Windsurfing

Windsurfing has a history of dispute. Its origin, disputably, started as early as 1948 with Newman and Naomi Darby's invention of a "free sail" attached to a surf board, leading to the first sail boarding. The Darbys started making and selling their "sail boards" in 1964, which incorporated a sale loosely fit into a groove on the board. Unfortunately, the idea did not take off right away and by the late 1960s the business folded.

In 1968, Jim Drake, who was a sailor, and Hoyle Schweitzer, who was a surfer, combined their sports to start the new hybrid sport, "Windsurfing." They applied for patents for their new design and started Windsurfing International. These patents led to many court cases against companies who were producing sail boards and windsurfing equipment in the 1970s and 1980s.

The rigging for the sail was attached to the board with a universal joint which allowed free movement of the sail so steering could be accomplished without the use of a rudder. The same basic design is used
By the 1970s windsurfing had taken hold in Europe. Many Europeans preferred individual sports to the traditional team sports. Manufacturers began popping up throughout Europe, leading to more patent cases. Many Americans were buying European made boards, a trend that continues today.

Windsurfing enjoyed a great period of growth during the 1980s. Racing competitions increased in popularity and equipment continued to go through changes. As equipment began to be tailored to competitive windsurfers during the 1990s the recreational windsurfer found it harder to get into the sport. Windsurfing began a slow decline.

Recent developments in windsurfing equipment and a return focus on recreational windsurfing, has helped the sport enjoy growth again. Light-wind windsurfing and cruising are ideal for beginners and recreational windsurfers. The more adventurous windsurfers might try high-wind, slalom, bump & jump, and wave sailing. The board style is determined by the type of sailing the user will be doing.

**Anatomy Involved**

Windsurfing can be enjoyed by people of all shapes and sizes, but a basic level of conditioning is important. Windsurfers should be able to swim in rough surf and be able to support themselves on the board while holding the rigging in place.

Lower body and core strength are important for the balance needed for windsurfing. Upper body strength is also important for controlling the sail in steering. Cardiovascular conditioning and muscular endurance are essential for successful windsurfing.

Windsurfing requires the use of the following major muscles:

- The muscles of the upper legs and hips; the gluteals, the hamstrings, and the quadriceps.
- The muscles of the lower leg; the gastrocnemius, the soleus and the anterior tibialis.
- The core muscles; the rectus abdominus, obliques, and the spinal erectors.
- The muscles of the shoulder girdle; the latissimus dorsi, the teres major, and the deltoids.
A solid strength and conditioning program, as well as a good stretching routine, will help the windsurfer stay on top and keep clear sailing ahead.

### Most Common Windsurfing Injuries

As with any water sport, drowning is always a concern. Along with this possibility, the faster moving high-wind windsurfing can result in other water related injuries such as aspiration of water and eardrum ruptures. Traumatic injuries make up the majority of windsurfing injuries, although chronic injuries may still occur.

Windsurfing, when proper safety equipment is used, is relatively safe, but injuries do occur. Some common injuries associated with windsurfing are ankle sprains, shoulder dislocation, Lisfranc fracture dislocation, and lower back pain.

- **Ankle Sprains:** Since the foot is fixed in straps on the board, falls from the board can result in ankle sprains due to violent twisting of the foot. When the ankle is rotated beyond its normal range of motion the ligaments become stretched and torn. This leads to inflammation and swelling in the joint, pain and tenderness over the ligament, and pain with weight bearing. Sprains may occur on either side of the ankle and in a high or low position depending on the rotational direction and movement of the foot. Ice, immobilization, and elevation may relieve some of the pain. An x-ray may be required to rule out a fracture, especially when a large amount of swelling is present. Recovery time ranges from 4 to 6 weeks in most cases.

- **Shoulder dislocation:** Holding the rigging while falling may put the shoulder in a weak position and may result in a dislocation. The humerus drops out of its normal position in the shoulder joint, stretching and tearing the ligaments and tendons. If the shoulder remains out of position it can cause long term damage. Subsequent dislocations occur easier due to the stretched ligaments. Most dislocations can be reduced non-surgically, although they do still require medical
attention. Ice, immobilization of the arm, and removal from the activity are important initial steps in the treatment of a shoulder dislocation. Recovery time varies depending on the ligament involvement, from 4 weeks to as many as 8 weeks or more for return to normal activity.

- **Lisfranc Fracture Dislocation:** The Lisfranc joint, the tarsometarsal joint, was named for a field surgeon in Napoleon's army who first identified this joint as an amputation option. The injury with the same name has little to do with amputation, but it does involve this same joint. This fracture, or dislocation, occurs when the foot gets caught in the strap on the board and the bones in the mid-foot become dislocated, with possible associated fracture of the metatarsals. Due to the weight bearing set-up of the foot this injury can be very debilitating, reducing the ability of the foot to distribute the weight effectively. Pain, tenderness, swelling, deformity, and inability to bear weight may all accompany this injury. Ice, compression, support, and elevation are all initial steps in treating a Lisfranc fracture dislocation. An x-ray may be required to determine the extent of the injury. As with any dislocation or fracture, the amount of soft tissue and bone involvement will determine the length of recovery time.

- **Lower Back Pain:** The prolonged lumbar lordosis position assumed by windsurfers as they grip the rigging, especially in low-wind surfing and cruising can lead to chronic lower back pain. The muscles become tight and put stress on the vertebrae they are attached to, causing pain. Stretching and frequent breaks will help alleviate this pain.

**Injury Prevention Strategies**

Proper equipment, good overall conditioning, and lessons to learn the sport before starting are all important preventative measures that should be practiced by all windsurfers.

- Use of personal flotation devices and practice swimming in different surf conditions will help prevent drowning and near-drowning injuries.

- Frequent breaks and changing positions during long periods of windsurfing will help prevent the muscles from becoming tight and causing pain.
• A good overall conditioning program to strengthen the muscles to protect the joints will also help prevent many of the traumatic injuries.

• Proper sizing of the equipment for the activity and making sure the foot can release easily from the strap will also prevent some of the lower extremity injuries.

• A solid overall stretching routine, with extra work for the lower back and hamstrings, will also help the windsurfer avoid many of the injuries incurred during their activity.

The Top 3 Windsurfing Stretches

Below are 3 of the most beneficial stretches for windsurfing. Obviously there are a lot more, but these are a great place to start. Please make special note of the instructions beside each stretch.

**Reaching-up Shoulder Stretch:**
Place one hand behind your back and then reach up between your shoulder blades.

**Rotating Stomach Stretch:**
Lie face down and bring your hands close to your shoulders. Keep your hips on the ground, look forward and rise up by straightening your arms. The slowly bend one arm and rotate that shoulder.
towards the ground.

**Kneeling Quad**

**Stretch:** Kneel on one foot and the other knee. If needed, hold on to something to keep your balance and then push your hips forward.