.



START



FINISH

BACK EXERCISES

Reverse Fly

BENEFIT: This is the primary exercise for developing, toning and firming the middle back and the posterior shoulder muscles. When performed with medium or low resistance, it helps to increase the range of movement, and allows for a controlled stretching of the back muscles. And, when combined with the Chest Fly, the Reverse Fly promotes good posture.

PULLEY POSITION: Shoulder Level.

BODY PLACEMENT: Facing Power Rod[®] unit. Lock-down system secured.

STARTING POSITION: Grasp handles with palms facing each other.

EXECUTION: Keeping arms straight, pull arms back and out at shoulder level. Palms will now be facing in toward the Power Rod® unit. Keep the elbow slightly bent. Initiation of the movement will be felt in the back of the shoulders.

BREATHING TECHNIQUE: Breathe out as you pull the handles and breathe in when returning to start position.

COMPLEMENTARY EXERCISES: Chest Fly and Bench Press.



START



FINISH

Seated Row

BENEFIT: This exercise is designed to strengthen and stretch the upper, middle and lower back, as well as the extensor muscles of the shoulder joint and the pulling muscles of the upper body. Natural breathing capacity is increased, and so is the range of movement in the arms. A must exercise to compliment any pushing movement.

PULLEY POSITION: Shoulder level.

BODY PLACEMENT: Facing Power Rod[®] unit. Lock-down system secured.

STARTING POSITION: Reach forward and grasp both handles, palms facing down. Bring the torso upright and remember to keep it stationary throughout the movement.

EXECUTION: Draw the arms toward the lower chest, turning the palms in toward the body. Bend slightly at the waist, and only at the waist, when returning to the start position. This allows for greater range of movement and greater isolation on the latissimus dorsi. Do not go beyond perpendicular, erect position in the upper body when pulling the handles towards the upper chest.

COMPLEMENTARY EXERCISES: Bench Press and Chest Fly.



START



FINISH

EXERCISE CHART

Feel free to make copies of this chart for further use.

		Exercise									
		P									
Date:	Sets										
	Reps										
	Resist										
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GLOSSARY

Abdominals: A group of four muscles - *the rectus abdominis, internal and external obliques, and tranversus abdominis* - in the anterior body wall that collectively flex your trunk forward. The abdominals rotate the trunk right and left, aid in stabilizing the torso, and assist in exaggerated exhalation.

Antagonist: The muscle or muscle group that is working in direct opposition of the prime mover *(see complementary muscle group)*. When the biceps contract, the triceps act as in antagonist and relax.

Body Building: The application of progressive overload to improve body appearance. An exercise program focusing on muscle shape, definition, and symmetry.

Circuit Training: A series of exercises performed in rapid succession, with minimal (or no) rest between exercises.

Complementary Muscles Groups: Often called antagonists. Muscle groups that work opposite of each other. When one muscle is contracting or shortening, the other is relaxing or extending. Developing complementary muscles groups give a balance of strength.

Compound Joint Movement: use of more than one joint to achieve a motion. Exercises like the Forehand Drive that address compound joint movement naturally address more than one muscle group, which enhances muscle power and coordination.

Contraction: A contraction occurs when muscles are at work, using energy and expending heat to produce movement of a bone. In a *concentric contraction* or positive contraction, the muscle shortens as it moves. In a *eccentric contraction*, the muscle lengthens as it resists an outside force - for instance, gravity.

Definition: Visibility of the muscle outline or shape, caused by muscle development and absence of fat.

Deltoids: Also called *delts*. The muscles that cover your shoulder joints. The delt has three separate heads (anterior, middle, and posterior) and its primary functions are should joint flexion and extension; inward and outward rotation; abduction and adduction.

Extension: Return of a body part from a flexed position to a normal position. *Hyper-extension* is the continuation of a body part beyond extension.

Fast Twitch Muscle Fiber: The white muscle fiber, responsible for fast, explosive contractions - the kind necessary in sprinting, or moving heavy resistance. Primarily fueled by glucose, it fails quickly.

Fat: A basic energy source. When stored in and on the body, it's called adipose tissue. You begin to draw upon your fat as an energy source when you exercise at about 50 percent resistance for at least five minutes.

Flexibility: The ability of a muscle to control a joint through a full range of motion. Flexibility is the result of opposite muscle groups working in complementary actions: in moving a joint, one muscle or muscle group contracts and its opposite muscle relaxes, providing range.

Flexion: Movement of a body segment away from the basic anatomical position and closer tot he center. A flexion brings the forearm to the shoulder.

Hypertrophy: An increase in muscle size, caused by working the muscle to failure, followed by a period of relaxation.

GLOSSARY (continued)

Intensity: The level of work, which is defined by the level of resistance used during an exercise.

Joint: The point of contact between skeletal elements; when movement takes place at a point where two bones come together, it is the result of a muscle or group of muscles working across the joint.

Kinesthesis: The body's movement and position as perceived by receptors in the joints, muscles, and tendons. Kinesthesis, in combination with visual cues, provides an accurate body sense and response.

Muscle Endurance: The ability of a muscle to continue contractions over a long period of time. Muscle aerobics is related to muscle endurance: to continue contractions ,muscle tissue must be supplied with sufficient food energy and oxygen.

Muscle Failure: A complete failure of the muscle to contract, which occurs after the third stage of muscle fatigue. Without a short rest period, you will be unable to perform the exercise.

Muscle Fatigue: The precursor to muscle failure. There are three stages to muscle fatigue: (1) a weakening of the muscle, in which the user senses a loss of strength; (2) the onset of a burning sensation - caused by the release of lactic acid - deep in the muscle; (3) an increase of intensity of the burn. In most programs, it's your choice as to which stage you reach.

Muscle Power: The ability of a muscle to exert force in a fast manner, the result of a fast, quick-to-fatigue muscle fiber. Muscle power is the product of strength times speed. Anaerobic exercise relates to muscle power: the energy source is stored carbohydrate or glycogen, without the need for oxygen.

Muscle Strength: The ability of a muscle or group of muscles to exert force against resistance.

Obliques: Those muscles on the sides of the abdominals that move the upper body laterally (side-to-side).

Overload: More than normal - more repetitions, greater resistance, longer time. Progressive overload is the gradual, systematic increase of any of those components, sometimes in combination with a reduction in the duration of rest intervals.

Pectorals: Also called pecs. The main, superficial chest muscles. Their primary function: to flex and rotate the upper arm across and into the body.

Pronation: The anatomical movement of turning your palm down, a function of the elbow.

Pulling Exercise: Any exercise that draws the upper or lower extremities toward the trunk of the body. Pulling exercises are usually coupled with pushing exercises - for maximum body strength.

Pushing Exercise: Any exercise that moves resistance away from the trunk mid-line of the body. Pushing exercises are usually coupled with pulling exercises for maximum body strength.

Quadriceps: Also called quads. The four separate thigh muscles on the front of the thigh responsible for extending the knee and flexing the hip joint.

Repetition: Also called rep. The actual start-to-finish performance of one complete exercise; 15 reps means performing the same exercise 15 times.

GLOSSARY (continued)

Rest Interval: The amount of time spent relaxing between reps of exercises or sets of exercises. During this time, the muscle recovers a percentage of its contractile power.

Rhomboids: Muscles that attach the shoulder blades or scapulae to the spine, responsible for drawing the blades back and aiding in good shoulder posture.

Serratus: Muscles that outline your upper ribs on the side of your body. They are developed by pressing and pullover movements.

Single Joint Movement: The movement of only one joint, achieved through exercise such as the Bicep Curl. Because these kinds of exercises enable you to focus on a single muscles group, they're excellent for rehabilitation.

Skill: A movement pattern relative to a particular activity or sport.

Slow Twitch Muscle Fiber: The red muscle fiber, responsible for low, sustained contractions - the kind necessary for endurance sports such as road racing. Slow twitch fibers are primarily fueled by oxygen.

Supination: The anatomical movement of turning your palms up.

Symmetry: The balance of strength and development throughout the body - front and back; right and left; upper and lower extremities.

Tone: Enhanced muscle contractibility and state of readiness, achieved by exercising the muscle using light resistance and high reps.



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