Guide to Prevention of Sports Injuries

ORLANDO HEALTH®

Jewett Orthopedic Institute

Maintaining an active lifestyle offers a number of benefits for your physical and mental health.

While exercise and sports-related activities often have a positive impact on our lives, they can also lead to serious injury. The last thing you want is to disrupt your exercise routine with an injury, requiring you to start all over again once you're healed. Following are some tips to help you remain injury-free.

Tips for Prevention of Sports Injuries

Warm Up

Always take time to warm up and stretch before a workout. A warm up gets your body ready for exercise by gradually increasing your heart rate and loosening your muscles and joints. Warm up by walking, cycling or jogging for 5 to 10 minutes. Once your body is warm, do some stretching to increase flexibility.

Increase Your Range Gradually

A key to preventing injuries is to gradually build the intensity, duration and frequency of your workouts. Avoid pushing yourself too hard, too fast. Follow the 10 percent rule to increase activity in increments of 10 percent per week.

Exercise Consistently

Avoid the "weekend warrior" syndrome that compresses exercise into two days for the entire week. Try to get at least 30 minutes of moderate physical activity every day.

Vary Your Workouts

Follow a balanced fitness program that incorporates cardiovascular exercise, strength training and flexibility. This will help decrease your chance of injury. Avoid overusing one set of muscles — repeating the sample muscle movements frequently can lead to overuse and injuries like shin splints or tendonitis.

Listen to Your Body

Adjust your activities if your body is showing signs of too much stress. The "no pain, no gain" mentality can have damaging effects. Pain in your muscles or joints is a sign that you should cut back.

Cool Down

When ending your exercise, remember to cool down with slow, gentle stretching. Hold each stretch for 30 seconds.

Causes of Sports Injuries

While sports injuries are highly prevalent among athletes, anyone who engages in physical activity can be injured.

Common causes of sports injuries include:

- Not warming up or stretching properly before exercising
- Using inadequate exercise equipment
- Poor technique while exercising
- Overtraining or pushing yourself too hard
- A traumatic accident

When to Ice or Heat an Injury

Ice

- Apply ice for the first 72 hours following injury to reduce inflammation as long as swelling is present or reoccurring.
- Apply ice for 20 minutes with a break of at least one hour before reapplication.
- Commercial ice packs should never be put directly on skin! Use a paper towel or thin fabric.

Heat

- Use heat to treat an injury once the initial swelling has subsided. Heat aids in increasing blood flow to the area to help reduce stiffness and pain.
- Apply heat to the injured area for 15-20 minutes and use as needed.
- Avoid overheating or burning the skin by adding toweling between the hot pack and the skin as needed.

How to Hydrate Correctly

Adequate hydration is an important part of preparing for sports activity or training in any climate and will help you avoid heat illnesses and injury.

Fluid Consumption

Pre-exercise Drink water throughout the day. Carry a water bottle with you. Drink 10-14 ounces of water 3 hours before activity and an additional 10 ounces 10-15 minutes before activity.

During exercise Drink at every break during activity, even if you do not feel thirsty. Average consumption should be 8 ounces every 15 minutes.

After exercise Drink 16-24 ounces for every pound of weight lost during activity. This should be over a period of time.

Hydration Tips

- Thirsty? You're already dehydrated!
- Sports performance is affected when as little as 3% of body weight is lost due to fluid loss.
- Weigh yourself before and after workouts to determine how much rehydration is needed after a practice. Your weight should be back to pre-activity weight of the previous day before returning to activity.
- You'll sweat more on hot, humid and/or windy days.
- Check your urine color daily. Goal: pale, clear yellow. Dark, cloudy yellow? Drink more!
- Eat fruits and vegetables high in water content such as cucumber, zucchini, strawberries and watermelon.
- Vital nutrients such as potassium and sodium are depleted as you sweat. Consume salty snacks to replace sodium along with potassium-rich foods such as bananas and sweet potatoes.
- Avoid sodas, caffeinated beverages and energy drinks. Limit consumption of sports drinks to just before, during and right after activity.

Question: Water or Sports Drink?

Sports Drink: The Good

- Will adequately hydrate the body
- Contains carbohydrates and nutrients to replace what is lost during activity
- Easy to transport and digest during activity

Sports Drink: The Bad

- May contain excessive amounts of sugar
- Should not be consumed outside of activity due to the high amount of calories

Answer:

Drinking both water and sports drinks will support your body through long workouts.

Minimize "the bad" in sports drinks by choosing ones that are sugar-free or low in sugar and avoid drinking them when you are sedentary. Mix water into sports drinks, or alternate between drinking water and sports drinks, to experience the maximum benefit from each.

Types of Sports Injuries

At the Orlando Health Jewett Orthopedic Institute, our team of expert specialists is dedicated to providing comprehensive care for a variety of sports injuries affecting patients of all ages. Common sports injuries we treat include, but are not limited to:

Lower Body Injuries

Knee Ligament Injuries

The knee is made up of three major bones and four ligaments. The ligaments are strong bands of tissue that connect the bones together and keep the knee stable. The four major knee ligaments include:

Anterior cruciate ligament (ACL) Located in the center of the knee, this ligament controls the rotation and forward movement of the tibia, or shinbone.

Posterior cruciate ligament (PCL) Also located in the center of the knee, the PCL controls the backward movement of the shinbone.

Medial collateral ligament (MCL) This ligament, which extends from the lower thighbone to the upper shinbone, provides stability to the inner knee.

Lateral collateral ligament (LCL) Located on the outer part of the knee, this ligament connects the thighbone to the fibula, which is the small bone located in the lower leg. Similar to the MCL, the LCL's primary function is to provide stability to the knee.

Two of the most common knee injuries include sprains or tears to the ACL and PCL ligaments. An ACL injury often occurs when the ligament is stretched due to an unnatural twisting motion, whereas a PCL injury may result from a sudden, direct impact, such as a football tackle. While ACL and PCL tears commonly occur during sports-related activity, these injuries may also be the result of traumatic injuries, automobile accidents or routine exercise.

When an injury to a knee ligament occurs, it is common to hear a popping sound, and the leg will often buckle. While pain may be limited, surgical reconstruction is often required to repair the ligament and fully rehabilitate the knee.

In addition to major knee ligament injuries, our sports medicine specialists are also skilled in diagnosing and treating several other knee injuries, including meniscal tears, arthritis, tendonitis and cartilage tears. We also specialize in rehabilitating common knee overuse injuries, including:

Shin splints Shin splints are a symptom associated with stress fractures or irritated and swollen muscles in the shin. Shin splints are commonly caused by running downhill, running in worn-out footwear or playing a sport that involves frequent starts and stops.

Runner's knee This injury occurs due to inflammation in the patellar tendon, which is located at the front of the knee. Runner's knee is highly common in individuals who participate in a sport or exercise routine that involves a significant amount of jumping or bending of the knee.

Regardless of the type of knee injury, our goal is to achieve maximum joint preservation, while restoring optimal strength and mobility to the knee.

Hip Injuries

Your hip is a ball-and-socket joint where the thighbone and pelvis meet. In a normal, healthy hip, a layer of cartilage allows the ball, or the upper end of the thighbone, to glide smoothly within the socket. When damage or injury occurs to the joint, the hip no longer moves smoothly as it should. Several common hip injuries include:

Hip impingement This condition occurs when the bones of the hip are abnormally shaped and do not ft together properly. This causes the hip bones to repeatedly rub against each other, resulting in irritation and damage to the joint. Hip impingement is commonly caused by bone overgrowth, also known as bone spurs. As the bone spurs develop, the cartilage in the joint may wear down or even tear, leading to osteoarthritis or serious injury.

Soft tissue injuries A soft tissue injury is the result of damage to the ligaments, tendons or muscles surrounding the hip. Common soft tissue injuries include sprains, strains, tendonitis, contusions and stress injuries. While these injuries often occur due to a sudden fall or impact to the body, a soft tissue injury can also be caused by repeated overuse during exercise or sports-related activity.

Hamstring injuries The hamstring is a group of three muscles located along the back of the thigh. When one of these muscles is strained or pulled, a hamstring injury occurs. Hamstring injuries are highly common among individuals who play a sport that involves sudden starts and stops. While surgery is rarely necessary to repair a hamstring injury, it is important to consult a specialist to ensure the muscle heals properly.

Depending on the severity of the condition, hip injuries can often be treated through physical therapy and activity modification. However, if the pain becomes too intense or the hip joint becomes deformed, surgery or a total hip replacement may be necessary.

Ankle Injuries

The ankle is a joint where three bones meet — the two lower leg bones, called the tibia and fibula, and the talus, which is the foot bone that sits just above the heel. The ankle joint, which is held in place by ligaments, allows for the up-and-down movement of the foot. When the ankle joint is twisted or turned too far out of its normal position, an ankle injury may occur. Two of the most common ankle injuries include fractures and sprains.

While most ankle injuries occur during sports-related activity, a fracture or sprain can also result from wearing unstable footwear or walking on an uneven surface. An ankle injury may lead to severe pain, swelling or bruising, and it is often difficult to put body weight on the joint. When a sprain occurs, the ankle will typically feel stiff. If the joint is fractured, the ankle will look out of place and feel tender to the touch.

If a fracture or sprain is ignored or not treated properly, long-term, chronic problems can occur. These problems may include ankle weakness, repeated injury or osteoarthritis. It is important to see an experienced sports medicine specialist as soon as possible to ensure that the injury is evaluated and treated properly.

Upper Body Injuries

Shoulder Injuries

The shoulder joint comprises three bones — the collarbone, the shoulder blade and the upper arm bone. Because it has the largest range of motion of any joint in the body, the shoulder can also be highly unstable. This instability can lead to several problems, including sprains, dislocations, separations, fractures and tendonitis. Shoulder injuries are generally grouped into two categories, including:

Instability injuries When the shoulder joint is forced out of its normal position, an instability injury occurs. This condition can result in a dislocation of the joint and cause intense pain when the arm is raised. This type of injury often feels as if the shoulder is "slipping" out of place. If left untreated, an instability injury can cause the labrum, which is the thick layer of cartilage surrounding the shoulder joint, to tear. Instability injuries are highly common among young athletes, particularly those who perform repeated overhead arm motions.

Impingement injuries This type of shoulder injury is caused by the rubbing or irritation of the shoulder muscles against the top part of the shoulder blade. An impingement injury can occur due to repeated lifting or overhead arm motions. Impingement causes inflammation in the shoulder and may eventually lead to a more serious injury.

One of the most common shoulder injuries is a damaged or torn rotator cuff. The rotator cuff is a network of muscles and tendons that covers the upper arm bone and surrounds the shoulder joint. It keeps the upper arm bone firmly attached to the shoulder blade, and it helps you lift and rotate your arm. When the rotator cuff is damaged or torn, the tendons are no longer fully attached to the bone, making it painful to perform everyday activities. There are several factors that may contribute to rotator cuff tears, including:

- **Repetitive stress** Rotator cuff injuries are most common among people who perform repetitive overhead or lifting motions. Many athletes, including tennis players and baseball pitchers, are particularly susceptible to rotator cuff tears. However, other activities, such as painting, carpentry and weightlifting, can also increase the risk of rotator cuff injury.
- **Aging** Those over the age of 40 are at greater risk for rotator cuff injury due to the normal wear and tear that comes with aging.
- **Bone spurs** Also known as bone overgrowth, bone spurs can develop on the underside of the bone on top of the shoulder. As we lift our arm, the bone spurs can irritate the rotator cuff, causing the tendons to weaken and possibly tear.
- **Swimmer's shoulder** A common rotator cuff injury that occurs among athletes is known as swimmer's shoulder. Swimmer's shoulder is athletic overuse injury that occurs when the rotator cuff becomes inflamed. It is highly common among swimmers, as well as baseball and softball players, due to repeated overhead arm motions.

Elbow Injuries

The elbow is a joint that is made up of three bones. It bends and straightens like a hinge, which allows you to rotate your forearm and turn your hands up or down. When you bend your elbow, you can feel the bony tip, called the olecranon. The olecranon, which has little protection from the surrounding muscles or tissue, can easily break because of a direct blow or fall.

An elbow fracture often leads to intense pain, swelling, numbness in the fingers, bruising and an inability to straighten the elbow. While an elbow injury can be painful, not all fractures require surgery. A splint, sling and routine visits to a physical therapist may be sufficient to heal the injury. However, if the bone has penetrated the skin or the fracture is displaced, surgery may be required.

In addition to elbow fractures, our sports medicine specialists are also skilled in treating and rehabilitating common elbow overuse injuries, including:

Tennis elbow Tennis elbow is a painful condition that occurs when the tendons in the elbow become inflamed. This injury is caused by repetitive movements of the wrist and arm, and it is highly common among those who play racquet sports.

Little league elbow This injury occurs when the tendons and ligaments in the elbow begin to pull one of the growth plates away from the bone. Caused by a repetitive throwing motion, little league elbow is highly common among children and adolescents, particularly those who do not give the arm ample rest or use proper form when throwing.

Ulnar collateral ligament injuries The ulnar collateral ligament is one of the primary ligaments located in the elbow. Its function is to connect the bones together and provide stability for the elbow. The ulnar collateral ligament can become stretched or torn due to the stress of repetitive throwing motions. As the ligament continues to weaken over time, tiny tears or even a complete rupture can occur. While this injury is common among baseball players and other athletes, it can also be caused by a fall on an outstretched arm.

Biceps Injuries

In addition to treating shoulder and elbow injuries, our highly skilled physicians also specialize in treating soft tissue injuries, including tears and strains to the biceps muscle and tendons. The biceps muscle, which is located in the front of the upper arm, helps you bend your elbow, rotate your arm and keep your shoulder stable. The tendons attach your biceps muscle to the bones in the shoulder and elbow.

When a strain or tear to the biceps occurs, it is common to lose strength in the arm. It may also be difficult to turn your arm from palm up to palm down. While a biceps tear or strain can be painful, simple treatments, such as physical therapy, are usually sufficient to heal the injury. In more severe cases, however, surgery may be required to repair a complete tear in the muscle or tendon.

Head Injuries

Concussions

A concussion is a traumatic brain injury that is caused by a sudden impact to the head. While the effects are usually temporary, this type of injury alters the way your brain functions for a brief period of time. Following a concussion, a person may experience problems with coordination, balance, memory, judgment, concentration as well as headaches.

Concussions are highly common among athletes, especially those who play a contact sport like football. However, a concussion can also be caused by a simple fall or traumatic accident that violently shakes the head and upper body. Although concussions are often described as mild brain injuries, the effects can be serious, particularly if an individual suffers multiple concussions.

Through comprehensive neurocognitive assessment and brain-mapping techniques, our team works quickly to diagnose concussions and provide personalized treatment plans for patients of all ages.

Why seek a professional opinion on sports injuries?

Whether you have an enduring overuse injury or a sudden, acute injury, it is never a good idea to work through the pain. **If you experience persistent pain during a particular activity or movement, it is important to seek treatment from an experienced sports medicine specialist, particularly if:**

- You cannot put any body weight on the affected area
- The injury causes severe pain, swelling or numbness
- The pain or ache of an old injury persists and is accompanied by increased swelling or joint instability

Regardless of your sports injury or condition, it is always beneficial to seek a professional opinion. Our expert specialists can quickly identify the cause of the injury and prevent further damage by developing a specialized treatment plan that meets your specific needs.

Sports Injury Treatment at Orlando Health

When you are faced with a sports injury or condition, expert care is crucial to maintaining optimal health and a high quality of life.

At the Orlando Health Jewett Orthopedic Institute, our multidisciplinary sports medicine team is committed to providing exceptional orthopedic care to help you return to your active, pain-free lifestyle as soon as possible. Whenever possible, we utilize nonoperative methods to treat and rehabilitate your sports-related condition. If surgery is necessary, our team will ensure you are informed and at ease throughout the entire treatment process.

Nonsurgical Treatment

Physical therapy is a nonoperative form of rehabilitation used to treat a variety of sports injuries. It may be prescribed in place of surgery or as a post-surgery treatment option. Physical therapy helps to manage acute or chronic pain, and it allows the patient to regain strength, motion and function. When the injury is not severe, physical therapy is typically the most effective treatment option. Physical therapy at the Orlando Health Jewett Orthopedic Institute is performed by a team of skilled therapists who are specially trained to rehabilitate sports-related injuries. Our therapists work closely with our sports medicine physicians throughout the entire treatment process to ensure the best outcomes for our patients.

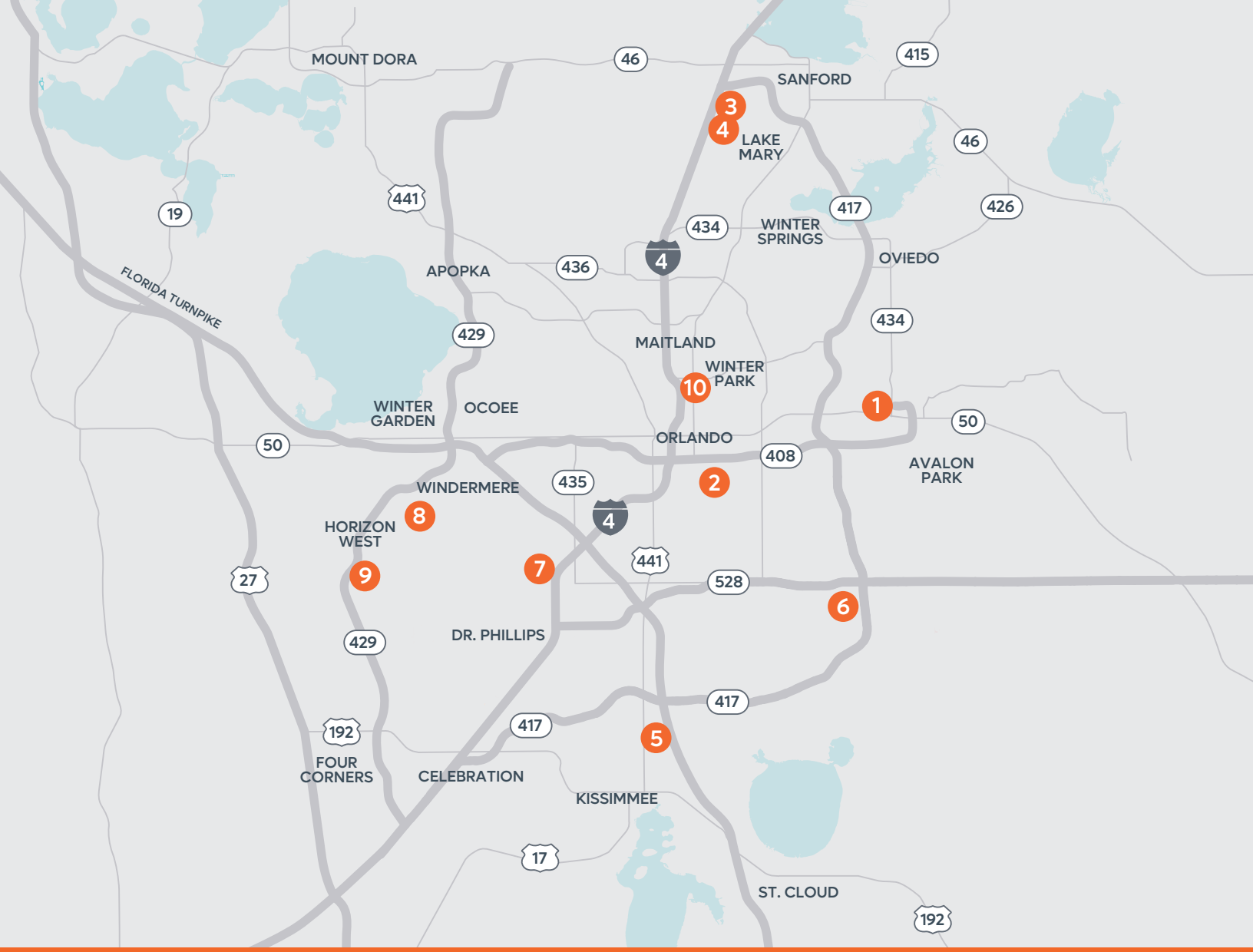
Surgical Treatment

When nonoperative treatment methods fail to fully rehabilitate a sports injury, surgery may be necessary to restore full function and strength. If surgery is required, our experienced specialists utilize minimally invasive surgical procedures whenever possible to treat your condition. With our state-of-the-art technology and highly skilled surgical team, we make it possible for you to return to your active lifestyle quickly and safely.

If you are experiencing severe pain, swelling or numbness while engaging in physical activity, contact us at **(321) 843-4800** to schedule an appointment.

Our team will ensure you are informed and at ease throughout the entire treatment process.

Timely and proper evaluation and treatment are critical to ensuring the best possible outcome for your sports injury or condition. Our knowledgeable and experienced sports medicine specialists are here to help.



Locations

1 Alafaya/Waterford Lakes*
1900 N. Alafaya Tr., Suite 900
Orlando, FL 32826
(407) 629-2444
Walk-in Hours
Mon – Fri | 8:00 am – 4:00 pm

2 Orlando Health Jewett Orthopedic Institute Downtown Complex – Medical Pavilion*
60 Columbia St.
Orlando, FL 32806
(321) 843-5851
Walk-in Hours
Mon – Thu | 8:00 am – 7:00 pm
Fri | 8:00 am – 4:00 pm
Sat | 9:00 am – 3:00 pm

3 Lake Mary - Platinum Point*
701 Platinum Pt.
Lake Mary, FL 32746
(407) 629-2444
Walk-in Hours
Mon – Fri | 8:00 am – 4:00 pm

4 Lake Mary - Rinehart Road
392 Rinehart Rd., Suite 3000
Lake Mary, FL 32746
(321) 843-5851

5 Osceola
1001 E. Osceola Pkwy.
Suite 260
Kissimmee, FL 34744
(321) 843-5851

6 Randal Park/Lake Nona
10155 Dowden Rd., Suite 301
Orlando, FL 32832
(321) 843-5851

7 Spring Lake
7243 Della Dr., Suite I
Orlando, FL 32819
(321) 843-5851

8 Windermere*
5151 Winter Garden Vineland Rd.
Suite 206
Windermere, FL 34786
(407) 629-2444
Walk-in Hours
Mon – Fri | 8:00 am – 4:00 pm

9 Winter Garden
17000 Porter Rd., Suite 205
Winter Garden, FL 34787
(321) 843-5851

10 Winter Park*
1285 Orange Ave.
Winter Park, FL 32789
(407) 629-2444
Walk-in Hours
Mon – Thu | 8:00 am – 7:00 pm
Fri | 8:00 am – 4:00 pm
Sat | 9:00 am – 3:00 pm

* Walk-ins available

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