

Stretch Your Way To The Top

Just returning from the Intercollegiate Bowling Championships (**IBC**) I had many thoughts fresh on my mind. Originally, I wanted to put together a training routine for bowlers who travel a lot. Instead, **BTM** will delve into a three-part program of stretching exercises that can be done while on the road or in the home. My decision was made after discussing stretches and exercise with a good friend, **Dan Dorion**, who commands the **Saginaw Valley State University** bowling team. In fact, the former national collegiate champions lead by the amazing **Kurt Pilon** finished second to **Nebraska** in the men's division at the **IBC**. Congratulations to both of you.

Stretching as exercise is often overlooked or downplayed in today's society of exercise phobias. The routines are generally simple, stretches easy to learn, and availability is endless, yet still not given the proper acknowledgment it deserves. In the sporting realm, though, stretching has become a major element added to the athletes training routine, and bowlers should be no exception. Baseball pitchers stretch the shoulder and rotator cuff, football players the hamstrings and arms, hockey players stretch hips and thighs, golfers trunk and upper torso. Bowlers have stretching needs too and we intend to address them.

Stretching And Flexibility

Stretching in itself is a form of exercise. Though not vigorous like aerobic activity or strenuous as strength training, it has its place in the training world. Amateur athletes and recreational exercisers often overlook stretching alike. Thought of as "a waste of time" or "unnecessary," moderate stretching has lost the interest of the public. Fortunately for us exercise advocates, just look at any professional sport team or individual and you will most often see a stretching routine incorporated into their training or precontest preparation. So, have professional athletes discovered something we are unaware of? No, they have just developed and adhered to the **flexibility training philosophy** suitable for their sport specific needs.

Flexibility Training

Stretching can be done in the confines of the home, while traveling on tour, or even at work on a short break. Flexibility training enhances physical fitness by optimizing learning, practice, and performance of skilled movements. Stretching a given muscle or group increases muscular and joint specific flexibility. In turn, improved flexibility reduces the risk of sprains and strains, soreness and tensions, and the severity of painful menstruation (dysmenorrhea). Specific to bowling and many other sports, a lack of flexibility hinders the natural motions required for skill execution. Bowlers should be aware that poor flexibility would restrict the smooth flow of the pendulum arm swing. It may also tend to bump the swing away from the body and avert a long fluid extension during the follow through. Stiff joints prevent a good deep knee bend, disallow forward pelvic tilt, and restrict the ability to cup and relax the wrist for different release positions. **Finally, again specific to bowlers, poor flexibility prevents the proper and continuous execution of crisp clean shots.**

Stretching has fewer inherent risks compared with strength training or aerobic exercise. Overtraining is improbable while stretching and the likelihood of an injury is minimal. Overstretching is a common fear of many beginners. Not to worry, the body has many internal mechanisms that protect itself from overstretching injuries. When the body is tensed while stretching, the **stretch reflex**, an internal safety mechanism, often occurs and the body fights the stretch. This is why relaxation is important while stretching since it allows the body to reduce tensions enabling the exerciser to stretch further.

The Stretching Technique

Static Stretching is my favorite technique because it can be done anywhere without another's assistance. Though other types of stretching such as **ballistic**, **PNF**, **Mates**, **dynamic**, and **active** exist and have a place in the training program, we do not want to expand on them presently. **Static stretching** allows the individual to hold a stretched position for a set time creating semi permanent changes in muscular length inducing muscular relaxation. Static stretching is properly executed following the progression list as follows:

1. Position the body on a flat surface such as a table, bed, or floor.
2. Take 1-2 minutes to relax the entire body by slowly closing the eyes and inducing deep breathing.
3. Begin using self-assistance; stretch the specific muscle to the furthest point while maintaining form.
4. Hold this position for 15 seconds, then slowly return to the starting position.
5. Repeat steps one through four two-additional times.

Hamstring Stretching

The posterior portion of the upper leg consists of the hamstring and gluteal muscles. The gluteal muscles will be excused from this specific routine because of our focus on the hamstrings. The hamstrings consist of the **semitendinosus**, **semimembranosus**, and **biceps femoris** muscle. Each originates on the **ischial tuberosity** (bony portion at the pelvic hip region) and inserts on the upper **tibia** and/or **fibula** (lower leg bones).

The hamstring muscles contract to flex the knee joint by pulling the lower leg closer to the upper leg along with extending the hip. These muscles support and assist the trunk and hip region during all movements involving forward bending and deep knee bends. They are usually 20% - 30% weaker than the quadriceps muscles and are therefore often subject to greater strains and sprains. Stiff hamstrings often lead to lower back sprains and strains that are a common occurrence in our society.

The following two hamstring stretches should be incorporated into the everyday training routine. Follow the previously described **Static Stretching** guidelines during the routine.

Reclining Single Leg Stretch

Reclined supine or flat on the back, arms and legs fully extended (diagram #1). Begin by raising one leg off the floor and clasp the hands behind the knee joint. Keep the other leg flat on the ground during the movement. Using the assistance of the arms, pull the leg toward the upper body stretching the hamstring muscles (diagram #2). Maintain a straight leg and pull to the furthest point withstanding the stretch. Hold the stretched position for 15 seconds before slowly relaxing the leg back to the floor. Repeat the stretch two additional times, then switch legs.

Reclined Trunk Flexion Stretch

Reclined supine or flat on the back, arms and legs fully extended (diagram #3). Begin by raising the upper torso off the floor and slowly leaning forward toward the feet. The back should be kept straight throughout the stretch. Keep the legs flat on the ground during the movement. Use the arms to reach toward the feet (not grabbing the feet) while bending forward (diagram #4). Hold the stretched position for 15 seconds before slowly relaxing the upper torso back to the floor. Repeat the stretch two additional times.

Each stretch should be done while relaxing on a flat surface. You may want to dim the lights to simulate a nighttime experience. Stretch three specific times holding each for a 15-second count. This simple routine can be done daily as long as your nutrient and water intake are sufficient and the body receives the proper rest required for recovery. Usually 6-8 hours daily. Remember, if any complications arise during or due to any of the prescribed exercise, consult a medical provider immediately.

Next month, part II, stretching the shoulder region.