The Agony of Da-Feet
How to Walk Away From a Foot Operation on Your Own Two Feet!

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If you’re reading this book, then chances are that your feet and/or ankles hurt. You’re not alone. Studies have shown that as many as 4 out of every 5 people will develop some type of foot or ankle problems during their lifetime. What I’ve never quite understood is why people think that it’s not normal for their heads or stomachs to hurt, but it’s completely normal for their feet to hurt. If you’re one of these individuals, this book is especially dedicated to you and written for you.

My goal and purpose in life has always been to help people. The way that I felt I could best do this is by specializing in the treatment of the most abused part of the human body…the foot. In 1978, I was a third year student at the Illinois College of Podiatric Medicine in Chicago, Illinois and taking my first courses in foot and ankle surgery. I was attending lectures and observing the performance of traditional surgical procedures when a feeling came over me…there must be a better way.

The saying goes, “When the student is ready, the teacher will appear.” I had heard rumbling in the medical school cafeteria about an organization called The Academy of Ambulatory Foot & Ankle Surgery. In fact, I had heard that the president of this national organization actually practiced in Chicago. I decided to call him to see if I could spend a day with him in the office. The rest, as they say, is history. Rather than the grimacing look on patients faces who were in agony after foot and ankle surgery which I had observed so many times at the podiatry school and while visiting the offices of some leading Chicago area podiatric and orthopedic surgeons, this doctor’s patients had smiles on their faces and many of them took only an aspirin tablet and returned to work immediately after undergoing some revolutionary foot surgery techniques.

There have been much advancement in these techniques since then and as I write this book, I have performed an estimated 15,000 or more of these procedures. I hope that you will enjoy reading about The Agony of Da-Feet.

In Spirit, love and friendship,

Dr. Richard M. Cowin, DPM, FACFAS, FAAFAS
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Dr. Richard M. Cowin, DPM, noted podiatric surgeon, is the director of the Laser Foot Surgery Specialist in Orlando, Florida. He is an acclaimed lecturer, practitioner, and pioneer in the field of Minimally Invasive and Laser foot and ankle surgery. Dr. Cowin is board certified by The American Board of Podiatric Surgery, The American Board of Ambulatory Foot Surgery, The American Academy of Pain Management, and The American Board of Quality Assurance and Utilization Review Physicians. He is a Fellow of the American College of Foot and Ankle Surgeons and served for years as a member of its Minimal Incision Surgery Committee. He is also a Fellow of The Academy of Ambulatory Foot Surgery and has served as a board member, president, vice president, treasurer, secretary, scientific chairman, and has chaired the Standards of Care and Preferred Practice Guidelines committees. Dr. Cowin has lectured extensively in the United States, Spain, Canada, Mexico, Israel, Holland, and China and some of the papers that he has authored have been translated into many languages and have been studied by doctors around the world. You may have seen some of Dr. Cowin’s many television appearances as a medical expert on Weekend Edition, QVC, American Medicine Today, Home Shopping Network, and “Ask Dr. Rich” or read his contribution to books such as the Doctors’ Book of Home Remedies.
Minimally Invasive Foot and Ankle Surgery

It may sound simple, or even elementary, but any tissue that is not cut in surgery doesn’t have to heal. Further, it is interesting to note that bones themselves have little or no nerve supply. What does that mean to you? It means that if your foot and ankle surgeon makes a smaller rather than a larger skin incision and gets right into the bone and remodels and/or repositions that bone, chances are that you will have much less discomfort and can probably return to normal activities (including walking) much more quickly than with traditional techniques.

Today, all of us know about orthopedic surgeons performing minimally invasive arthroscopic surgery on knees and shoulders, obstetricians performing minimally invasive laparoscopic surgery and even cardiologists and nephrologists performing minimally invasive surgery on hearts and kidneys respectively.

It may surprise you to know that all the research that I have gathered and studied has led me to believe that podiatrists were the first medical specialists to perform minimally invasive surgery. The reasons for this as far as I can tell is that back in the 1970’s, most podiatrists were unable to attain hospital privileges to perform their surgery. Necessity was the mother of invention and pioneers of The Academy of Ambulatory Foot & Ankle Surgery developed procedures which could be safely and efficiently performed in the comfort of their own offices at greater convenience and lower cost to their patients.

THE FOOT CARE REVOLUTION had begun!
What is it?
Minimally Invasive Foot Surgery is a relatively new way to correct foot problems in which the skin incision (usually less than 1/8 inch in length) is only large enough to introduce special instruments into the offending area.

What types of foot problems can be corrected by minimally invasive foot surgery?

The most common problems are:

- Bunions
- Hammer Toe
- Callouses
- Tailor’s Bunions
- Heel Pain
- Soft Corn

Other foot problems, such as ingrown and infected toenails, can be corrected without making any skin incision at all.

What are some of the advantages of minimally invasive foot surgery?

1) Since the skin incision is so small (usually requires only a one stitch closure), scarring is greatly reduced.
2) Because of the lack of surgical tissue dissection in this type of surgery, post-operative pain may be greatly reduced.
3) Since minimally invasive foot surgery can be performed in the doctor’s office rather than a hospital or surgery center, there are several advantages:
   a) more convenient
   b) less experience
   c) less chance for certain post-operative complications
4) Since minimally invasive surgery causes less trauma to the tissues of the foot, no pins, wires, screws, or cast are generally required post operatively.
5) After the surgery is completed, a gauze and tape bandage is usually applied to the foot, and the patient is given a special post-surgery shoe to wear. Many patients are surprised to find that they can return to work and normal activities in no time at all!
LASER Foot and Ankle Surgery

Laser technology may seem like a mysterious and complicated science, but it’s really not. Think about a Laser as you would a sunbeam—did anyone ever show you the “magnifying glass experiment” when you were younger? Laser works much in the same way during surgery to treat your foot problem. Although Laser is an exciting technology, there are some limits. Research is under way, but bone problems like bunions and hammer toes cannot currently be treated with laser. I have personally been performing Laser foot and ankle surgery since 1984. Here are some of the most commonly asked questions about Laser surgery.

What is a Laser?
A Laser is a device that generates an intense beam of light—light that’s man-made and not known to occur in nature. The word Laser is an acronym which stands for: Light Amplification by Stimulated Emission of Radiation

What does a surgical Laser do?
A surgical Laser beam can cut or vaporize tissue almost instantaneously. It is so precise that the surrounding tissue is hardly affected. And the beam sterilizes and seals blood vessels as it cuts so there’s generally less bleeding, less post-operative pain and less chance of post-operative infection than with conventional surgical instruments.

Is Laser surgery a new technique?
Not at all. Lasers have been used for everything from removal of tonsils to treatment of infertility. More recently, Lasers have been used to remove tattoos and facial skin wrinkles and even to treat disc problems in the spine. Laser use in podiatry is now quite common, although not every podiatrist owns a Laser.

Does it hurt?
Many patients have reported that Laser surgery is far less painful than conventional techniques. Depending on the nature of your problem, Dr. Cowin will probably numb the area with a local anesthetic before using the Laser.

Is Laser like an x-ray?
No. There is no ionizing radiation present in the Laser beam.
Some common foot problems treatable with LASER are:

Fungal Nails: Infections of the toenails by a fungus similar to the one that causes athlete’s foot.
Warts: Benign skin growths caused by a virus. The Laser beam can be used to vaporize warts, sometimes providing permanent relief when other methods have failed.
Ingrown Toenails: Nails that grow into the flesh, causing pain and often leading to infection. The Laser can be used to prevent the offending part of the nail from regrowing.
Neuromas: A nerve growth causing burning, stinging, or sharp pain. The Laser can be used to remove the “pinched” section of nerve.
Porokeratosis: Slightly elevated, wart-like lesions that originate in the sweat glands and are often painful.
Bunions

A bunion is seen as an enlargement or “bump” on the inside of the foot near the big toe. Often, the big toe will turn and begin to point toward the second toe. Actually, a bunion forms when one of the long bones of the foot, known as the first metatarsal, becomes dislocated toward the other foot. The problem is often aggravated by narrow shoes, and a callus often forms on the side and underneath the bone and on the side of the big toe. The corrective procedure most often performed at Laser Foot Surgery Specialist is as follows: an incision approximately 1/8 inch in length is made over the “neck” of the first metatarsal bone, and using a tiny drill, a small cut is made across the bone enabling the doctor to reposition the top 1/3 of the bone to a straight position. Also, the area of the metatarsal bone where the bump was located is smoothed down. It is also necessary in most cases to “lengthen” one or more of the tendons (muscle attachments) to the big toe. In case of severe bunions, it may also be necessary to make a second cut in the bone of the big toe in order to further straighten that toe. It is usually necessary to wear a post-surgical shoe for 3 to 4 weeks after this procedure is performed with the bandage changed once a week.
The above pictures were taken of the foot of one of our patients at the time of initial consultation, and then after corrective bunion surgery performed by Dr. Cowin at Laser Foot Surgery Specialist. The pictures below are taken of a patient presented to Laser Foot Surgery Institute LLC after undergoing “traditional-type” bunion surgery by another doctor which was unsuccessful. Revision surgery performed by Dr. Cowin at Laser Foot Surgery Specialist yielded the results seen in the photo below right.
**Arthritic Big Toe Joints**

*Question:* When is a bunion not a bunion?

*Answer:* When it’s an arthritic big toe joint.

The normal range of motion for a big toe joint is 65 to 75 degrees of dorsiflexion (upward movement) and 30 to 35 degrees of plantarflexion (downward movement). When this movement is restricted due to deterioration of the cartilage in the big toe joint and/or the formation of arthritic bone spurs around that joint, the condition is called hallux limitus (limited big toe joint movement).

In more severe cases when the big toe joint is unable to move at all, the condition is called hallux rigidus (rigid big toe joint).

Many podiatrists and orthopedists treat these conditions by removing some of the bone(s) in the big toe joint and inserting “joint implants” which can be made out of plastic, metal, or both. Dr. Cowin strongly recommends against the insertion of these devices in the foot.

For most cases of hallux limitus, a minimally invasive procedure called a Valenti Arthroplasty can be performed through a tiny incision to remodel the arthritic spurs and big toe joint, allow an improved range of motion. At right are illustrations of this procedure before and after treatments. For more severe cases, such as hallux rigidus, a small portion of the base of the great toe can be removed in a technique known as a Keller Procedure.

Both of these procedures can be performed on an outpatient basis at Modern offices of Laser Foot Surgery Specialist.
Tailor’s Bunions

A tailor’s bunion (bunionette) is seen as an enlargement or “bump” on the outside of the foot near the little toe. Actually a tailor’s bunion forms when one of the long bones of the foot, known as the fifth metatarsal, becomes dislocated towards the outside of the foot. The problem is often aggravated by narrow shoes, and a callus often forms on the side and underneath the bone.

The corrective procedure most often performed at Laser Foot Surgery Specialist is as follows:
An incision approximately 1/8 inch in length is made over the “neck” of the fifth metatarsal bone. Then using a dental-type drill, a small cut is made across the bone in this area enabling the doctor to reposition the “head” of the metatarsal. Thus, the part of the bone causing the “bump” is repositioned and realigned back inside the foot in the normal anatomical position.

It is usually necessary to wear a post-surgical shoe for 1 week after this procedure is performed.
The picture above was taken of a young woman who came to Laser Foot Surgery Specialist with a moderately severe Tailor’s Bunion. Below is a picture taken one week after corrective surgery which was performed by Dr. Cowin on an outpatient basis at our office.
Calluses

A callus is an area of thickened skin located on the bottom of the foot, in most cases on the ball of the foot and/or heel. The most common cause of calluses on the ball of the foot is a “declination” of one or more of the long bones of the foot called metatarsal bones of which there are normally five in each foot. Since one or more of these metatarsal bones is/are lower than the others, the bone(s) bear more weight. A callus forms under the end of the metatarsal bone in order to protect the bone from trauma. In the case of some severe calluses, a small core or “nucleus” can be found within the callus and if present, the patient usually feels as though he/she is walking on a small pebble. The procedure most often performed at Laser Foot Surgery Specialist is as follows. A small incision (approximately 1/8 inch) is on the top of the foot at the neck of the affected metatarsal bone. Using our special drill, a small cut is made across the metatarsal bone and the metatarsal head is repositioned toward the top of the foot enough to redistribute the weight. If the callus has a “nucleus,” this is removed from the bottom of the foot with a laser and is sent to our pathology lab for analysis. In most cases, this “nucleus” is a “Porokeratoma” or a benign “plugged sweat gland.”
The diagram above is a cross-sectional look at a case of declination of the second metatarsal bone. Below are pictures of the foot of one of our patients with a callus caused by second metatarsal declination before (arrow points to callus) and after the second metatarsal bone was repositioned.

Before

After
Hammer Toes

Hammer Toes occur when the tendons and ligaments around the toes become contracted and the toes take on a “claw-like” appearance. The problem is aggravated when the toes come in contact with the top of a shoe causing “corns” to form on the tops of the toes. In severe cases, a callus can also form at the end of one or more toes. The most common method of correction at Laser Foot Surgery Specialist is as follows:

The tendon (muscle attachments) on the top and bottom of the toe are “lengthened.” Then, using a special drill, a small cut is made across one of the joints and/or the bones in the toe, allowing the joint to be realigned, and thus the toe straightened. After these procedures are performed, it is usually necessary for the patient to wear a post-surgical shoe for one week.
The above picture was taken of a woman who came to Laser Foot Surgery Specialist for treatment of her bunion and her hammer toes (arrows). The picture below was taken several weeks after corrective surgery was performed to straighten her toes and thus eliminate the painful corns which were present on the tops of her toes and which resolved completely following the procedures.
Soft Corns

A soft corn forms between the toes when the bony prominence known to doctors as the “condyle” of a toe rubs against the condyle of the adjacent toe while walking. In an attempt to protect the body, nature builds up a layer of thickened skin (a soft corn) to cushion the bony prominences. The moisture between the toes keeps the thickened skin somewhat soft, thus the name “soft corn.” If left untreated, the corns become quite painful. Although soft corns can form between any two toes, they are most often found between the fourth and fifth toes. The most common procedure used to correct soft corns at LaserFoot Surgery Specialist is as follows: A small incision is made on the top of the affected toe and, using a small drill, the condyles are smoothed down so that these prominences will not rub against one another. It is usually necessary to wear a post-surgical shoe one week after the procedure is performed.
In both of these pictures the arrows point to soft corns which resolved completely following the “smoothing down” of the condyles of the adjacent toes.
Thick Toenails

The most common cause of thick toenails is a fungus infection similar or identical to the fungus that causes “athlete’s foot.” The nail usually takes on a yellowish cast and may be difficult to cut. The problem usually becomes painful when closed shoes are worn since the thick nail is pressed down into the skin underneath. Although the big toe (hallux) is most commonly affected, the nails of the other toes are also often involved.

In some cases, this problem may be best treated with oral and/or topical antifungal medicine. In other cases, Laser surgery may be the best option. There are two corrective methods commonly used at Laser Foot Surgery Specialist. The more common one involves aiming the Laser at the nail plate and nail root in an effort to kill the fungus germs so the nail plate will grow out normally.

In more severe cases, the affected thick toenail is removed and a chemical and Laser beam are used to dissolve the entire nail root so that the thickened nail will not grow back. No skin incisions are made using either technique.
The picture above demonstrates a fungal infection of the big toenail of nine months’ duration. This was successfully treated with Laser treatment and topical medication. The picture below shows a severely-thickened “Ram’s Horn” toenail which was present for many years. In this case permanent removal was performed utilizing a chemical and the Laser.
An Ingrown Toenail occurs when the side of a toenail begins to cut through the surrounding skin which is referred to by doctors as the ungualabia or “nail lip.” This is often aggravated by tight socks and pointed-toe shoes. If left untreated, the nail lip becomes red and sore and frequently becomes infected.

The most common treatment for ingrown toenails at Laser Foot Surgery Specialist is as follows:

After numbing the toe, the ingrown portion of the toenail (the affected side only) is removed as is the portion of the nail “root” that caused the problem. A chemical and Laser beam are then used to dissolve the nail root cells of the ingrown portion of the nail such that the ingrown portion of the nail will usually not return, but the remainder of the nail (the normal portion) will grow normally.

No skin incisions are required to perform this procedure and patients generally wear their own shoes at all times. If infection is present, the appropriate antibiotics are also prescribed.
Before

The picture above was taken of a child who came to Laser Foot Surgery Institute LLC for treatment of an infected ingrown toenail (arrow).

The picture below was taken one week after corrective Laser surgery and after antibiotics were prescribed for this patient.

After
Heel Pain

Heel pain is usually caused by acute or chronic inflammation of the plantar fascia, a ligament-like structure located on the bottom of the foot. Inflammation of the plantar fascia (plantar fascitis) can be caused by a heel spur (pointed to by arrow in picture below) or by gout, arthritis, obesity, and other local and systemic diseases. Heel pain can frequently be treated by such conservative methods as orthotic foot supports, cortisone injections, oral anti-inflammatory medications, and weight loss, if indicated. A new conservative treatment called EPAT (shock wave therapy) may also alleviate the pain without surgery. When conservative treatment fails, surgical intervention may be necessary. In most cases, the surgical treatment can be performed minimal invasively in the modern facilities of Laser Foot Surgery Specialist.
EPAT “Shock Wave” Treatment for Heel Pain

EPAT is an acronym for Extracorporeal Pulse Activation Treatment. “Extracorporeal” means “outside the body.” Shock waves are created by very strong acoustic (sound) energy. The EPAT treatment is non-invasive (no incisions required) and is performed with a device called the D-Actor 50.

EPAT has a proven success rate that is equal to or greater than that of traditional treatment methods (including surgery) and without the risks, complications, and lengthy recovery time.

The beneficial effects of EPAT treatment are often experienced after only 3 treatments. Some patients report immediate pain relief after the treatment, although it can take up to 4 weeks for pain relief to begin.
Morton’s Neuroma occurs when one of the nerves on the bottom of the foot becomes “pinched” between two adjacent metatarsal bones or the base of the bones of two adjacent toes. Fibrous tissue builds up around the nerve and the condition generally worsens. Patients generally experience sharp pain on the bottom of the end of their feet radiating into two adjacent toes, most frequently the third and fourth toes. Conservative treatment includes ethyl alcohol injections, cold-water soaks, and sometimes orthotic arch supports to control motion of the foot. Surgical treatment is indicated if these fail and involves removing the inflamed section of nerve via Laser. This procedure can usually be performed on an outpatient basis at Laser Foot Surgery Specialist.
Ethyl Alcohol Injection Therapy for Neuromas

A landmark scientific research paper entitled, The Treatment of Intermetatarsal Neuromas with 4% Alcohol Sclerosing Injections was published in the November/December 1999 issue of The Journal of Foot & Ankle Surgery. In this study, 100 adult patients with previously untreated intermetatarsal neuromas received three to seven injections of a 4% alcohol sclerosing solution every 5-10 days. No additional treatment was provided during the visits.

Table 1 shows the number of 4% ethyl alcohol injections performed.

<table>
<thead>
<tr>
<th>Total Number of Injections Given</th>
<th>Number of Patients</th>
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<tbody>
<tr>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>19</td>
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<tr>
<td>5</td>
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<td>6</td>
<td>11</td>
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<tr>
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<td>39</td>
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Table 2 shows the number of cases presenting with single inter-space involvement.

<table>
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<th>Intermetatarsal Space</th>
<th>Number of Cases</th>
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<tr>
<td>2nd</td>
<td>11</td>
</tr>
<tr>
<td>3rd</td>
<td>81</td>
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<tr>
<td>4th</td>
<td>8</td>
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Table 3 shows the total percentage of reported improvement noted by the patients at end of study.

<table>
<thead>
<tr>
<th>Number of Cases</th>
<th>100% Improved</th>
<th>60% -85% Improved</th>
<th>% Failure</th>
</tr>
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<tbody>
<tr>
<td>100</td>
<td>82</td>
<td>7</td>
<td>11</td>
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In summary, The use of a series of 4% ethyl alcohol sclerosing solution showed an 89% success rate. Of the 89 patients that were improved, 82 had complete resolution of symptoms. The results of this prospective study indicate that the alcohol sclerosis treatment of intermetatarsal neuromas is a viable alternative to serial steroid injections or surgery for persistent symptoms.
Computerized Gait Analysis and Custom Foot Orthotics

In the past decade or so, a new science called Biomechanics has made a tremendous contribution to the various treatments that podiatrists could offer their patients. By applying these principles to the human foot, we are now able to treat many foot problems non-surgically by fabricating a pair of Custom Foot Orthotic Devices which are worn in the shoes and can be changed from shoe to shoe.

In the past, impressions for custom foot orthotic devices were taken either by wrapping plaster around the feet, or having the patient step into some impression foam. The problem with doing this is that neither of these captures the foot while the patient is walking.

A new technology introduced into the United States in 1997 allows the patient to walk over a computerized gait pressure plate, making a 3-dimensional image of the foot in a dynamic rather than a static manner. This image can then be sent via computer modem directly into the orthotic laboratory. Not only can a computerized gait analysis report then be ordered, but accuracy in fabrication is increased, while production time is decreased.

Some indications for Custom Foot Orthotic Devices which can be made for adults and children are;

- Heel and Arch Pain
- Flat Feet (fallen arches)
- High Arched Feet (raised arches)
- In-toeing (pidgin-toeing)
- Out-toeing (duck-type walking)
- Pain on the Ball of The Foot
- Some Callous Problems
- Diabetic Ulcers and Pressure Sores

Many different types of Custom Orthotic Foot Devices are now available i.e., some for specific sports and athletics, some especially for women’s sandals and high-heeled shoes, etc.

In addition our custom orthotic laboratory has introduced Custom-fabricated Orthotic Sandals for both men and women to their product line. This development, now available from Laser Foot Surgery Specialist, allows patients to benefit from orthotic corrections while wearing comfortable, fashionable sandals.
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