Nautilus®

AMERICA'S FITNESS MAGAZINE

THE STRAIGHT SKINNY ON
Supplements

Heart Disease
FIGHT IT WITH EXERCISE

Fool Your Mouth With Modified Foods

The Thrills And Spills Of Whitewater

Strength Training's Ageless Benefits

$2.50
CANADA $2.95
SUMMER 1993

BY MATT BRZYCKI

Pain-Free EXERCISE

Not all injuries have to sideline your training

As much as you try to avoid getting hurt, injuries remain an unforeseen and inevitable occurrence. Indeed, many injuries are simply the result of being in the wrong place at the wrong time. But regardless of their origin, injuries don't necessarily have to bring your training to a complete standstill.

Injuries can be generally classified as either traumatic or nontraumatic. Traumatic injuries are those that are serious or severe and include fractures and muscle tears; nontraumatic injuries are less serious and are sometimes due to overuse, such as tendinitis and bursitis. Once you are injured, the injured area should receive treatment by qualified sports medical personnel, i.e. athletic trainers, physical therapists, etc.

It is very important to continue some type of strength training whenever possible, even in the event of an injury. Research has suggested that a muscle begins to lose size and strength if it is not exercised within 48 to 96 hours of its previous workout. Moreover, the rate of strength loss is most rapid during the first few weeks. Because of this, "rehabilitative" strength training performed throughout pain-free ranges of motion will present a significant loss in muscular size and strength.

Regardless of the nature of the injury, it will have some degree of impact on your strength training activities. In fact, some injuries — especially those that are traumatic — will not permit training whatsoever. Nevertheless, a limited amount of exercise can often be performed for parts of your body that aren't related to the afflicted area. In some cases, you may even be able to address the injured body part directly.

There are several different options and adjustments that you can use to continue strength training an injured area or body part in a safe, sensible and pain-free manner. It should be noted that these methods are intended for those injuries that aren't viewed as being serious or extremely painful. As such, make sure that you receive approval from a certified sports medical authority before initiating any rehabilitative strength training.

Lighten the Resistance

If you want to continue training an injured body part, your first step is to reduce the amount of weight being used. Let's suppose that your patellar tendon hurts when you do the leg extension machine with your normal training weight.

Reducing the amount of weight will produce less stress on your tendon and perhaps allow you to perform the exercise in a pain-free manner.

The 50-Degree Chest machine bypasses the wrist area to allow upper body training even with a wrist injury.

The amount that the weight is reduced will depend upon the extent and the nature of your injury.

Nautilus equipment allows you to select and change a resistance easily by moving the selector pin from one level of resistance to another. Furthermore, many of the machines have "user friendly" weight stacks that are located at your side. This feature enables you to adjust the resistance while seated or lying without getting off the machine.

Reduce the Speed of Movement

If pain-free exercise is still not possible even after reducing the amount of weight, your next move would be to slow down the speed of movement. This may involve raising the weight in about 4 to 8 seconds instead of the traditional 1 to 2 seconds. Reducing the speed of movement will decrease the amount of stress placed on a given joint. Slowing down the speed of movement will also necessitate using a reduced amount of weight, thereby lowering the stress even further.

Unlike some equipment, Nautilus machines have an unrestricted speed of movement. This allows you to adjust your training velocity according to your immediate needs — even during the middle of an exercise.

Change the Exercise Angle

If pain persists during certain exercises involving an injured body part, you can try to change the angle at which you perform the movement. This option can be used with many exercises for your upper body, particularly those involving the shoulder joint. Let's say that you have slight shoulder pain when doing a pressing movement like the Bench Press. In some cases, if the angle of the exercise is changed to that of the Incline Press, Decline Press or Seated Dip, there will be less stress on the shoulder joint.

Pulling movements in which your arms are extended above your head, such as the Torso Arm, may also exacerbate shoulder pain in some people. Often the pain is characterized as a tightness or a pinching in the shoulder joint. Generally, the discomfort can be lessened by changing the angle of the pull. This is accomplished by performing a pulling movement to the front part of your torso. In this case, the Compound Row unit can be substituted to affect the same muscles.

Use a Different Grip

In the case of the shoulder joint, there is often less stress when a different grip is used. Again let's say that you have slight pain when doing an exercise such as the Bench Press. It is quite possible that there will be a significant reduction in pain by simply changing the grip to one in which your hands are "parallel," i.e. palms facing each other, such as the Decline Press or Seated Dip.

Herein lies another advantage of Nautilus over conventional equipment such as barbells or dumbbells. Nautilus equipment allows you to vary your grip and hand positioning at your convenience without any loss of technique or function.

Perform Different Exercises

Yet another option for rehabilitative strength training is to perform different exercises that use the same muscle groups. For instance, if you simply cannot perform a Super Pullover without experiencing pain or discomfort, then perhaps a different exercise can be used that works the same muscles in a pain-free manner. In this case, you can substitute a Behind Neck machine or a Rowing Back to involve the same muscles as the Pullover, namely your upper back or "lats."

Bypass the Injured Area

One of the biggest advantages of Nautilus equipment is that it allows you to exercise above or below an injured area. Suppose you injured your wrist and as a result, find pushing movements for your upper torso difficult and uncomfortable with

free weights. In this instance, you could still perform a variety of Nautilus movements that target your upper body's pushing muscles, i.e. your chest, shoulders and triceps. Among the exercises that bypass your wrist area are the 10-Degree Chest, 50-Degree Chest, Neck and Shoulder, Lateral Raise and Multi-Triceps. As a matter of fact, you could perform those movements and others even if your wrist was in a cast.

In addition, if your leg was immobilized with a cast from your knee to your ankle, you wouldn't be able to perform any traditional hip exercises with free weights such as squats and deadlifts. However, access to Nautilus equipment would permit you to bypass your knee area to exercise your hips, despite the cast, with the Hip Abduction and Adduction machines.

Limit the Range of Motion

There's a possibility that pain occurs only at certain points in your range of motion such as the starting or the mid-range position of the movement. In either case, you can restrict that exercise's range of movement. For example, if pain occurs at the starting position of a movement, then you should stop short of a full stretch; similarly, if pain occurs at the mid-range position, then you should stop short of full muscular contraction. As your injured area heals over a period of time, you can gradually increase your range of motion until you obtain a full, pain-free range of motion.

Several Nautilus machines, such as the Leg Extension and the Lower Back, offer an optional range limiter, and one machine, the Hip Adduction, has a standard range of motion adjustment. This enables you to restrict your range of motion in a precise, repeatable manner. As a matter of fact, you can adjust the range of movement in fractional increments without getting off the machine!

Exercise the Good Limb

If all else fails, you can still exercise your unaffected limb. For example, suppose you had knee surgery and as a result, your left leg was placed in a cast from your mid-thigh to your ankle. Obviously, you would not be able to perform any exercises below your left hip joint. However, you can still strength train all the muscles on the right side of your lower body. This is important because some research has shown that training one side of your body will actually affect the muscles on the other side of your body! Although experts aren't exactly sure why this occurs, its results have been documented. This phenomenon has been dubbed "indirect transfer" or "cross transfer."

Nautilus offers many machines that can be performed with one limb at a time in a comfortable fashion. Numerous machines are also equipped with independent movement arms that allow you to train your limbs separately if needed.

Exercise Unaffected Body Parts

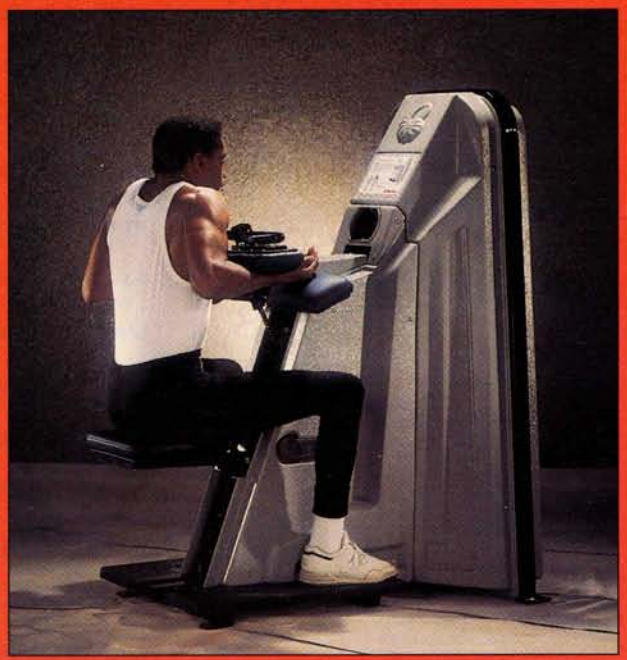
Even though you may not be able to exercise an injured area due to an unreasonable amount of pain or discomfort, you can still perform movements for your uninjured body parts. So if you have a knee injury you can still perform exercises for your entire upper torso — as long as the exercises are done sitting or lying down. Likewise, if you have a shoulder injury, you can still train the muscles of your lower body along with your arms and midsection.

Pain-Free Exercise

Keep in mind that there's a distinct difference between muscular pain and joint pain. Muscular pain isn't necessarily cause for alarm. It's an indication that high-intensity work is being done and that the muscle is being fatigued.

However, joint pain is something else altogether. Localized pain in a joint usually signifies some type of structural problem. If you experience pain in your joints while exercising, you're merely aggravating your condition and perhaps even causing further damage by brutalizing the joint infrastructure.

Remember, the critical factor in the safe and careful administration of rehabilitative strength training is pain-free exercise. The fact that such a wide range of movements can be performed comfortably in the event of an injury makes Nautilus an incredibly effective and productive tool for rehabilitation.



Although many options are available to continue exercise despite injuries, severe pain or discomfort should never be overlooked.