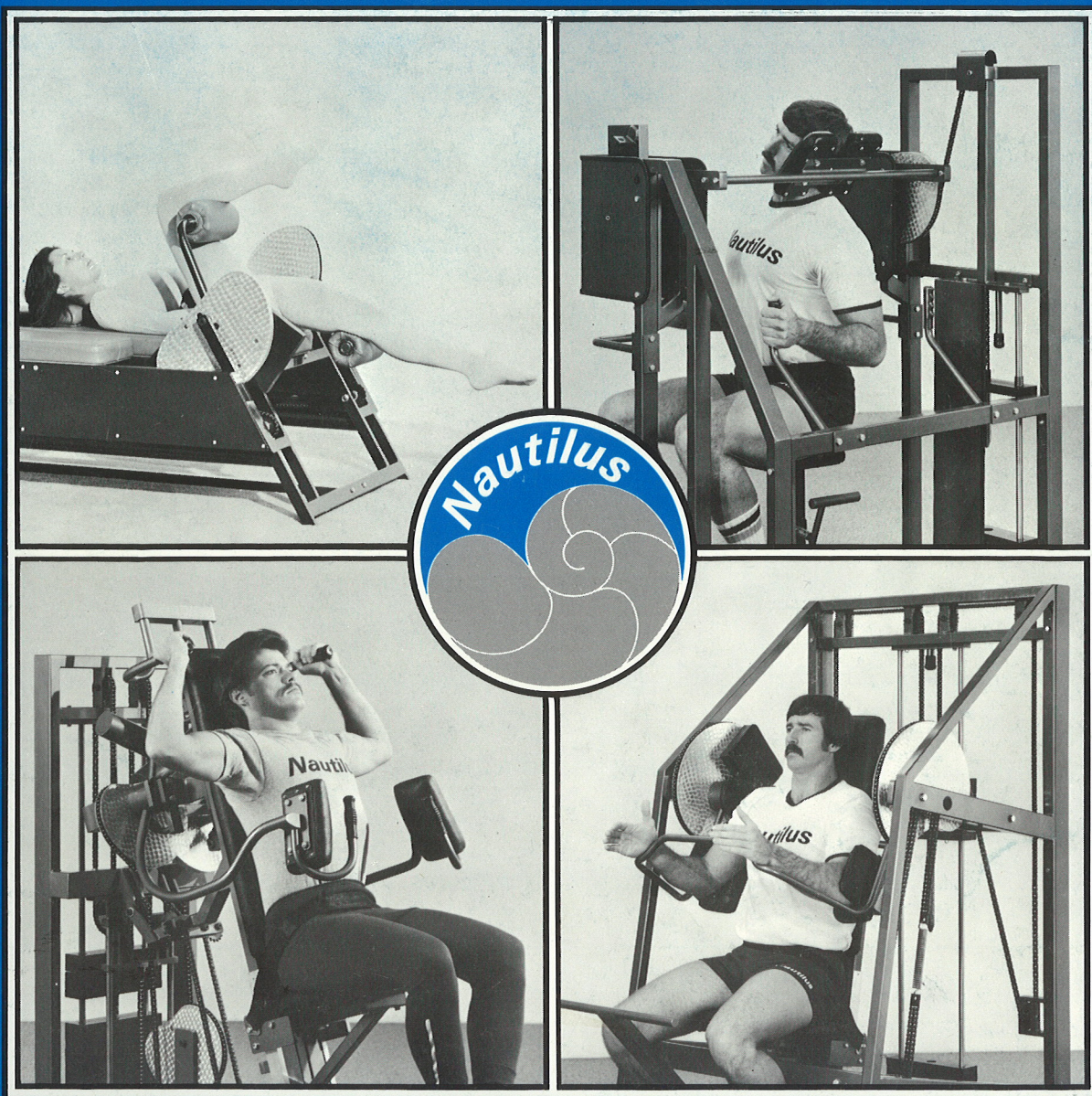


NEW

# Nautilus

## Instruction Manual



# Nautilus Training Principles

General procedures to be followed on all machines where the “normal” (positive-negative) movements are performed:

1. Make certain that the rotational axis of the cam of all rotary exercises is in-line with the joint axis of the body part that is being moved.
2. Position your body in a straightly aligned manner. Avoid twisting or shifting your weight during the movement.
3. Maintain a loose, comfortable grip. Never squeeze the handgrips tightly as this results in elevated blood pressure.
4. Lift resistance or perform positive work to the count of two . . . pause . . . lower the resistance or perform negative work slowly and smoothly while counting to four.
5. Use as much of your range of motion as possible on each machine to develop full-range strength and flexibility.
6. Breathe normally. Try not to hold your breath while training.
7. Perform each exercise for 8 to 12 repetitions:
  - a. Begin with a weight you can comfortably do 8 times.
  - b. Stay with that weight until you can perform 12 strict repetitions. On the following workout, increase the weight by approximately 5% which should result in your inability to perform more repetitions than the minimum guideline dictates.
  - c. Try to progress in repetitions and/or resistance in each successive workout.
8. Move quickly from machine to machine. The longer the rest between machines, the less effective the cardiovascular conditioning.
9. Follow your routine as the exercises are numbered on your workout sheet; however, any time the machine you are to do next is being used, go to another exercise and then return to the machine that was in use.
10. Move very quickly — in less than 3 seconds — from the primary exercise to the secondary exercise in all double Nautilus machines.
11. Include a maximum of 12 exercises, 4 to 6 for the lower body and 6 to 8 for the upper body.
12. Exercise the larger muscle groups first and proceed down to the smaller muscle groups. Example: hips, thighs, back, shoulders, chest, arms, and neck.
13. Finish your entire workout in 20 to 30 minutes.
14. Rest a minimum of 48 hours and not more than 96 hours between successive workouts.

**\* Extensive research covering all aspects of conditioning and rehabilitation is being conducted by Nautilus Sports/Medical Industries. Results of this research will be incorporated into the production of machines to maintain quality consistent with scientifically proven advances.**

**Nautilus therefore reserves the right to effect modifications in the design of machines shown.**

**\* Do not use, adjust, or operate this equipment without proper instruction by owner-authorized personnel.**

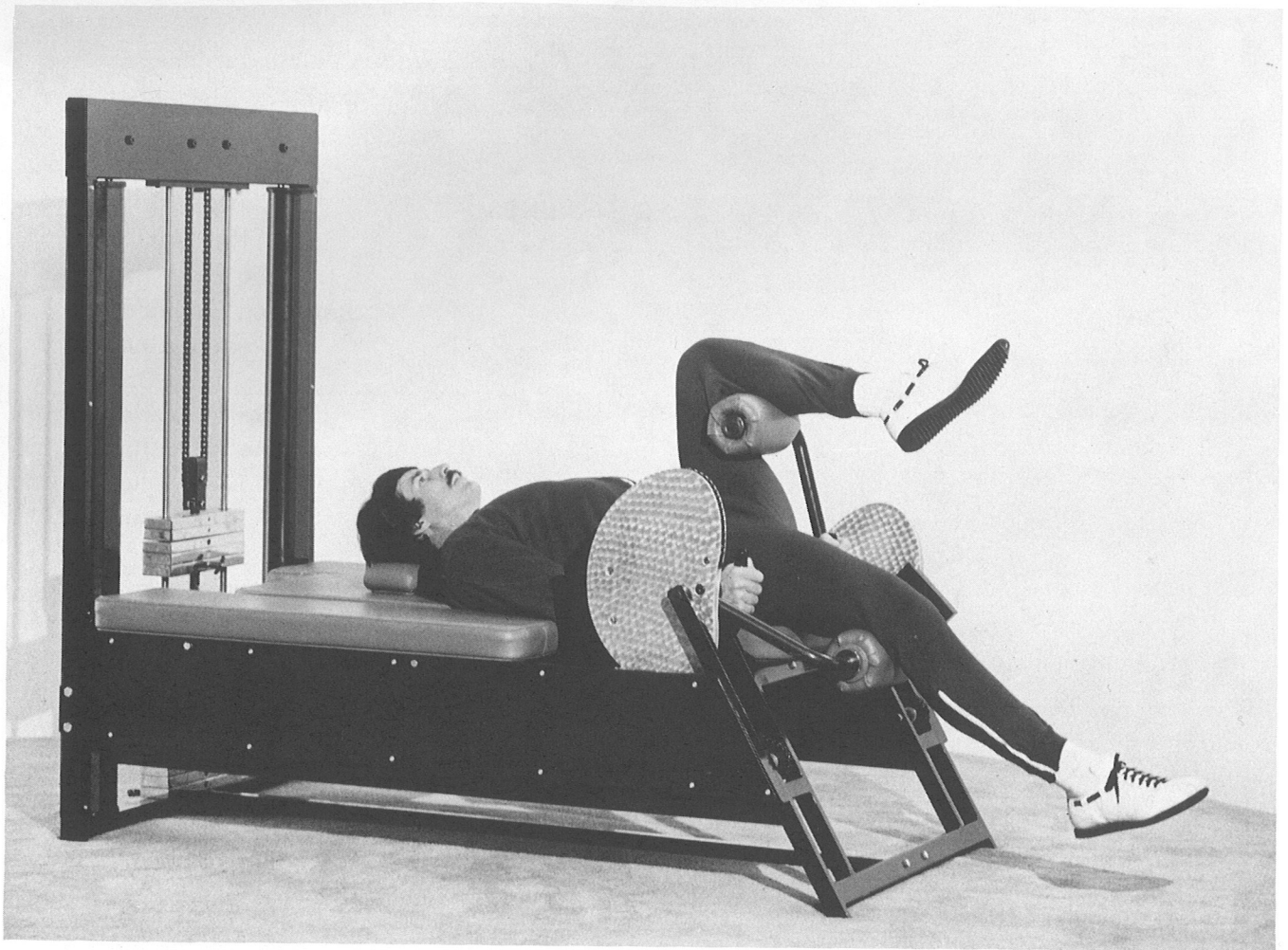
**Keep hands and feet away from weights and other moving parts while machine is in use. Never put hands or feet in or under weight stacks. Be sure to keep hands and feet located only on the hand grips and foot pads provided.**

**Do not operate equipment with loose or damaged parts. Notify owner-authorized personnel of any problems with equipment.**

**Failure to comply with these instructions may result in personal injury.**

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## DUO Hip & Back Machine

(Gluteus maximus, hamstrings, and erector spinae group)

1. Enter machine from front by separating movement arms.
2. Lie on back with both legs over roller pads.
3. Align hip joint with axes of cams.
4. Fasten seat belt and grasp handles lightly. Seat belt should be snug, but not too tight, as back must be arched at completion of movement.
5. Extend both legs and at the same time push with arms.
6. Keep one leg at full extension, allow other leg to bend and come back as far as possible.
7. Stretch.
8. Push out until it joins other leg at extension.
9. Pause, arch lower back, and contract buttocks. In contracted position, keep legs straight, knees together, and toes pointed.
10. Repeat with other leg.

\* Please read page 2.

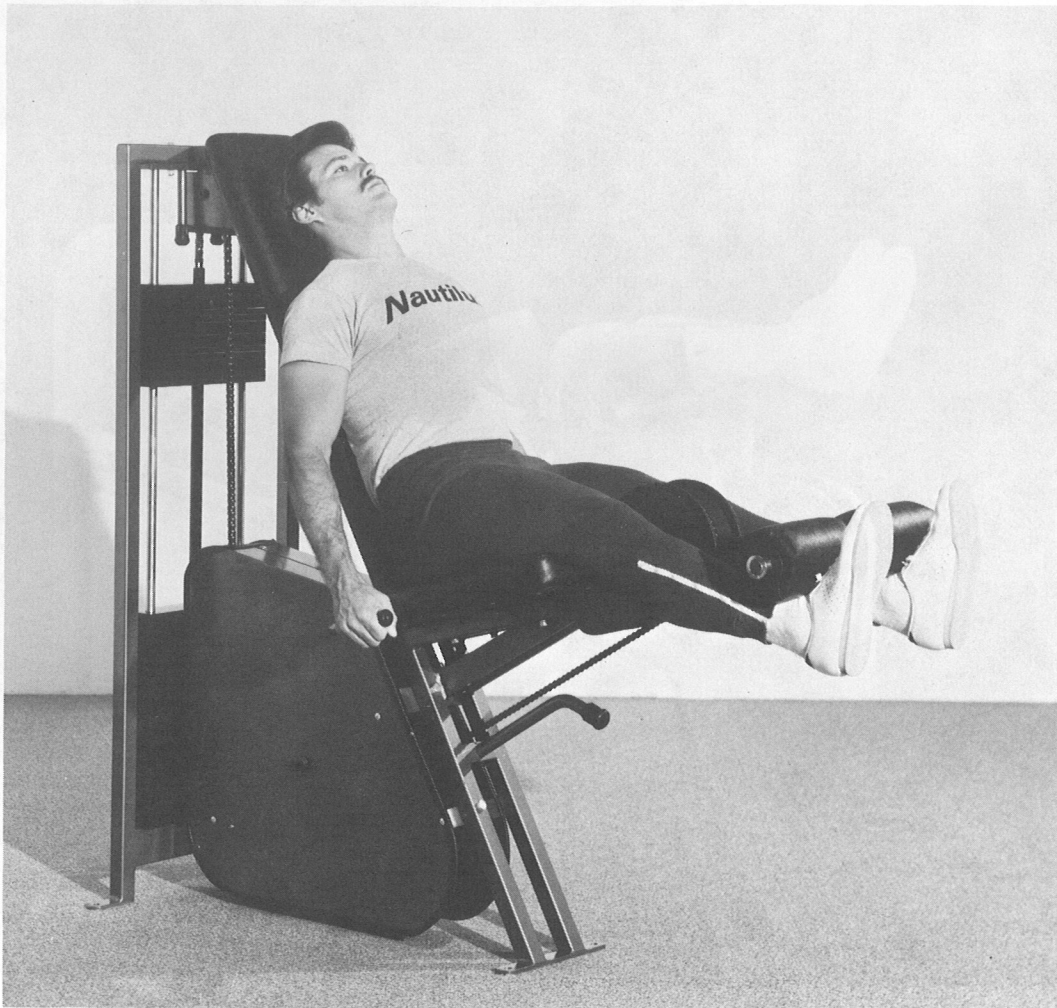


## Hip Flexion Machine

(Iliopsoas muscles)

1. Sit in machine.
2. Fasten seat belt across thighs.
3. Lie back and grasp handles near head.
4. Keep torso and head on seat back.
5. Flex hips by bringing knees to chest.
6. Pause.
7. Lower slowly to starting position and repeat.

\* Please read page 2.



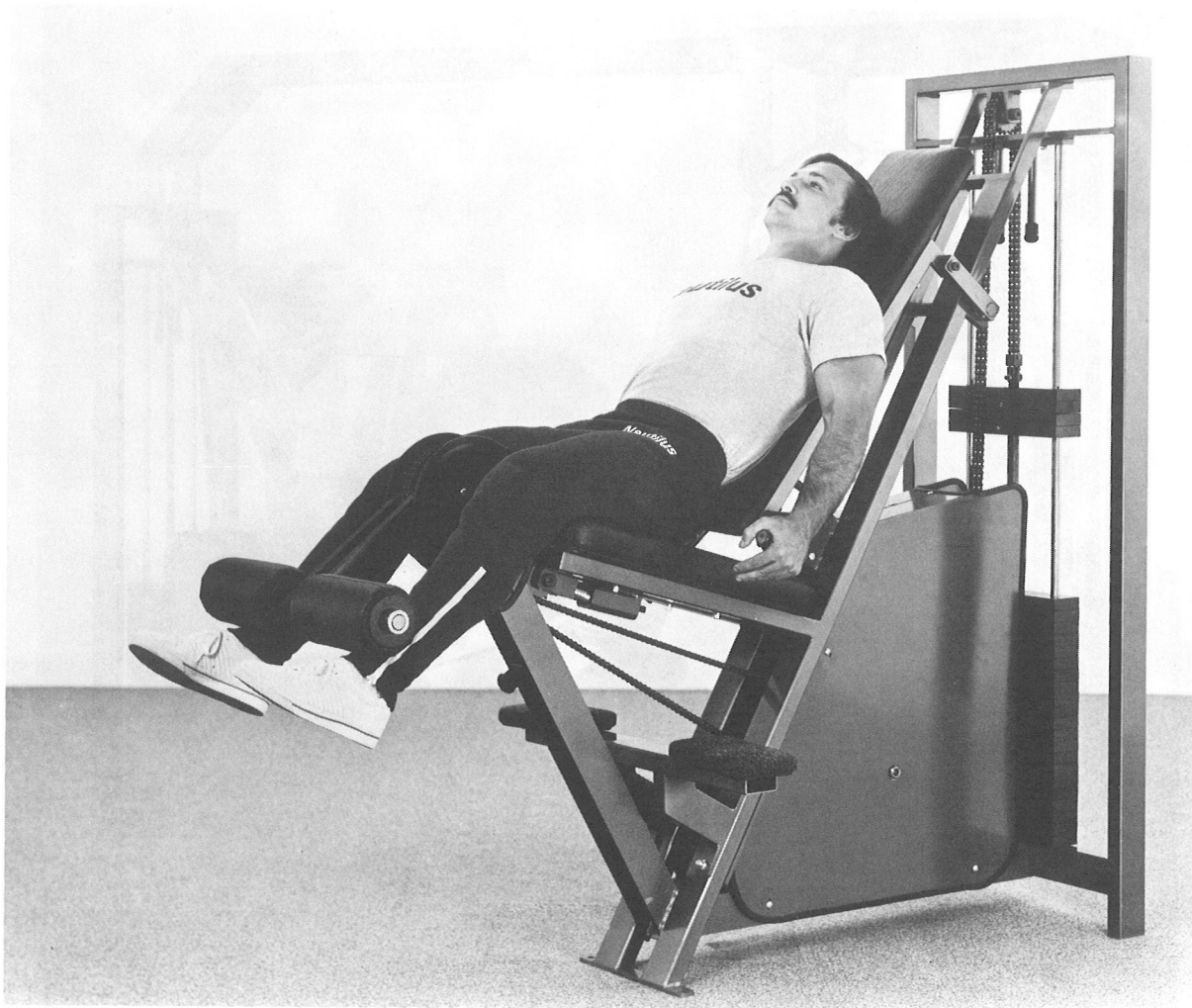
## Leg Extension Machine

(Frontal thighs or quadriceps)

1. Be seated in machine.
2. Place feet behind roller pads with knees snug against seat.
3. Fasten seat belt.
4. Keep head and shoulders against seat back.
5. Straighten both legs smoothly.
6. Pause.
7. Lower resistance and repeat.

**Important:** Avoid tightly gripping handles and do not grit teeth or tense neck or face muscles during movement.

\* Please read page 2.



## Super Leg Extension Machine

(Frontal thighs or quadriceps)

1. Place feet behind roller pads, with knees snug against seat.
2. Adjust seat back to comfortable position.
3. Keep head and shoulders against seat back.
4. Straighten both legs smoothly.
5. Pause.
6. Lower resistance slowly and repeat.

**Important:** Avoid tightly gripping handles and do not grit teeth or tense neck or face muscles during movement.

\* Please read page 2.





## Compound Leg Machine

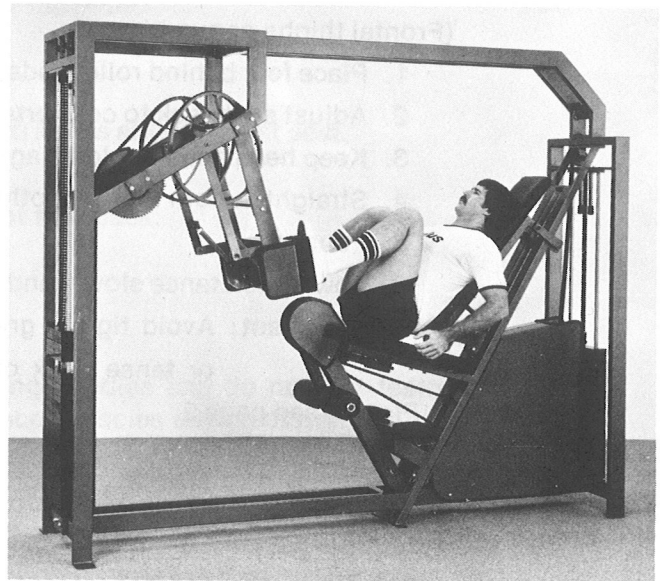
### Leg Extension (Frontal thighs or quadriceps)

1. Place feet behind roller pads, with knees snug against seat.
2. Adjust seat back to comfortable position.
3. Keep head and shoulders against seat back.
4. Straighten both legs smoothly.
5. Pause.
6. Lower resistance slowly and repeat.
7. Move quickly to leg press after final repetition.

### Leg Press (Quadriceps, hamstrings, and gluteus maximus)

1. Sit erect and pull seat back forward.
2. Flip down foot pads.
3. Place both feet on pads with toes pointed slightly inward.
4. Straighten both legs in a controlled manner.
5. Return to stretched position and repeat.

**Important:** Avoid tightly gripping handles and do not grit teeth or tense neck or face muscles during either movement. \* Please read page 2.





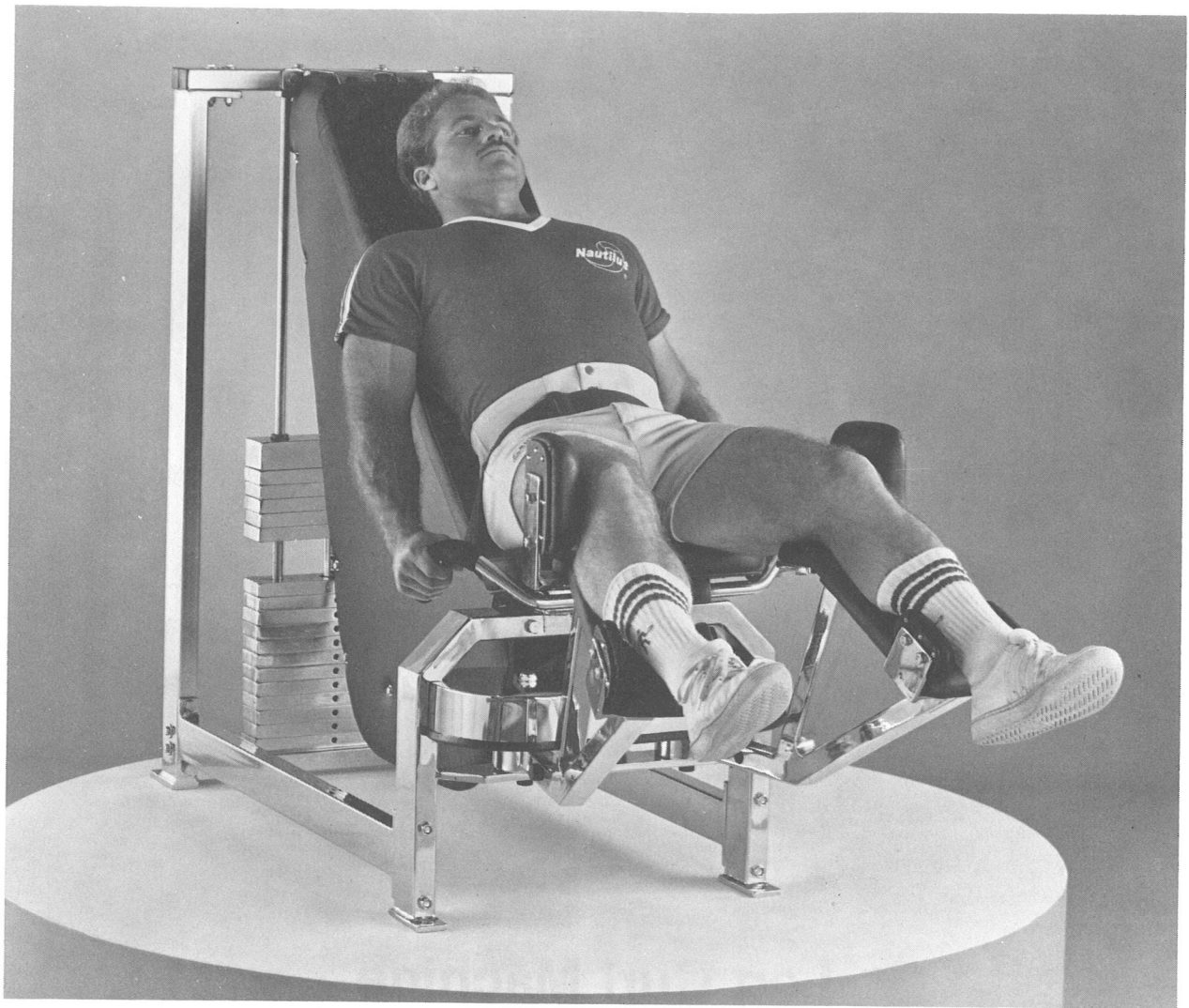
## Leg Curl Machine

(Hamstrings)

1. Lie face down on machine.
2. Place feet under roller pads with knees just over edge of bench.
3. Grasp handles to keep body from moving.
4. Curl legs and try to touch heels to buttocks.
5. Lift buttocks to increase range of movement.
6. Pause at point of full contraction.
7. Lower resistance and repeat.

**Important:** Top of foot should be flexed toward knee throughout movement.

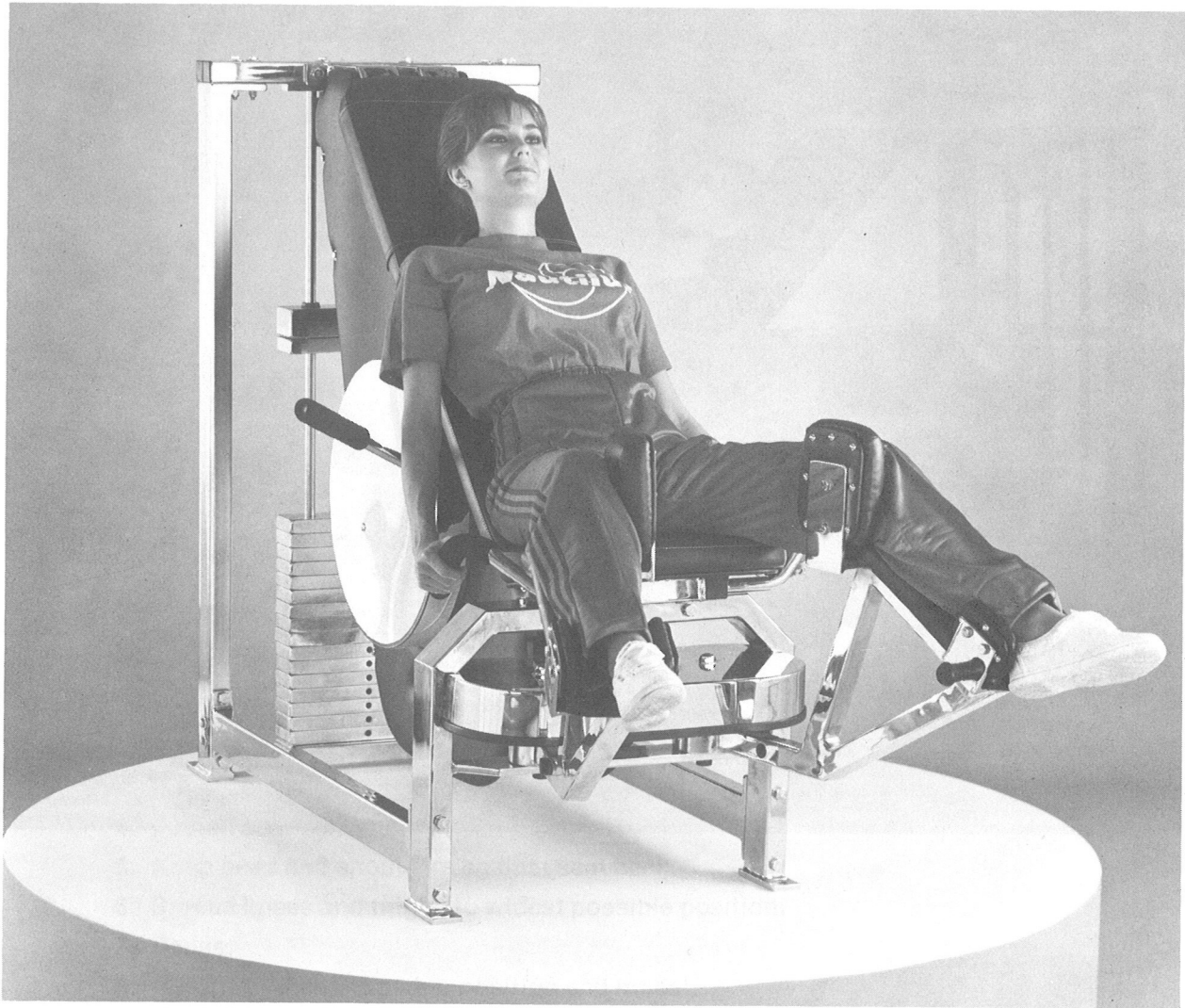
\* Please read page 2.



## Hip Abduction Machine

(Gluteus medius of outer hips)

1. Sit in machine and place legs on movement arms.
  2. Fasten seat belt.
  3. Keep head and shoulders against seat back.
  4. Spread knees and thighs to widest possible position.
  5. Pause.
  6. Return to knees-together position and repeat.
- \* Please read page 2.



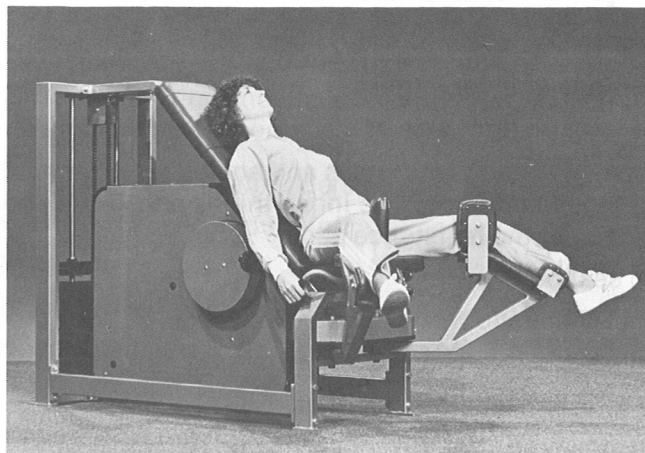
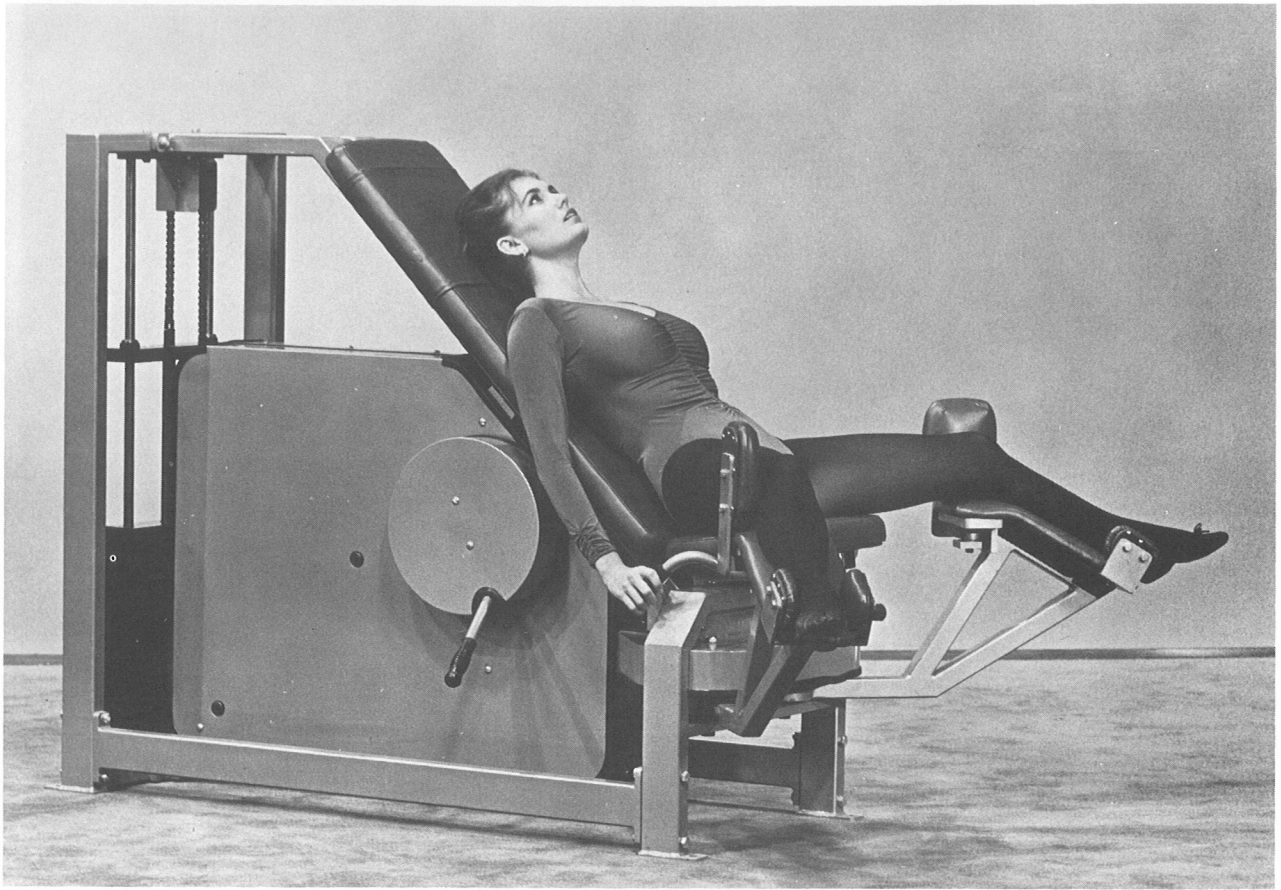
## Hip Adduction Machine

(Adductor muscles of inner thighs)

1. Adjust lever on right side of machine for range of movement.
2. Sit in machine and place knees and ankles on movement arm in a spread-legged position. The inner thighs and knees should be firmly against the resistance pads.
3. Fasten seat belt.
4. Keep head and shoulders against seat back.
5. Pull knees and thighs smoothly together.
6. Pause in knees-together position.
7. Return slowly to stretched position and repeat.

**Important:** To better isolate the adductor muscles, keep the feet pointed inward and pull with the thighs, not the lower legs.

\* Please read page 2.



# Hip Abduction-Adduction Machine

## **Hip Abduction** (Gluteus medius of outer hips)

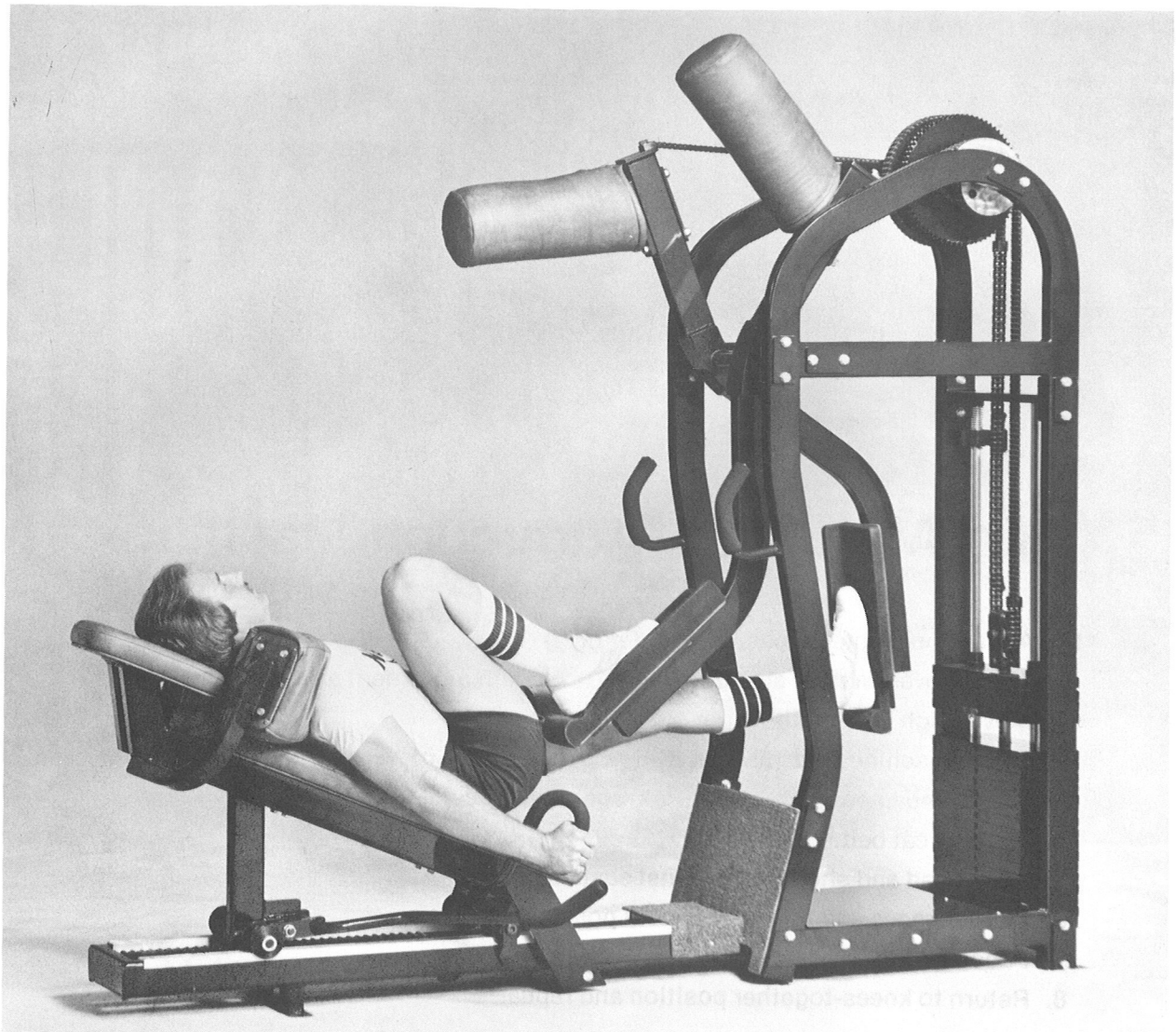
1. Adjust lever on right side of machine until both movement arms are together.
2. Move thigh pads to the outer position.
3. Sit in machine and place knees and ankles on movement arms. The outer thighs and knees should be firmly against the resistance pads.
4. Fasten seat belt.
5. Keep head and shoulders against seat back.
6. Spread knees and thighs to widest possible position.
7. Pause.
8. Return to knees-together position and repeat.

## **Hip Adduction** (Adductor muscles of inner thighs)

1. Adjust lever on right side of machine for range of movement. The farther the handle is pulled up the greater the range of the machine.
2. Move the thigh pads to the inside position.
3. Sit in machine and place knees and ankles on movement arms in a spread-legged position. The inner thighs and knees should be firmly against the resistance pads.
4. Fasten seat belt.
5. Keep head and shoulders against seat back.
6. Pull knees and thighs smoothly together.
7. Pause in knees-together position.
8. Return slowly to stretched position and repeat.

**Important:** To better isolate the adductor muscles, keep the feet pointed inward and pull with the thighs, not the lower legs.

\* Please read page 2.

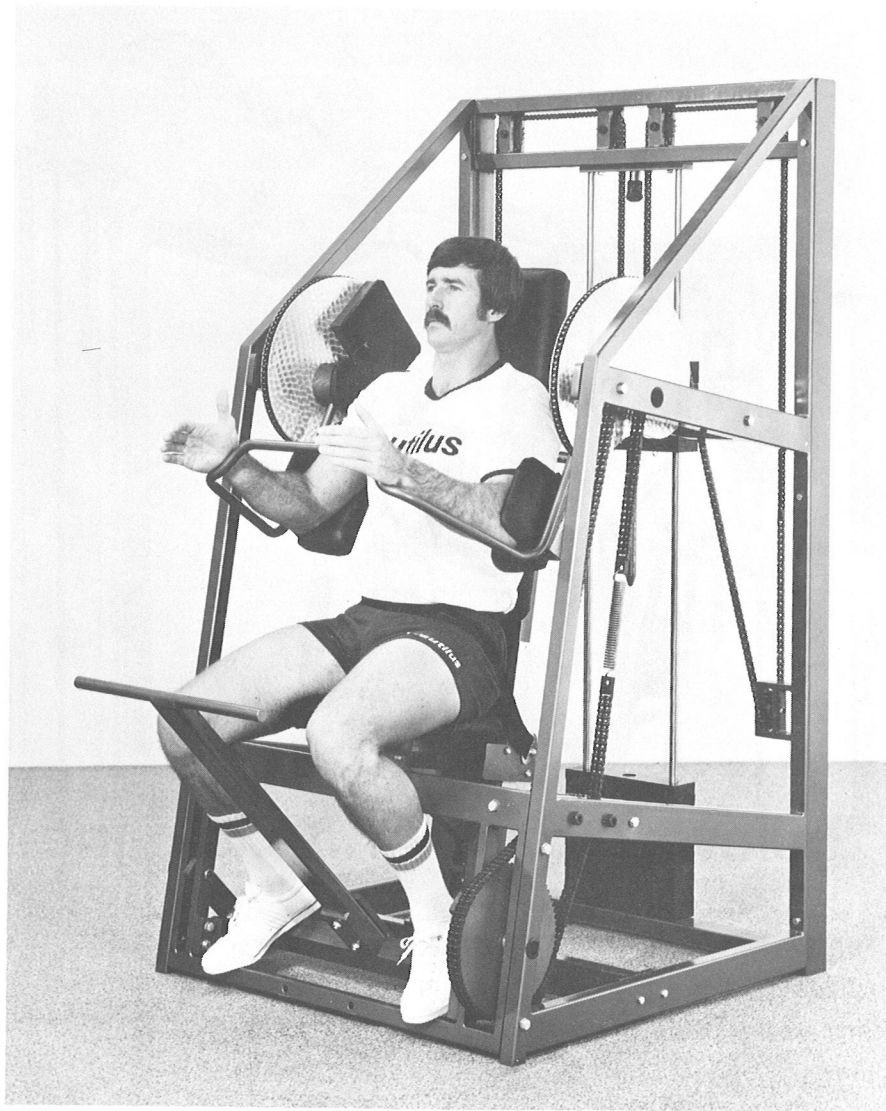


## DUO Squat Machine

(Gluteus maximus, quadriceps, hamstrings, and gastroc-soleus group)

1. Sit on lower portion of seat. Shoulders should be placed under pads.
2. Place both feet at the same time on movement arms. Heels should be placed on bottom right of foot pedals.
3. Pull up on lower right handle to adjust seat carriage. Seat is in proper position when these three factors occur:
  - \* Negative cam fully unwinds
  - \* Movement arms touch cross bar
  - \* Legs can lock out
4. Straighten both legs. Keep head and shoulders on pads and hands on upper handles.
5. Hold right leg straight while left leg slowly bends and comes back as far as possible.
6. Push out smoothly with left leg until straight.
7. Hold left leg straight and bend right leg.
8. Push out smoothly with right leg until straight.
9. Alternate between right and left legs until fatigued.

\* Please read page 2.



## Super Pullover Machine

(Latissimus dorsi muscles of the back and other torso muscles)

1. Adjust seat so shoulder joints are in line with axes of cams.
2. Assume erect position and fasten seat belt tightly.
3. Leg press foot pedal until elbow pads are about chin level.
4. Place elbows on pads. Hands should be open and resting on curved portion of bar.
5. Remove legs from pedal and slowly rotate elbows as far back as possible.
6. Stretch.
7. Rotate elbows down until bar touches midsection.
8. Pause.
9. Return slowly to stretched position and repeat.

**Important:** Look straight ahead during movement. Do not move head or torso.

Do not grip tightly with hands.

\* Please read page 2.



## Pullover/Torso-Arm Machine

### **Pullover** (Latissimus dorsi muscles of the back and other torso muscles)

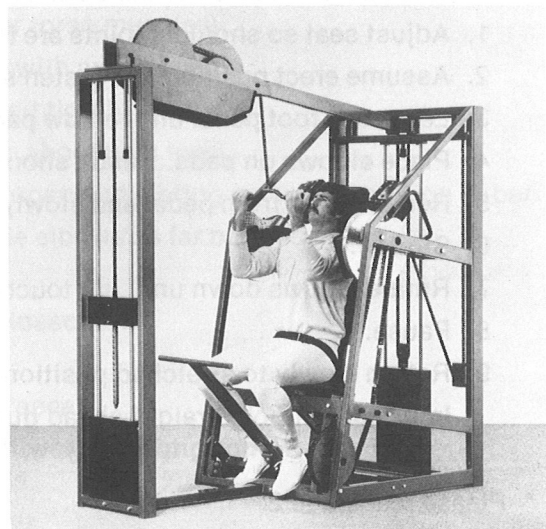
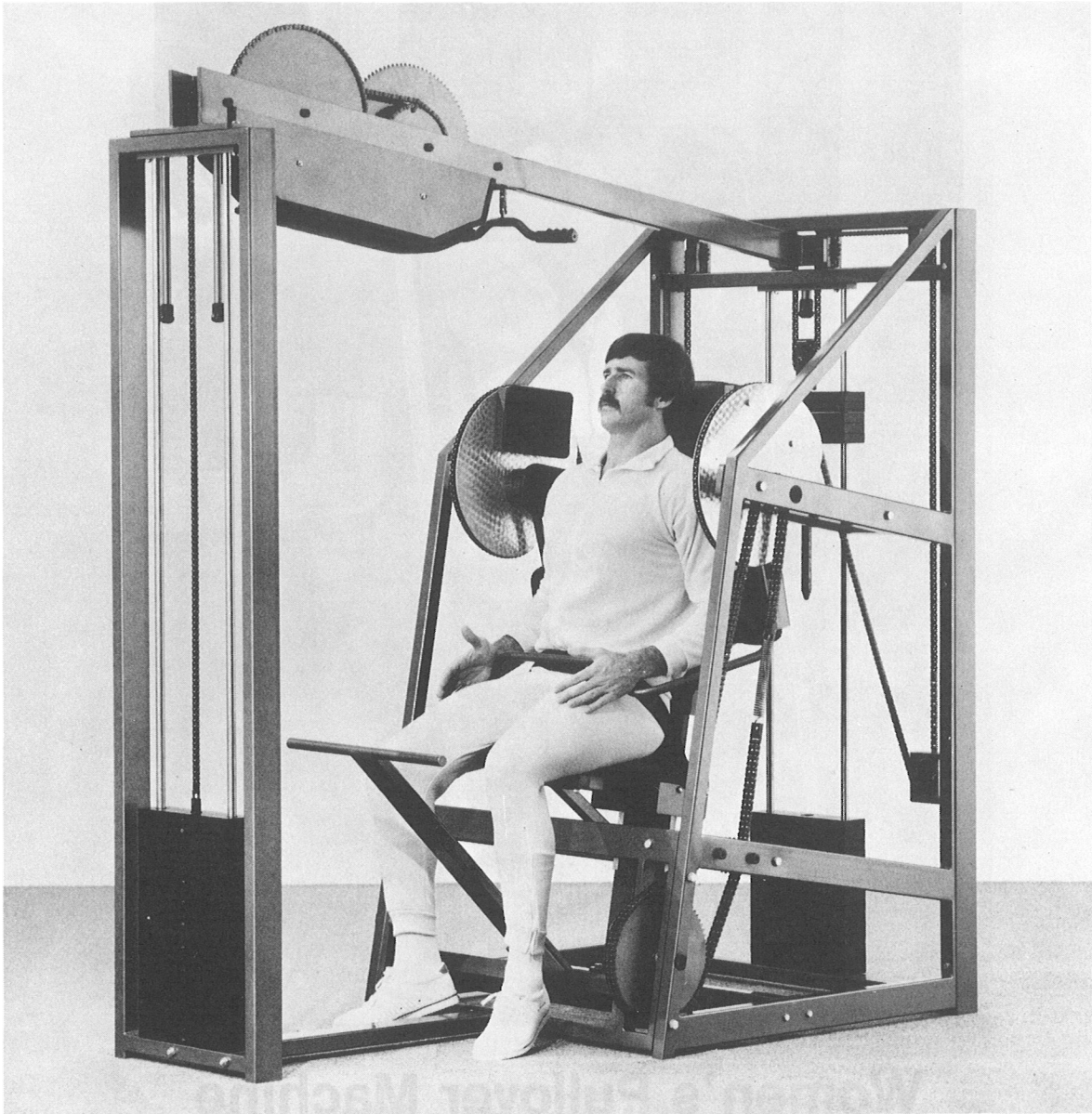
1. Adjust seat so shoulder joints are in line with axes of cams.
2. Assume erect position and fasten seat belt tightly.
3. Leg press foot pedal until elbow pads are about chin level.
4. Place elbows on pads. Hands should be open and resting on curved portion of bar.
5. Remove legs from pedal and slowly rotate elbows as far back as possible.
6. Stretch.
7. Rotate elbows down until bar touches midsection.
8. Pause.
9. Return slowly to stretched position and repeat. After final repetition, immediately do pulldown.

**Important:** Look straight ahead during movement. Do not move head or torso.  
Do not grip tightly with hands.

### **Torso-Arm Pulldown** (Latissimus dorsi muscles of the back and biceps of upper arms)

1. Lower seat to bottom for maximum stretch.
2. Grasp overhead bar with palms-up grip.
3. Keep head and shoulders against seat back.
4. Pull bar to chest.
5. Pause.
6. Return slowly to stretched position and repeat.

\* Please read page 2.





## Women's Pullover Machine

(Latissimus dorsi muscles of the back and other torso muscles)

1. Adjust seat so shoulder joints are in line with axes of cams.
2. Assume erect position and fasten seat belt tightly.
3. Leg press foot pedal until elbow pads are about chin level.
4. Place elbows on pads. Hands should be open and resting on curved portion of bar.
5. Remove legs from pedal and slowly rotate elbows as far back as possible.
6. Stretch.
7. Rotate elbows down until bar touches midsection.
8. Pause.
9. Return slowly to stretched position and repeat.

**Important:** Look straight ahead during movement. Do not lower head or torso.  
Do not grip tightly with hands.

\* Please read page 2.



## Pullover Machine (Plateloaded)

(Latissimus dorsi muscles of the back and other torso muscles)

1. Adjust seat so shoulder joints are in line with axes of cams.
2. Assume erect position and fasten seat belt tightly.
3. Leg press foot pedal until elbow pads are about chin level.
4. Place elbows on pads. Hands should be open and resting on curved portion of bar.
5. Remove legs from pedal and slowly rotate elbows as far back as possible.
6. Stretch.
7. Rotate elbows down until bar touches midsection.
8. Pause.
9. Return slowly to stretched position and repeat.

**Important:** Look straight ahead during movement. Do not move head or torso.  
Do not grip tightly with hands.

\* Please read page 2.



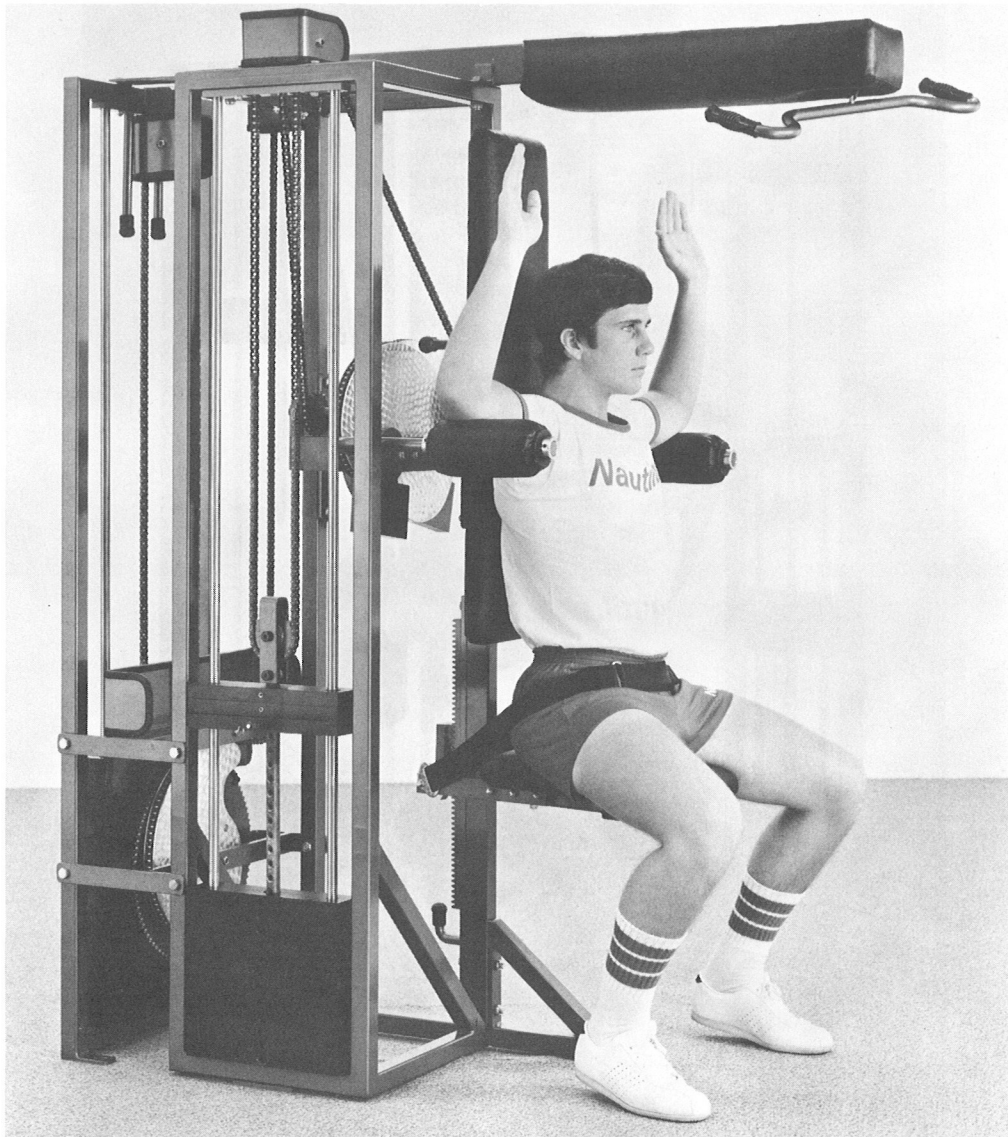
## Behind Neck Machine

(Latissimus dorsi muscles of the back)

1. Adjust seat so that shoulder joints are in line with axes of cams.
2. Fasten seat belt.
3. Place back of upper arms (triceps area) between padded movement arms.
4. Cross forearms behind neck.
5. Move both arms downward until perpendicular to floor.
6. Pause.
7. Return slowly to crossed-arm position behind neck and repeat.

**Important:** Be careful not to bring arms or hands to front of body.

\* Please read page 2.



## Behind Neck/Torso-Arm Machine



### Behind Neck (Latissimus dorsi muscles of the back)

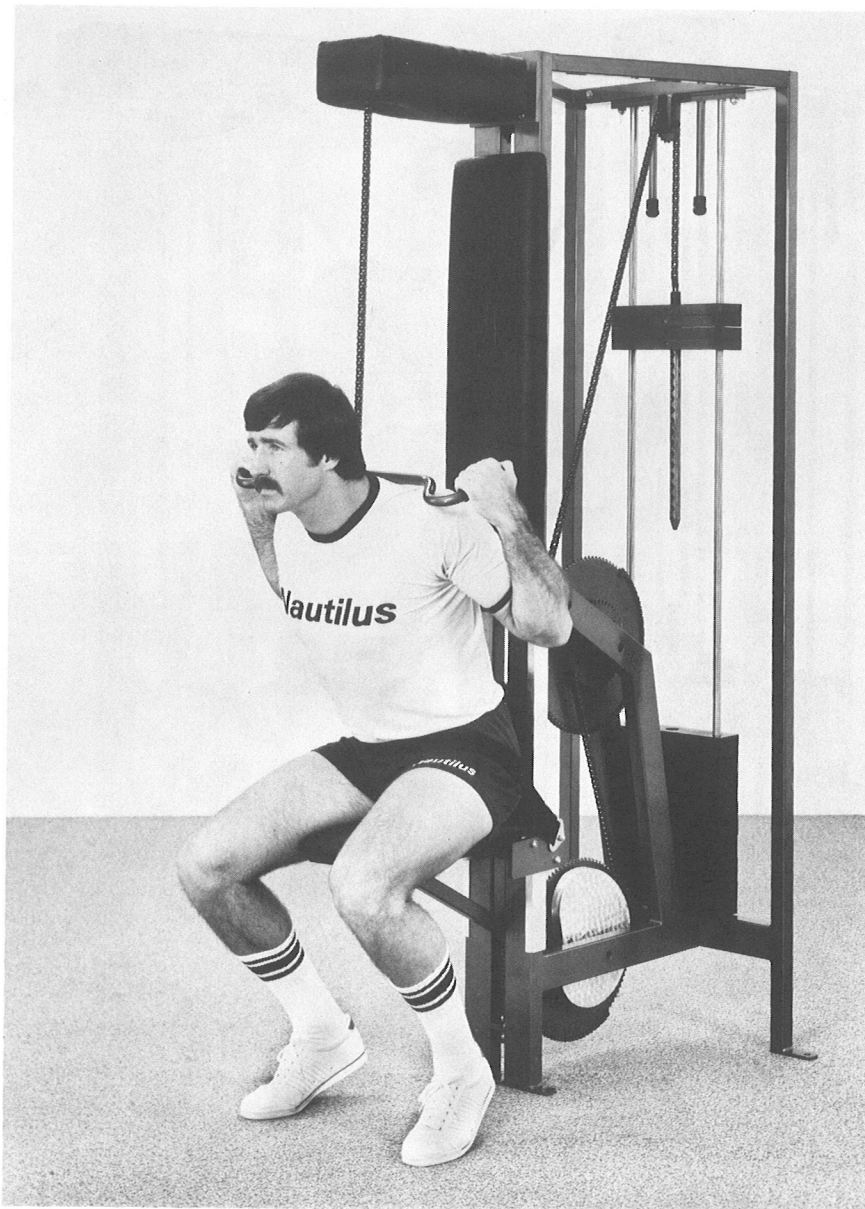
1. Adjust seat so shoulder joints are in line with axes of cams.
2. Fasten seat belt.
3. Place back of upper arms (triceps area) between padded movement arms.
4. Cross forearms behind neck.
5. Move both arms downward until perpendicular to floor.
6. Pause.
7. Return slowly to crossed-arm position behind neck and repeat. After final repetition, immediately do behind neck pulldown.

**Important:** Be careful not to bring arms or hands to front of body.

### Behind Neck Pulldown (Latissimus dorsi muscles of the back and biceps of upper arms)

1. Lean forward and grasp overhead bar with parallel grip.
2. Pull bar behind neck, keeping elbows back.
3. Pause.
4. Return slowly to starting position and repeat.

\* Please read page 2.

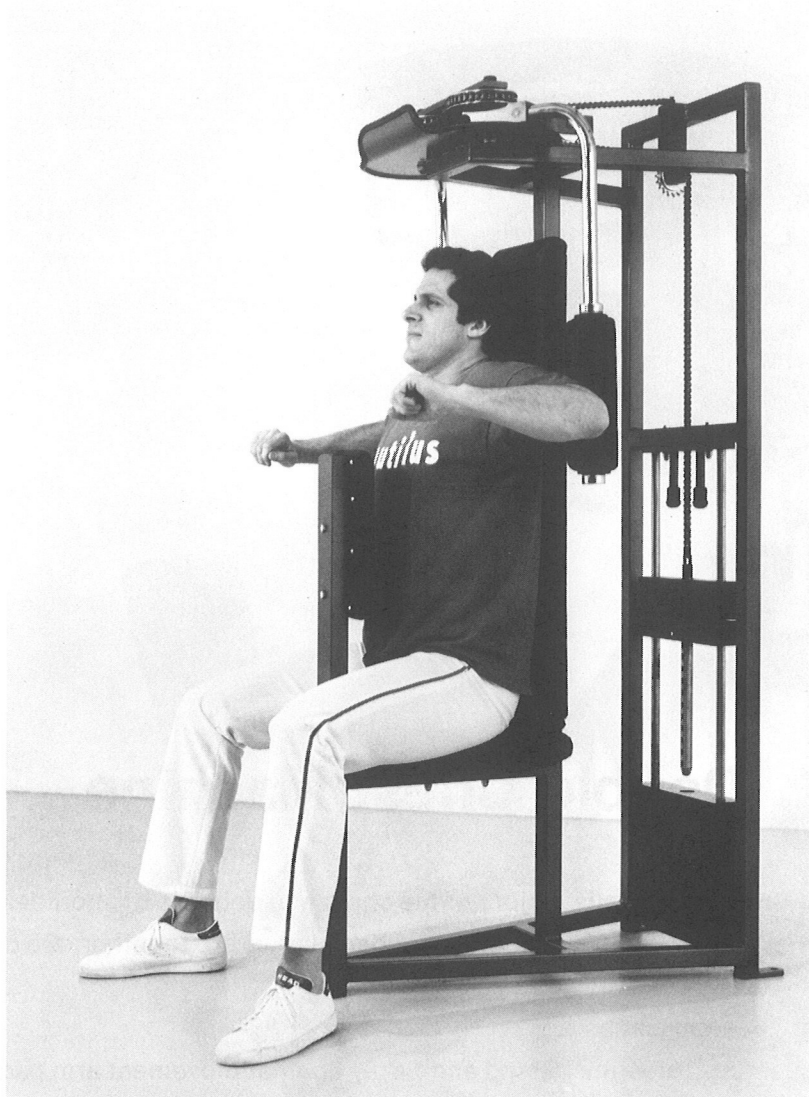


## Torso-Arm Machine

(Latissimus dorsi muscles of the back and biceps of upper arms)

1. Adjust seat for maximum stretch.
2. Fasten seat belt.
3. Lean forward and grasp overhead bar with parallel grip.
4. Pull bar behind neck, keeping elbows back.
5. Pause.
6. Return slowly to starting position and repeat.

\* Please read page 2.



## Rowing Torso Machine

(Deltoids and trapezius)

1. Sit with back toward weight stack.
2. Place arms between pads and cross arms.
3. Bend arms in rowing fashion as far back as possible.
4. Pause.
5. Return slowly to starting position and repeat.

**Important:** Keep arms parallel to floor at all times.

\* Please read page 2.



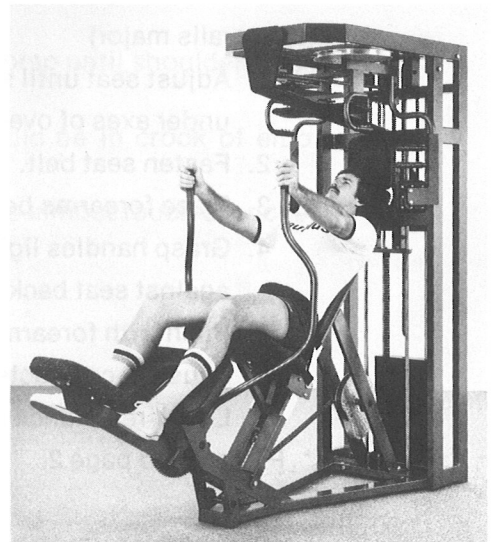
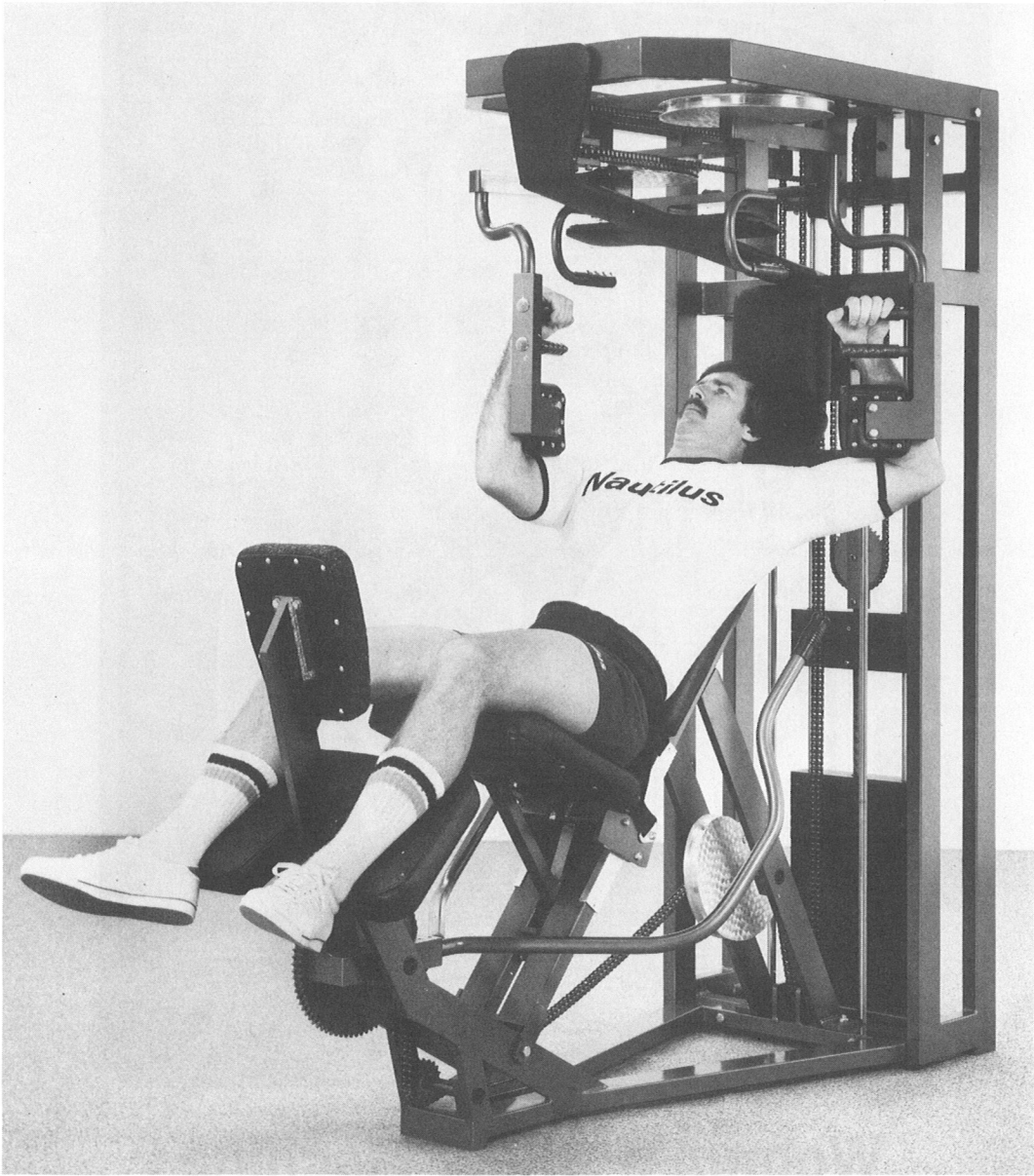
## Double Chest Machine

### **Arm Cross** (Pectoralis majors of the chest and deltoids of shoulders)

1. Adjust seat until shoulders, when elbows are together, are directly under axes of overhead cams.
2. Fasten seat belt.
3. Place forearms behind and firmly against movement arm pads.
4. Grasp handles lightly, thumbs should be around handle, and keep head against seat back.
5. Push with forearms and try to touch elbows together in front of chest. (Movement can also be done one arm at a time in an alternate fashion.)
6. Pause.
7. Lower resistance slowly and repeat. After final repetition, immediately do decline press.

### **Decline Press** (Chest, shoulders, and triceps of arms)

1. Use foot pedal to raise handles into starting position.
  2. Grasp handles with parallel grip.
  3. Keep head back and torso erect.
  4. Press bars forward in controlled fashion.
  5. Lower resistance slowly, keeping elbows wide.
  6. Stretch in bottom position and repeat pressing movement.
- \* Please read page 2.



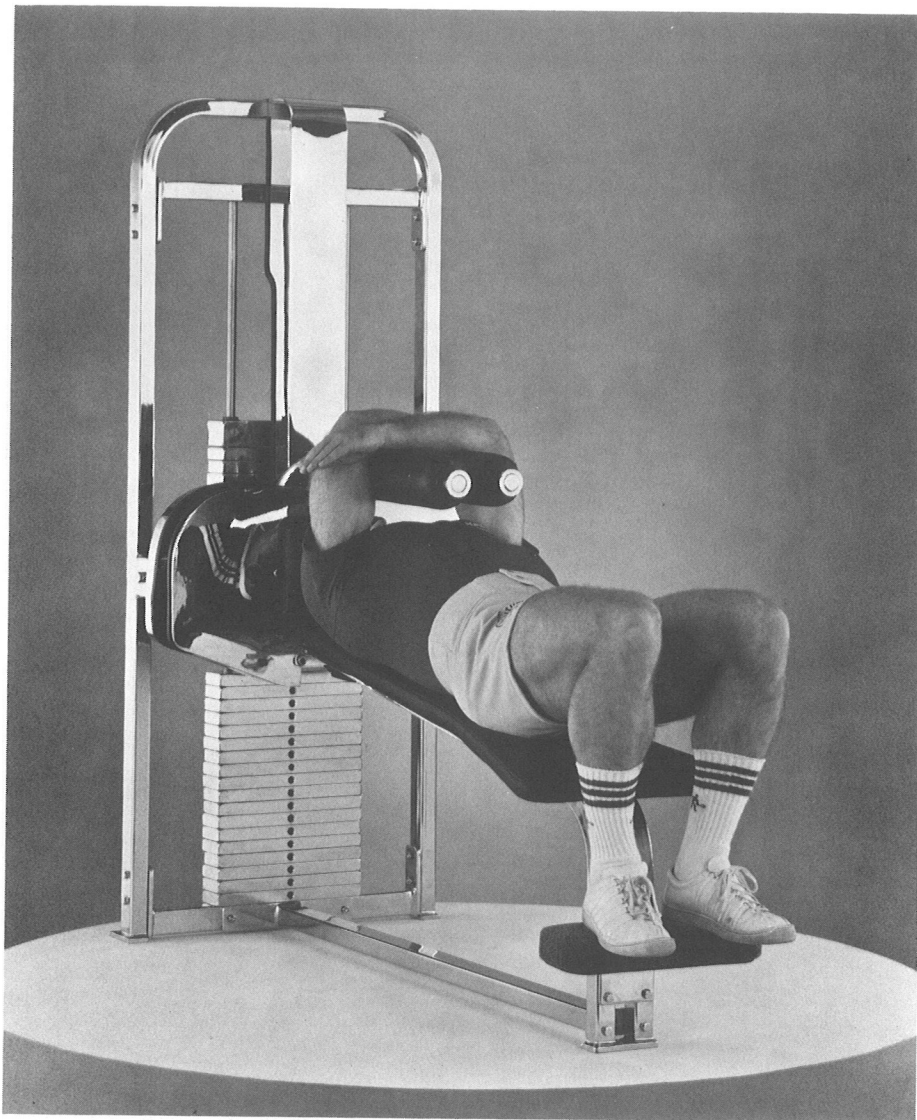


## Women's Chest Machine

(Pectoralis major)

1. Adjust seat until shoulders, when elbows are together, are directly under axes of overhead cams.
2. Fasten seat belt.
3. Place forearms behind and firmly against movement arm pads.
4. Grasp handles lightly, thumbs should be around handles, and keep head against seat back.
5. Push with forearms and try to touch elbows together in front of chest.
6. Pause in contracted position.
7. Lower resistance slowly and repeat.

\* Please read page 2.

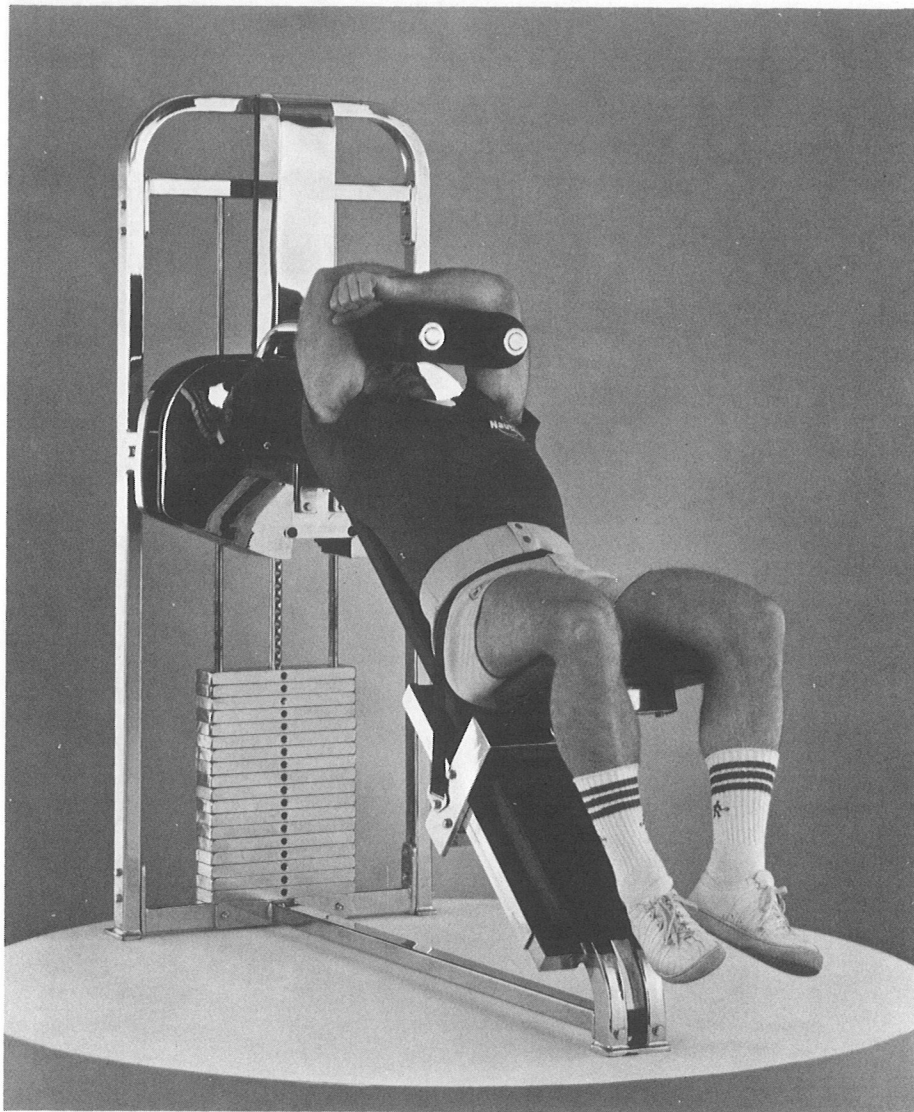


## 10° Chest Machine

(Pectoralis majors and deltoids)

1. Lie on back with head higher than hips. Adjust torso until shoulders are in line with axes of cams.
2. Place upper arms under roller pads. Pads should be in crook of elbows or on lower portion of biceps.
3. Move both arms in rotary fashion until roller pads almost touch over chest.
4. Pause.
5. Lower slowly to starting position and repeat.

\* Please read page 2.

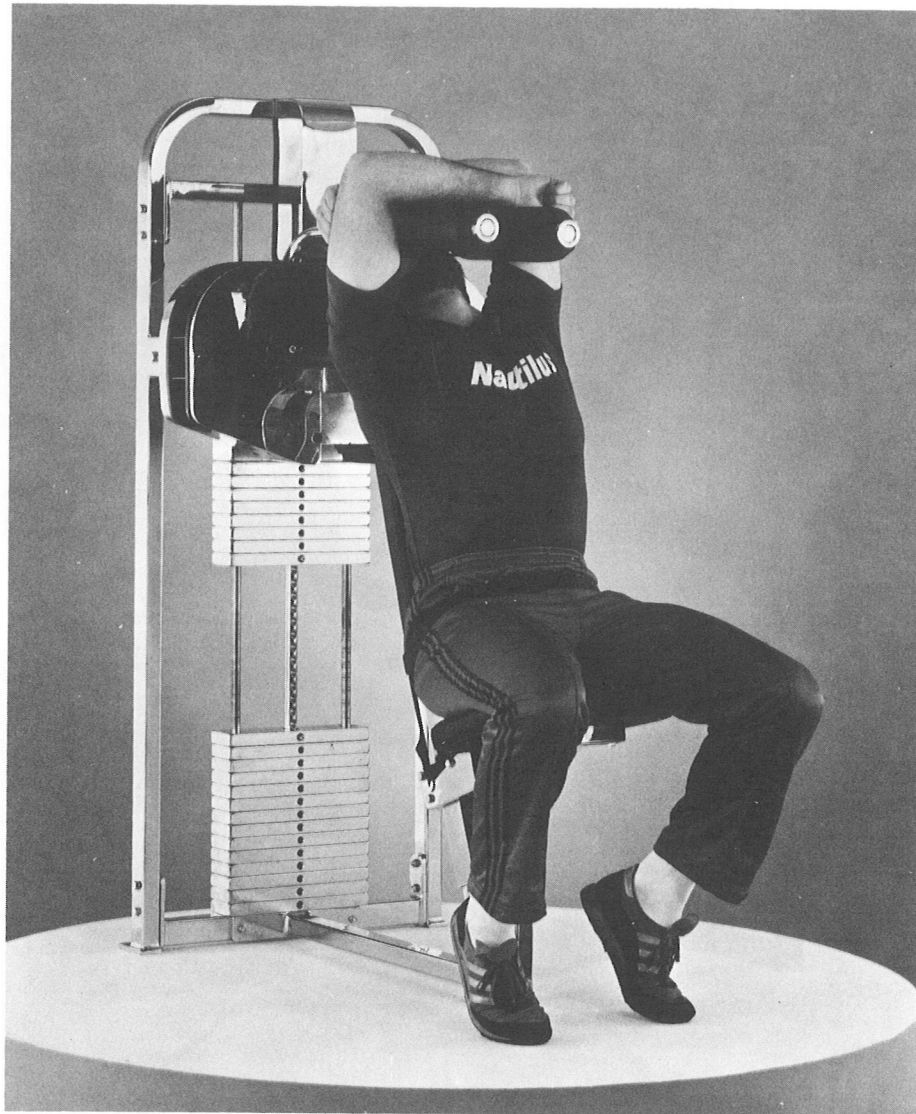


## 40° Chest/Shoulder Machine

(Pectoralis majors and deltoids)

1. Sit in machine. Adjust seat bottom so top of shoulders are in line with axes of cams.
2. Fasten seat belt.
3. Place upper arms under roller pads. Pads should be in crook of elbows or on lower portion of biceps.
4. Keep head against seat back.
5. Move both arms in rotary fashion until roller pads almost touch over shoulder.
6. Pause.
7. Lower slowly to starting position and repeat.

\* Please read page 2.

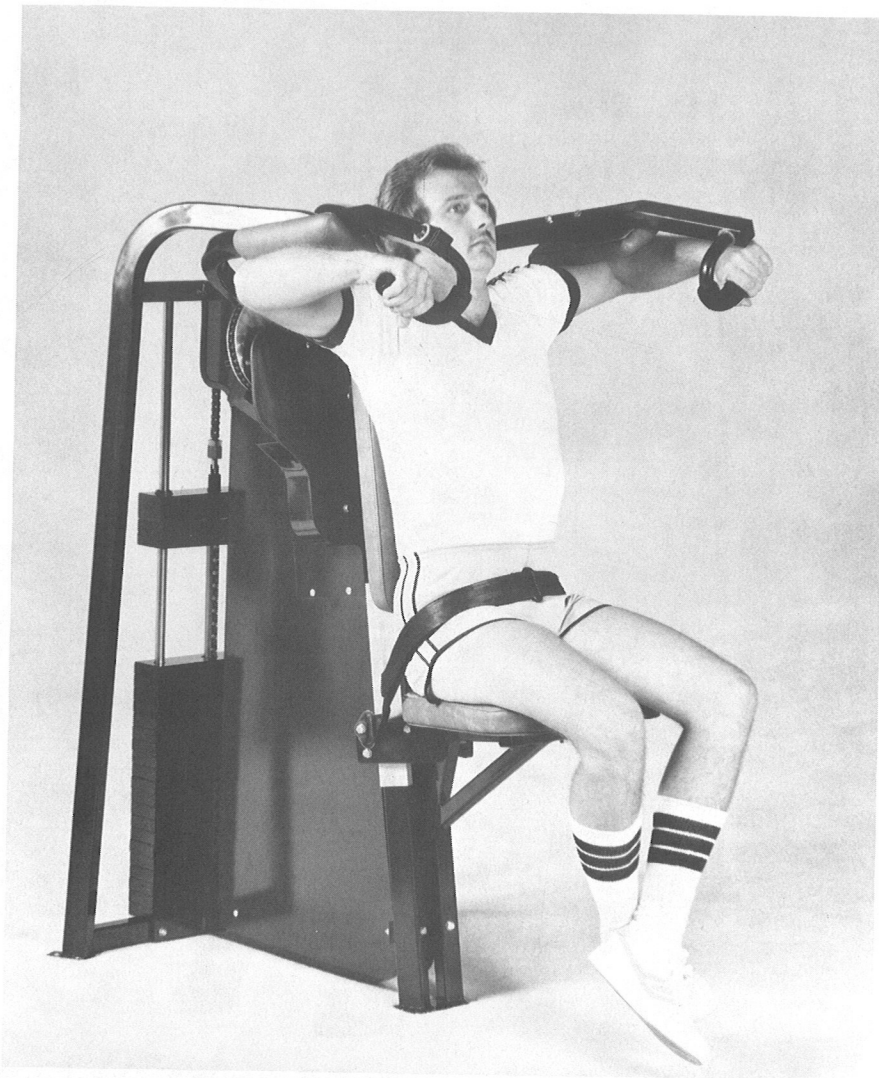


## 70° Shoulder Machine

(Deltoids and trapezius)

1. Sit in machine. Adjust seat bottom so top of shoulders are in line with axes of cams.
2. Fasten seat belt.
3. Place upper arms under roller pads. Pads should be in crook of elbows or on lower portion of biceps.
4. Extend head and rest it on pads behind shoulders. You should be looking at ceiling.
5. Move both arms in rotary fashion until roller pads almost touch over face.
6. Pause.
7. Lower slowly to starting position and repeat.

\* Please read page 2.



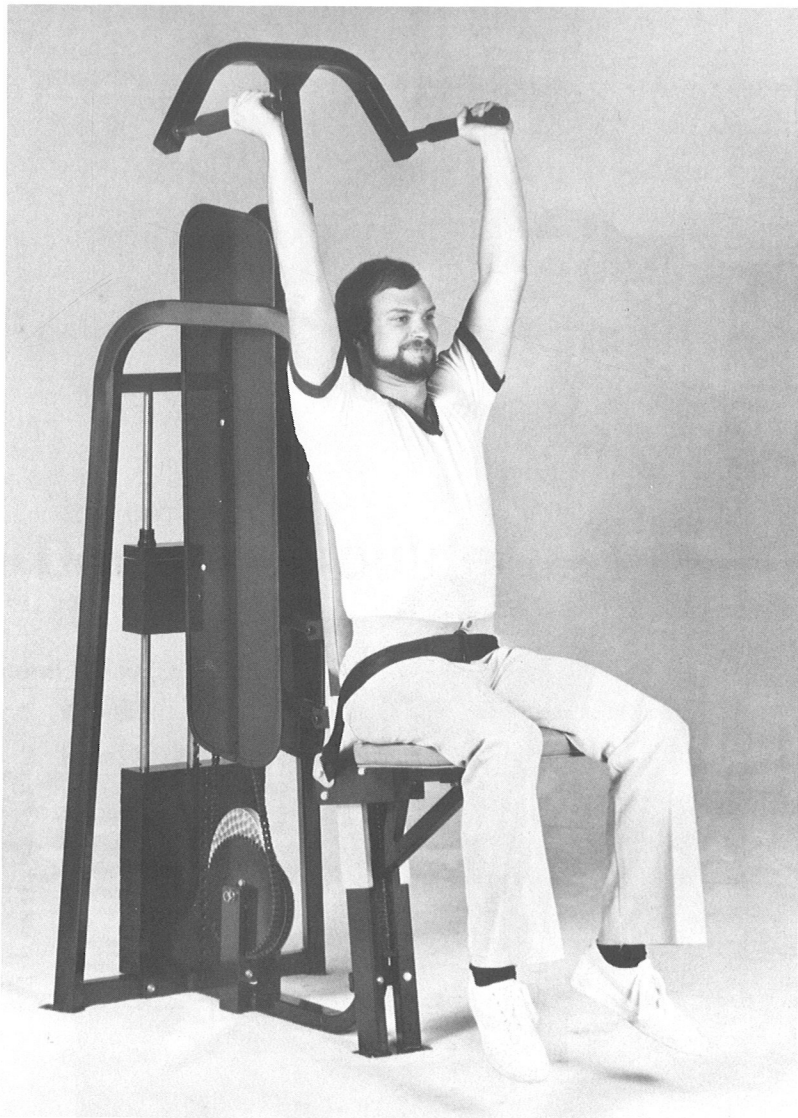
## Lateral Raise Machine

(Deltoid muscles of shoulders)

1. Adjust seat so shoulder joints are in line with axes of cams.
2. Position thighs on seat, cross ankles, and fasten seat belt.
3. Pull handles back until knuckles touch pads.
4. Lead with elbows and raise both arms until parallel with floor.
5. Pause.
6. Lower resistance slowly and repeat.

**Important:** Keep knuckles against pads and elbows high at all times.

\* Please read page 2.



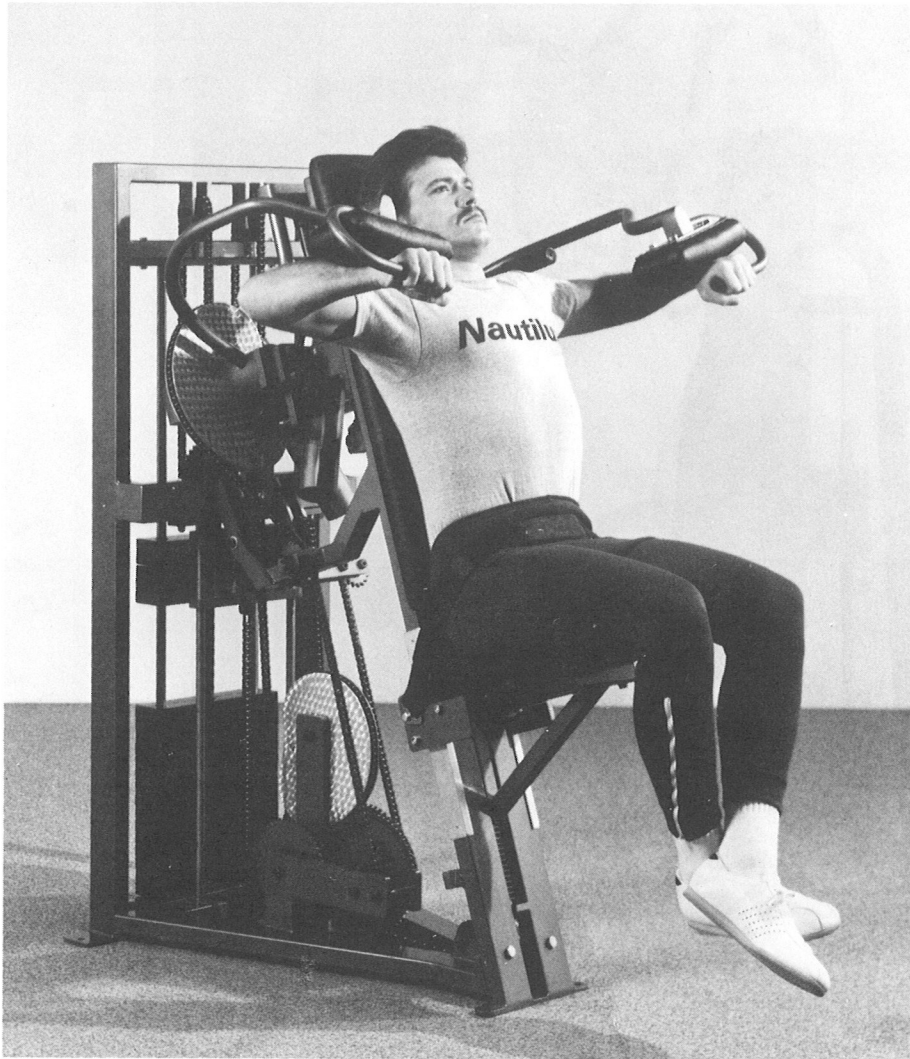
## Overhead Press Machine

(Deltoid muscles and triceps)

1. Adjust seat for greatest range of movement.
2. Grasp handles above shoulders.
3. Press handles overhead while being careful not to arch back.
4. Lower resistance slowly, keeping elbows wide, and repeat.

\* Please read page 2.





# Double Shoulder Machine

## **Lateral Raise** (Deltoid muscles of shoulders)

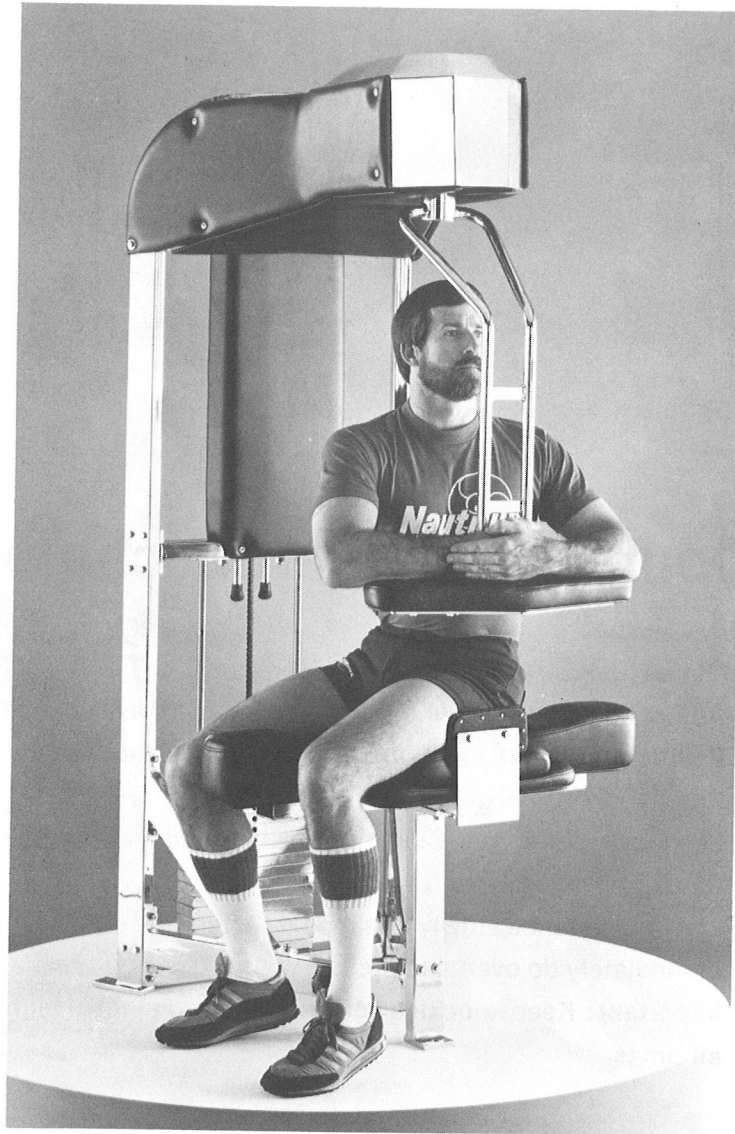
1. Adjust seat so shoulder joints are in line with axes of cams.
2. Position thighs on seat, cross ankles, and fasten seat belt.
3. Pull handles back until knuckles touch pads.
4. Lead with elbows and raise both arms until parallel with floor.
5. Pause.
6. Lower resistance slowly and repeat. After final repetition, immediately do overhead press.

**Important:** Keep knuckles against pads and elbows high at all times.

## **Overhead Press** (Deltoids and triceps)

1. Raise seat quickly for greater range of movement.
2. Grasp handles above shoulders.
3. Press handles overhead while being careful not to arch back.
4. Lower resistance slowly, keeping elbows wide, and repeat.

Please read page 2.

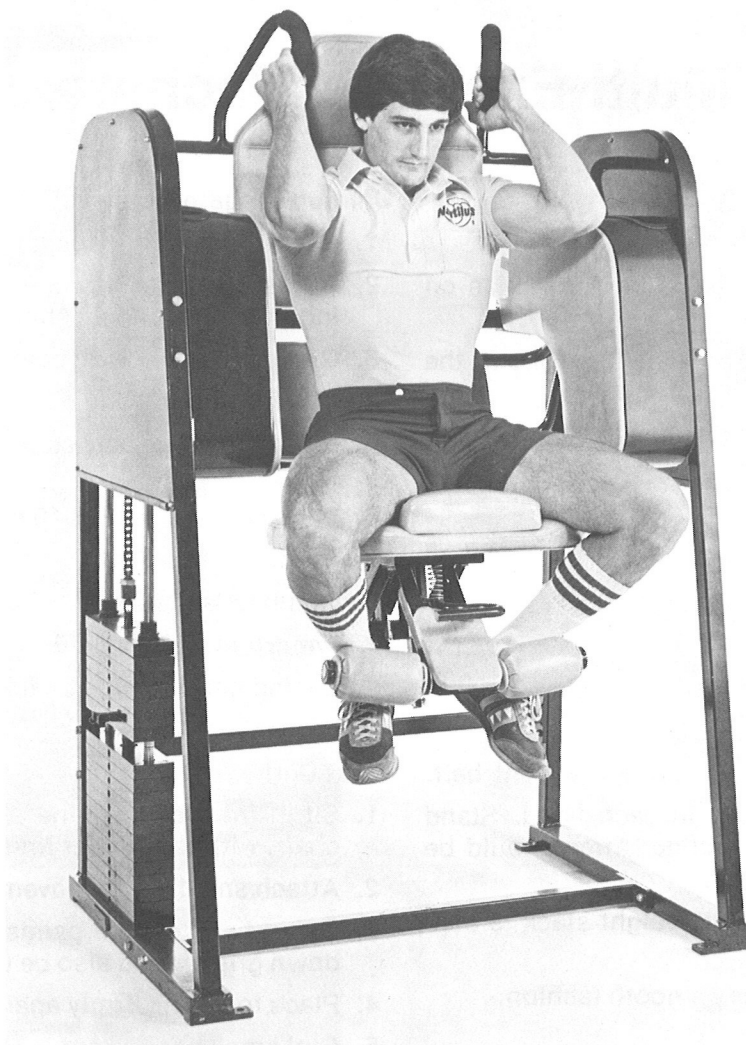


## Rotary Torso Machine

(External obliques, internal obliques, erector spinae group, and deep posterior spinal group)

1. Face front of machine while standing. Weight stack should be in back.
2. Place seat yoke (adjustment is underneath) approximately 90 degrees to right of weight stack.
3. Straddle seat and cross ankles securely. Do not allow hips and legs to move with torso.
4. Turn to right and place forearms on sides of pads. Right palm should be firmly against the middle bar of movement arm.
5. Rotate torso from right to left by pushing with the right palm. Do not use triceps or biceps to push or pull the movement arm. Use the torso rotators.
6. Move head with torso by focusing between parallel bars of movement arm.
7. Pause in contracted position. Rotation of torso will be less than 180 degrees.
8. Return slowly to starting position and repeat.
9. Adjust to opposite side of machine and reverse procedure for left to right torso rotation.

\* Please read page 2.



## Abdominal Machine

(Rectus abdominis)

1. Sit in machine.
2. Locate axis of rotation on right side
3. Adjust seat so axis of rotation is at same level as lower part of sternum or breastbone.
4. Place ankles behind roller pads.
5. Spread knees and sit erect.
6. Grasp handles.
7. Keep shoulders and head firmly against seat back.
8. Shorten the distance between rib cage and navel by contracting abdominals only.  
Do not pull with latissimus or triceps muscles.
9. Keep legs relaxed as seat bottom is elevated.
10. Pause in contracted position.
11. Return slowly to starting position and repeat.

\* Please read page 2.

# Multi-Exercise Machine

## Calf Raise

1. Adjust belt comfortably around hips.
2. Place balls of feet on first step and hands on front of carriage.
3. Lock knees and keep locked throughout the movement.
4. Elevate heels as high as possible and try to stand on big toes.
5. Pause.
6. Lower heels slowly.
7. Stretch at bottom by lifting toes.
8. Repeat.

## Triceps Extension

1. Loop a lightweight towel through weight belt.
2. Grasp one end of towel in each hand. Stand and face away from machine. Arms should be bent with elbows by ears.
3. Adjust grip on towel until weight stack is separated.
4. Straighten arms in a very smooth fashion.
5. Pause.
6. Lower resistance slowly and repeat.

## Parallel Dip (negative only with or without weight belt)

1. Adjust carriage to proper level. It is important to stretch in bottom position.
2. Climb steps.
3. Lock elbows and bend legs.
4. Lower body slowly by bending arms (8-10 seconds).
5. Stretch at bottom position.
6. Climb up and repeat.

## Chin-up (Negative only with or without weight belt)

1. Place cross-bar on forward position.
2. Adjust carriage to proper height. When standing on top step, chin should be barely over bar.
3. Grasp cross-bar with palms up.
4. Climb steps.
5. Place chin over bar, elbows by sides, and legs bent.
6. Lower body slowly (8-10 seconds).
7. Stretch at bottom position.
8. Climb up and repeat.

**Important:** Movement can also be done in a behind neck fashion by using parallel grip.

## Wrist Curl

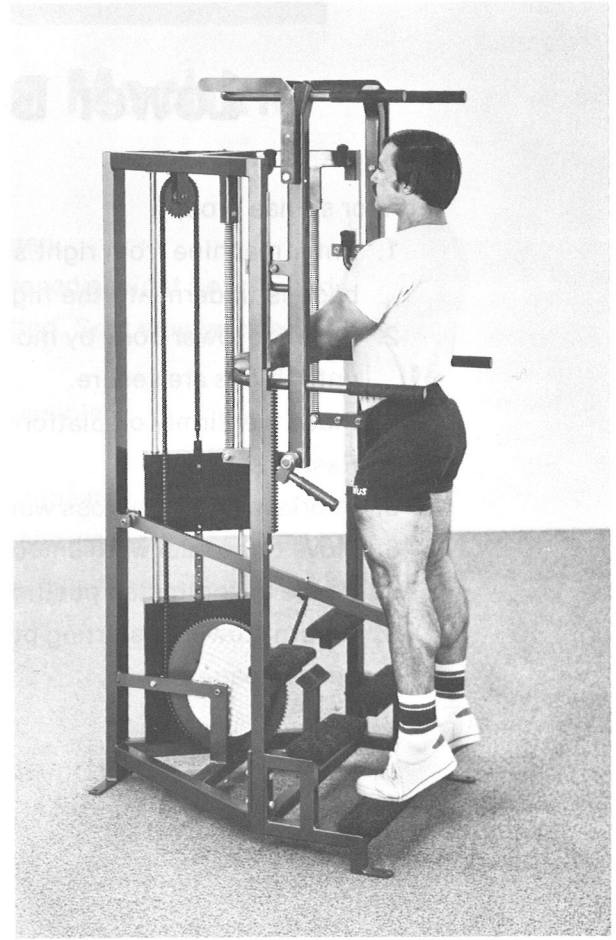
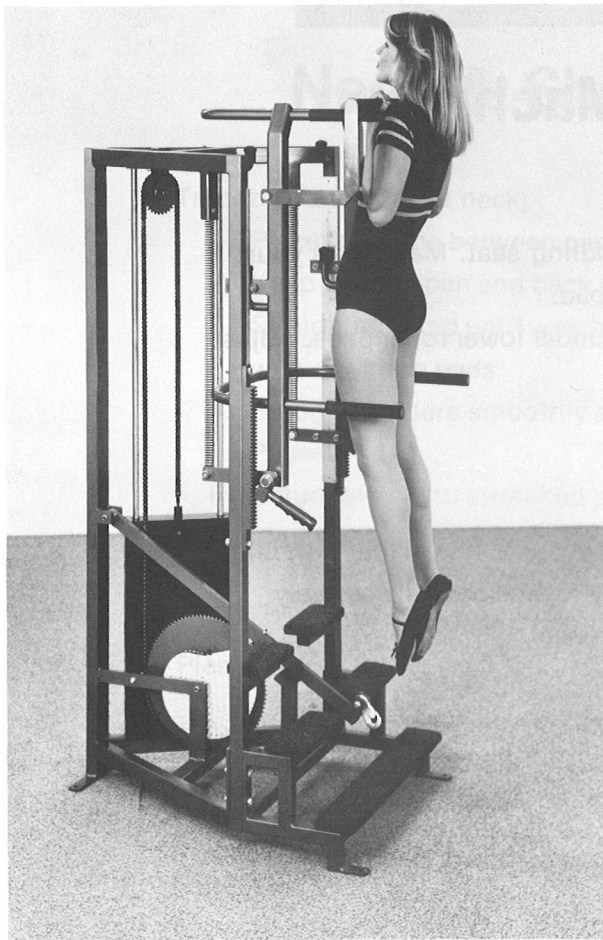
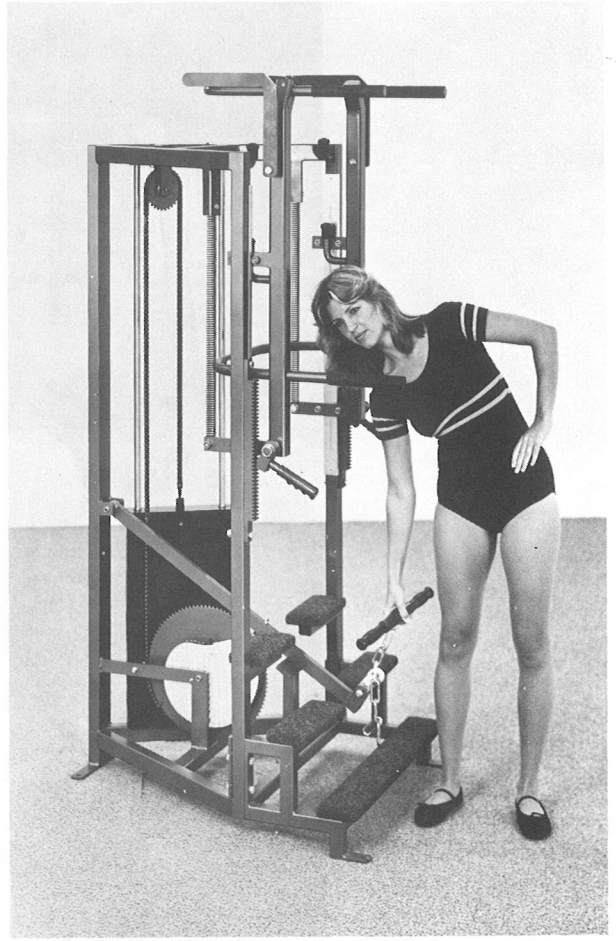
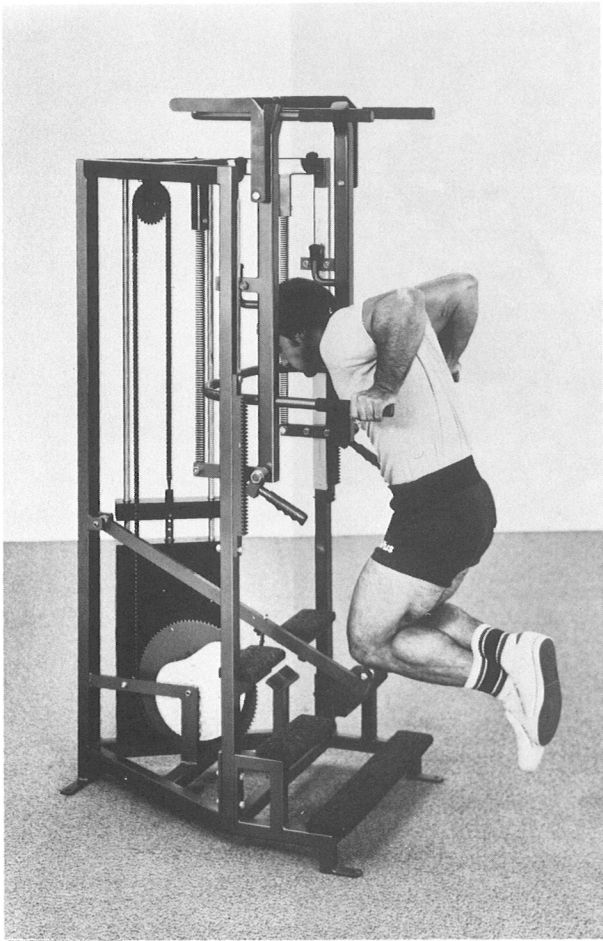
1. Sit in front of machine, using small bench or chair, with toes under first step.
2. Attach small bar to movement arm.
3. Grasp handles in a palms-up fashion. (Palms-down grip should also be used).
4. Place forearms firmly against thighs.
5. Curl small bar upward.
6. Pause.
7. Lower resistance slowly and repeat.

**Important:** Do not move forearms. Only hands should move. Keep knees close together. Avoid jerky movements.

## Other Movements

Biceps Curl,  
Shoulder Shrug,  
Bent-over Row,  
Hanging Leg Raise,  
Side Bend.

\* Please read page 2.





## Lower Back Machine

(Erector spinae group)

1. Enter machine from right side by straddling seat. Make sure your back is underneath the highest roller pad.
2. Stabilize lower body by moving thighs under lower roller pads. Adjust until thighs are secure.
3. Place feet firmly on platform.
4. Fasten seat belt.
5. Interlace fingers across waist.
6. Move torso backward smoothly and slowly until it is in line with thighs.
7. Pause in contracted position. Do not try to arch back excessively.
8. Return slowly to starting position and repeat.

\* Please read page 2.



## Neck & Shoulder Machine

(Trapezius and back of neck)

1. Place forearms between pads while seated.
2. Keep palms open and back of hands pressed against bottom pads.
3. Straighten torso until weight stack is lifted. Seat may be raised with elevation pads.
4. Shrug shoulders smoothly as high as possible.
5. Pause.
6. Return slowly to stretched position and repeat.

**Important:** Keep elbows by sides when shrugging. Do not lean back or try to stand while doing the movement. Do not rest weights on stack during movement.

\* Please read page 2.





## 4-Way Neck Machine

### **Anterior Flexion** (Front of neck)

1. Face machine.
2. Adjust seat so that nose is in center of pads.
3. Stabilize torso by lightly grasping handles.
4. Move head smoothly toward chest.
5. Pause.
6. Return slowly to stretched position and repeat.

**Important:** Do not use torso or legs to assist neck. Good form is a must.

### **Posterior Extension** (Back of neck)

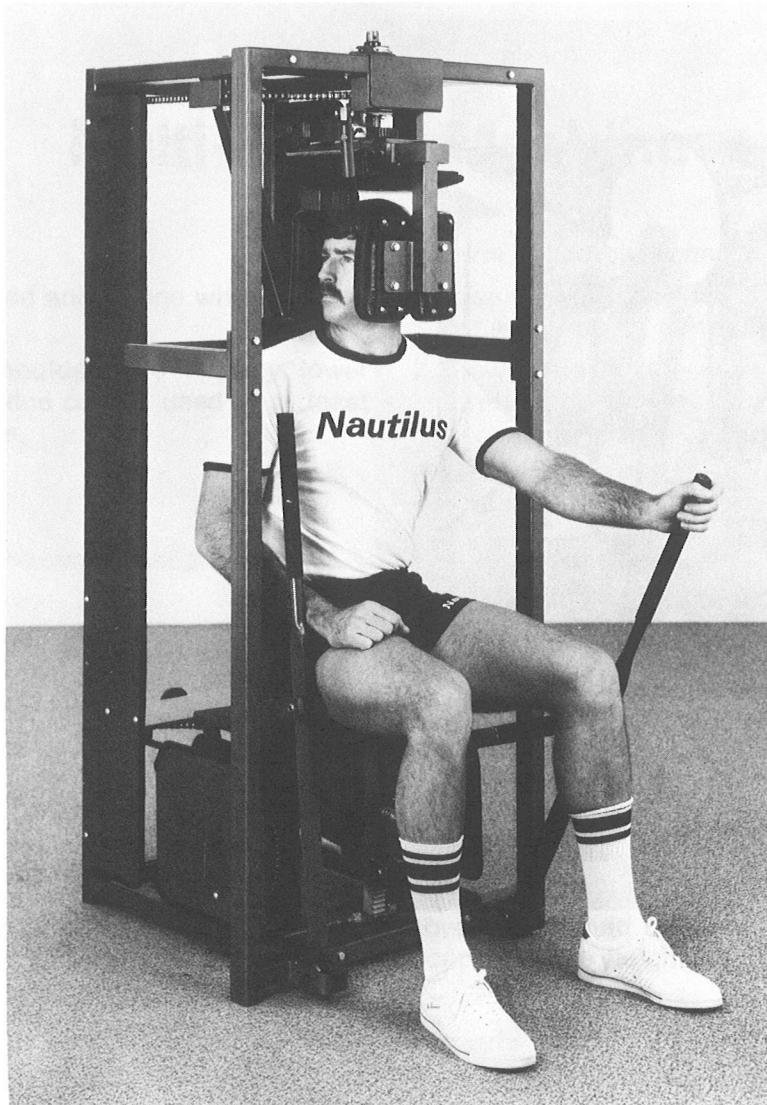
1. Turn body in machine until back of head contacts center of pads.
2. Stabilize torso by lightly grasping handles.

3. Extend head as far back as possible.
4. Pause.
5. Return slowly to stretched position and repeat.

### **Lateral Contraction** (Sides of neck)

1. Turn body in machine until left ear is in center of pads.
2. Stabilize torso by lightly grasping handles.
3. Move head toward left shoulder.
4. Pause.
5. Keep shoulders square.
6. Return slowly to stretched position and repeat.
7. Reverse procedure for right side.

\* Please read page 2.

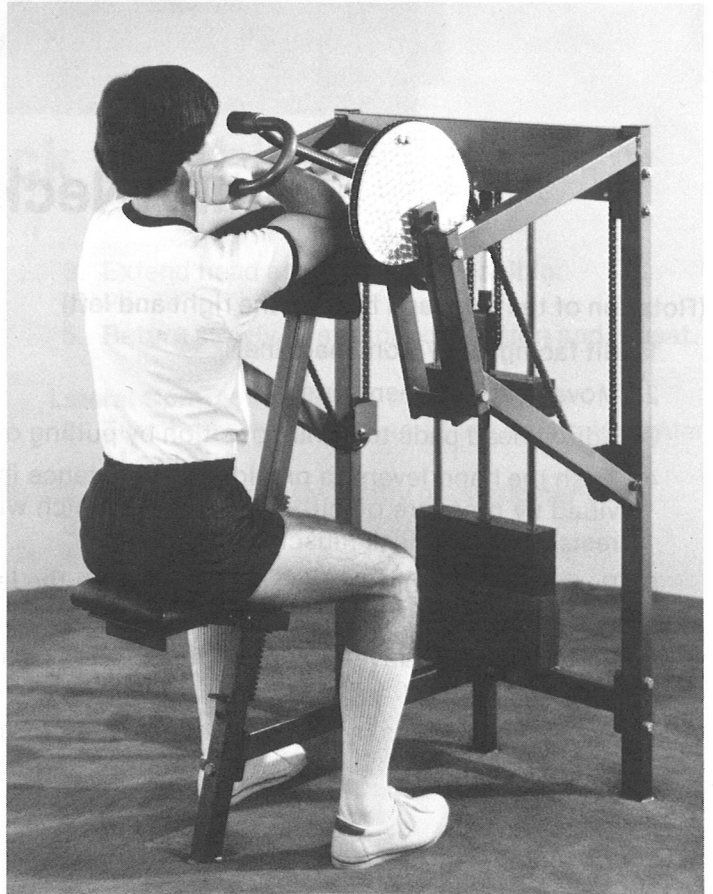
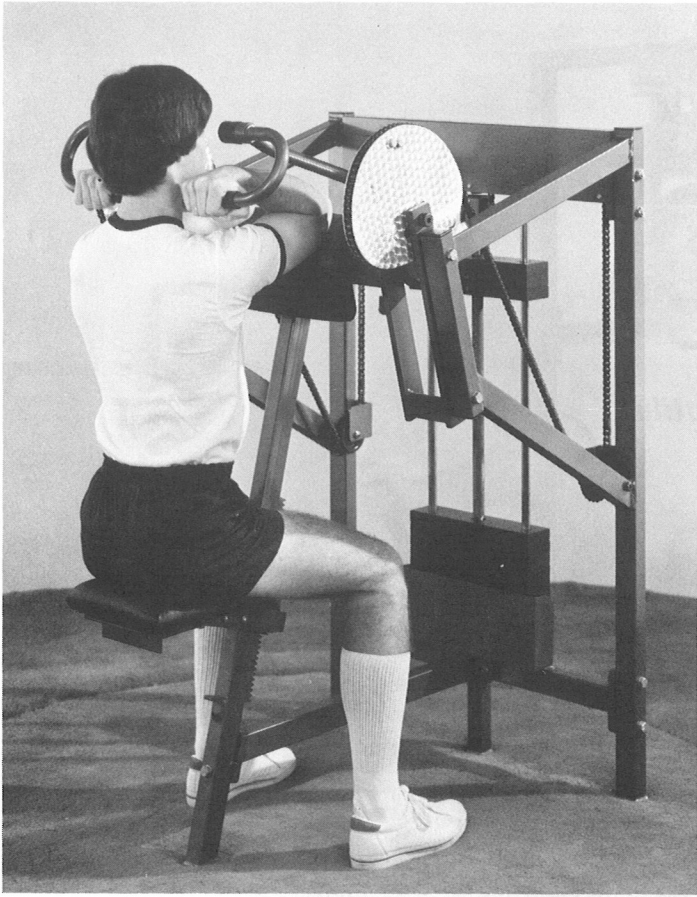


## Rotary Neck Machine

(Rotation of the neck and head to the right and left)

1. Sit facing away from machine.
2. Move head between pads.
3. Adjust head pads to a snug position by pulling overhead lever from right to left.
4. Push the hand levers to provide the resistance in this machine. Negative-only exercise can be provided by pressure on either hand lever, which will force the head to turn. This turning pressure is resisted by the neck muscles.
5. Push with the right-hand lever, or pull with the left-hand lever, to force the neck and head to rotate to the left or vice versa.
6. Perform six negative-only repetitions to the right and six negative-only repetitions to the left in an alternate fashion.
7. Release head pads by pulling overhead lever from left to right.

\* Please read page 2.



# Multi-Biceps Machine

(Biceps of upper arms)

1. Place elbows on pad and in line with the axes of cams.
2. Adjust seat so shoulders are slightly lower than elbows. Machine can be used in at least eight different ways.

## Two arms normal

1. Curl both arms to the contracted position.
2. Pause.
3. Lower slowly to the stretched position and repeat.

## Two arms alternate

1. Do a complete repetition with one arm.
2. Do another complete repetition with the opposite arm.
3. Alternate back and forth until momentary muscular exhaustion.

## Two arms duo-poly

1. Bring both arms to the contracted position.
2. Holding one arm in the contracted position, lower the resistance with the opposite arm, and curl the movement arm back to the contracted position.
3. Repeat with the other arm.

**Important:** One arm must always be in the contracted position while the other arm is moving.

## One arm normal

1. Work one arm to exhaustion, usually the non-dominant arm first.
2. Work the other arm to exhaustion.

**Note:** A trainee will be able to handle slightly more resistance with one arm than with two.

\* Please read page 2.

## One arm negative-emphasized

1. Use the opposite arm for assistance in curling a heavier-than-normal weight.
2. Lower slowly the resistance arm (8-10 seconds) with one arm.
3. Continue in this fashion until the biceps is unable to control the downward movement.
4. Repeat the procedure with the other arm.

## With the Movement Restraining Stop in the Center Position

### Infimetric

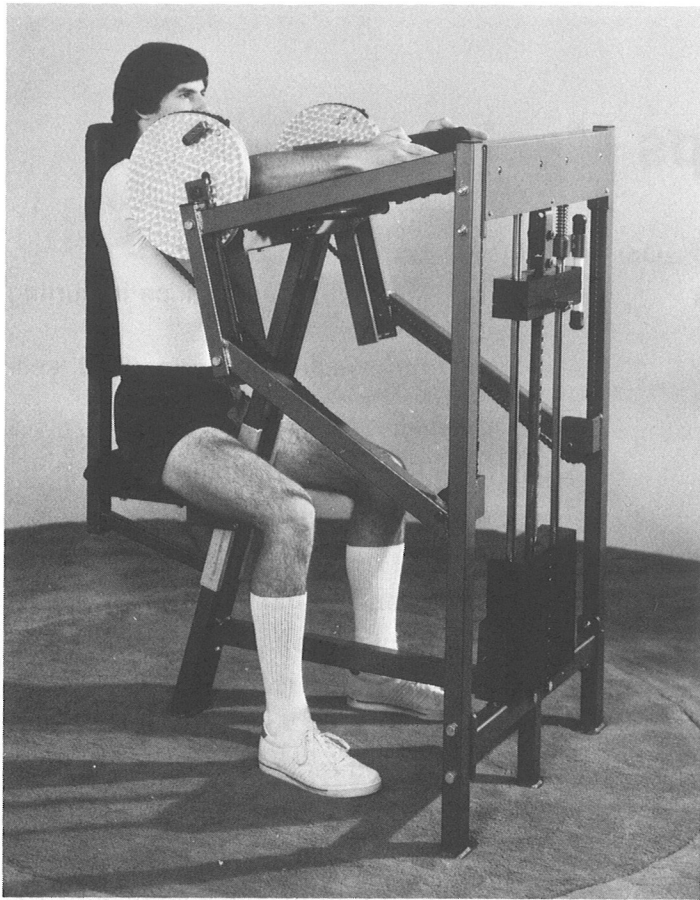
Remove the selector pin from the weight stack. Curl arms to the mid-range position, or until contact is made with the movement restraining stop. In order for one arm to straighten, the other arm must bend. The trainee can vary the force by resisting more or less with the unbending arm. The movement should be smooth and steady with no dropping of the weight.

### Isometric

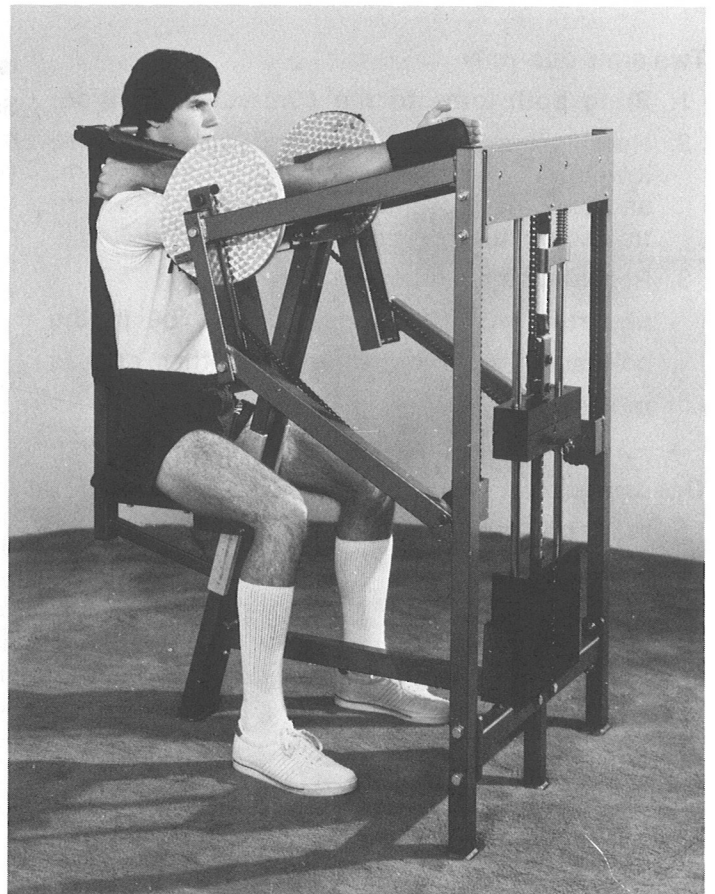
Same procedure as infimetric, except do not permit movement of the unbending arm. Since a person is 40% stronger negatively than positively, the negative arm is always able to prevent movement in the positive arm. It is possible therefore to provide an isometric or static contraction at any point along the range of movement of the machine.

### Akinetic

The primary difference between infimetric and akinetic is in infimetric the selector pin is not used, while in akinetic a pre-determined amount of resistance is used. With infimetric training, it is very difficult to estimate the amount of force that is being exerted during the movement. With akinetic training, however, a medium resistance is selected and although a trainee can exert more force, any time he exerts less force, the weight stack drops noticeably.



movement should be smooth and steady with no jerking of the weights.



# Multi-Triceps Machine

(Triceps of upper arm)

1. Adjust seat so that shoulders are slightly lower than elbows.
2. Place sides of hands on movement arms and elbows on pad and in line with the axes of cams. Machine can be used in at least eight different ways.

## Two arms normal

1. Straighten arms to the contracted position.
2. Pause.
3. Lower slowly to the stretched position and repeat.

## Two arms alternate

1. Do a complete repetition with one arm.
2. Do another complete repetition with the opposite arm.
3. Alternate back and forth until momentary muscular exhaustion.

## Two arms duo-poly

1. Straighten both arms to the contracted position.
2. Holding one arm in the contracted position, lower the resistance with the opposite arm, and return to the contracted position.
3. Repeat with the other arm.

## One arm normal

1. Work one arm to exhaustion, usually the non-dominant arm first.
2. Work the other arm to exhaustion.

**Note:** A trainee will be able to handle slightly more resistance with one arm than with two.

\* Please read page 2.

## One arm negative-emphasized

1. Use the opposite arm for assistance in lifting a heavier-than-normal weight.
2. Lower slowly the resistance arm (8-10 seconds) with one arm.
3. Continue in this fashion until the triceps is unable to control the downward movement.
4. Repeat the procedure with the other arm.

## With the Movement Restraining Stop in the Center Position

### Infimetric

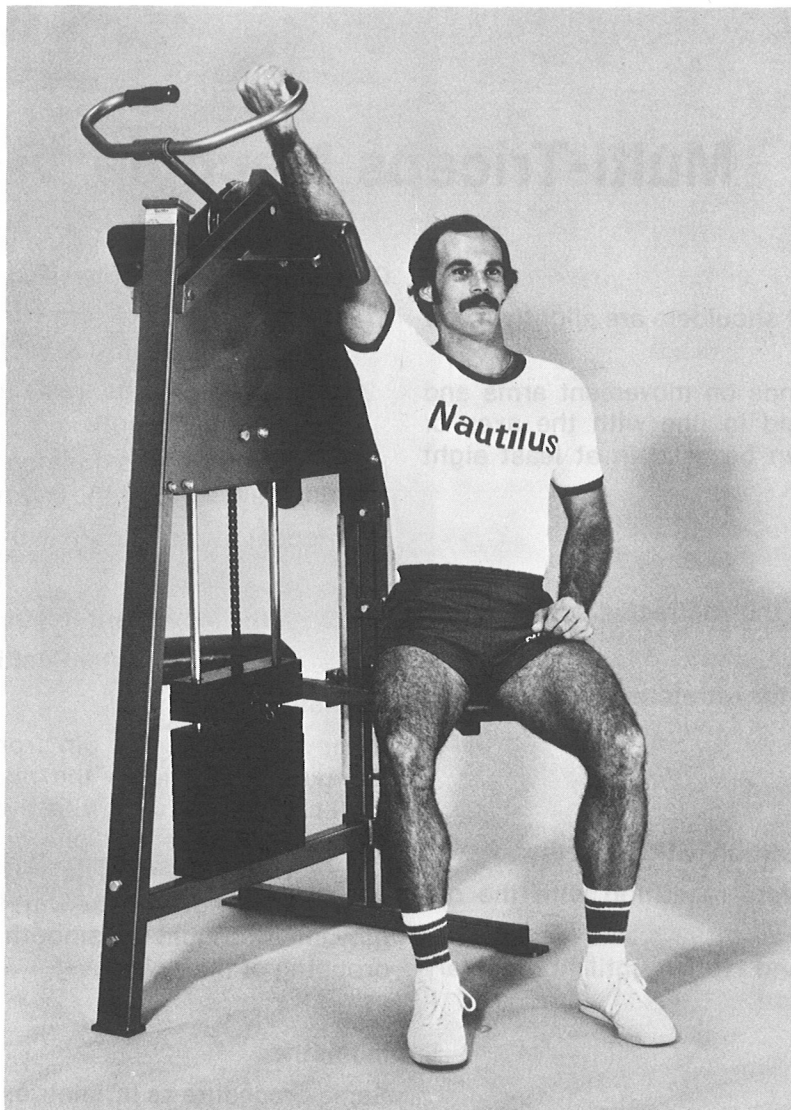
Remove the selector pin from the weight stack. Extend both arms to the mid-range position, or until contact is made with the movement restraining stop. In order for one arm to straighten, the other arm must bend. The trainee can vary the force by resisting more or less with the bending arm. The movement should be smooth and steady with no dropping of the weight.

### Isometric

Same procedure as infimetric, except do not permit movement of the bending arm. Since a person is 40% stronger negatively than positively, the negative arm is always able to prevent movement in the positive arm. It is possible therefore to provide an isometric or static contraction at any point along the range of movement of the machine.

### Akinetic

The primary difference between infimetric and akinetic is in infimetric the selector pin is not used, while in akinetic a pre-determined amount of resistance is used. With infimetric training, it is very difficult to estimate the amount of force that is being exerted during the movement. With akinetic training, however, a medium resistance is selected and although a trainee can exert more force, any time he exerts less force, the weight stack drops noticeably.



## Compound Position Biceps Machine

(Biceps of the upper arm)

1. Be seated on the left side of the machine to work the right biceps.
2. Adjust the seat so that the elbow is in line with the axis of the cam.
3. Grasp handle lightly with an underhand grip.
4. Curl the handle behind the neck.
5. Pause.
6. Lower the movement arm slowly and repeat.
7. Reverse the procedure for working the left biceps on the right side of the machine.

\* Please read page 2.

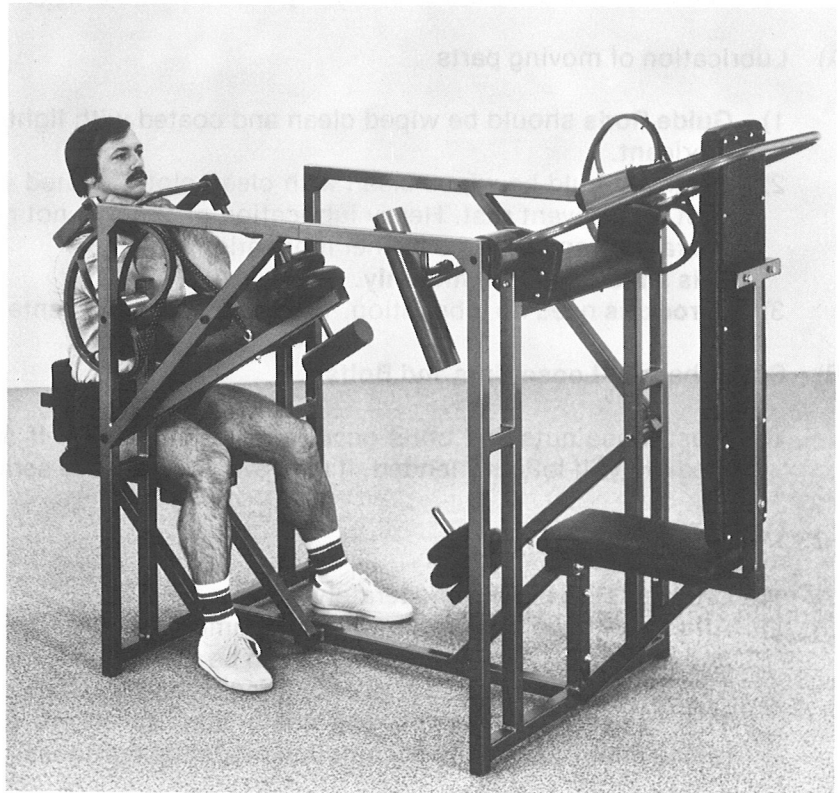
# Biceps/Triceps Machine (Plateloading)

## Biceps Curl

(Biceps of upper arms)

1. Enter machine from left side.
2. Place elbows on pad and in line with axis of cam.
3. Grasp bar with hands together and palms up.
4. Curl bar smoothly until it reaches neck.
5. Pause.
6. Return slowly to stretched position and repeat.

**Important:** Lean back at full extension to insure stretching.

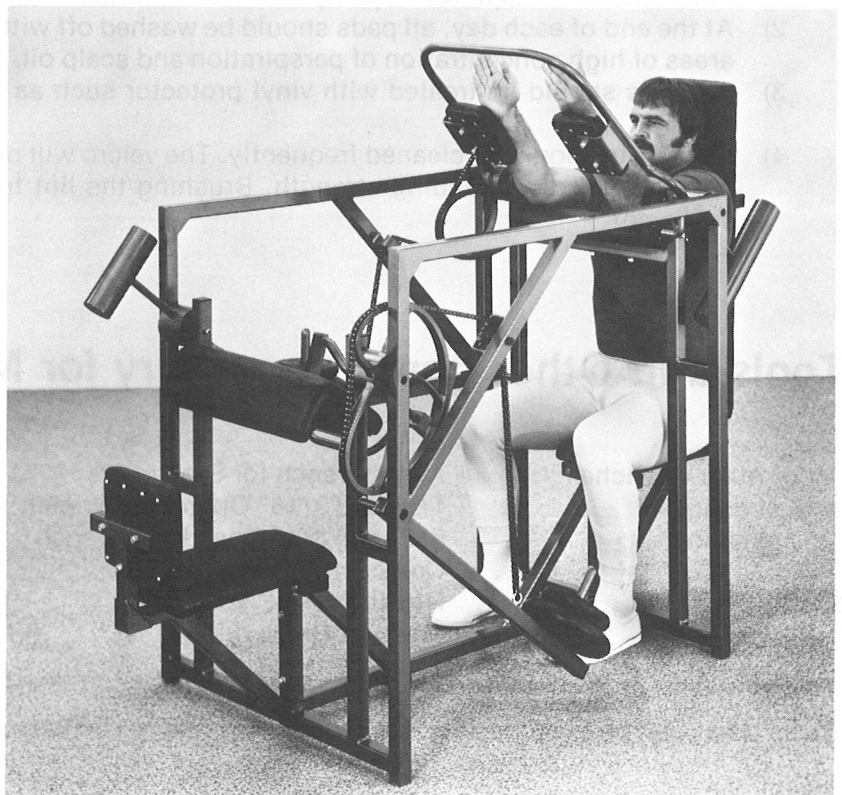


## Triceps Extension

(Triceps of upper arms)

1. Adjust seated position, with pads if necessary, until shoulders are on same level as elbows.
2. Place elbows in line with axis of cam and hands with thumbs up on pads.
3. Straighten arms smoothly.
4. Pause.
5. Return slowly to stretched position and repeat.

\* Please read page 2.





# Preventive Maintenance of Equipment

Standard Maintenance consists of bi-weekly check of equipment:

## A) Lubrication of moving parts

- 1) **Guide Rods** should be wiped clean and coated with light-weight machine oil (WD 40) or silicone lubricant.
- 2) **Chains** should be wiped clean with clean cloth, coated with oil (30 SAE) to keep chains free of dust and prevent rust. Heavy lubrication of chain is not necessary because they are pre-lubed at the factory and need no further lubrication.  
**This should be done monthly.**
- 3) **Sprockets** need **no** lubrication. The bushings in the center of sprockets are impregnated with oil.

## B) Spot Check of **Loose Nuts and Bolts**

- 1) Most loose nuts and bolts occur at rotation points. If any loose part is observed, tighten immediately. If left unattended, it may eventually cause serious damage to the equipment.

## C) Chain Tightening

- 1) Chain should be kept moderately tight.
- 2) All chains have chain adjusting attachments where they attach to the cam. By removing bolts and moving attachment, the chain can be tightened at that point.
- 3) Tightening of Chains in area other than cams should be done where chain attaches to sprockets. This is done by disconnecting chain from sprockets and removing required number of links (using chain breaker) to accomplish moderate tightness.

## D) Cleaning and Protection of Upholstery

- 1) Pads should be kept free of perspiration at all times.
- 2) At the end of each day, all pads should be washed off with mild soap and warm water, especially areas of high concentration of perspiration and scalp oil.
- 3) All pads should be treated with vinyl protector such as NU-Vinyl. **This should be done once a week.**
- 4) Seat Belts should be cleaned frequently. The velcro will pick up lint from carpet and gym clothes and will reduce its holding strength. Brushing the lint from the velcro belt with a stiff brush is sufficient.

## Tools and Other Items Necessary for Maintenance

### Set of Allen Wrenches:

3/16 of an inch  
7/32 of an inch  
1/4 of an inch  
5/16 of an inch  
3/8 of an inch

### Allen Wrench for Set Collars

1/2" and 9/16" Open End Wrench  
5/8" and 3/4" Open End Wrench  
Crescent Wrench  
Needle Nose Pliers  
Medium Screwdriver

### Chain Breaker

Assortment of Connecting Links  
Assortment of Bushings  
Can Silicone  
Can NU-Vinyl

These items can be purchased from Nautilus/Virginia or can be purchased from most Hardware stores.

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