

INTEGRATIVE PAIN CENTER OF ARIZONA

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“The right care at the right time”

Thermal annuloplasty

(also called: IDETT, Intra-Discal Electro-Thermal Therapy)

THERMAL ANNULOPLASTY is a minimally invasive spine procedure that is intended to treat mid and lower back pain. It is not for the leg pain (sciatica) that goes with a herniated or slipped disc. THERMAL ANNULOPLASTY is for people who have back pain that interferes with their lives and which does not get enough better with physical therapy and medications.

What is the purpose of THERMAL ANNULOPLASTY?

To decrease back pain and improve tolerance of activity (sit longer, stand longer, etc.).

How does THERMAL ANNULOPLASTY work?

With age or injury, discs may degenerate (cracks, tears, or fissures develop). This is a situation similar to “torn cartilage” in the knee. Torn knee cartilage causes knee pain and there is evidence that torn disc cartilage causes back pain. THERMAL ANNULOPLASTY is used to apply heat to the tears in the covering of disc, called the “annulus fibrosis”, contracting and thickening the protein, and raising the temperature of the small nerve endings which destroys them. The heat may result in contraction of fissures (cracks) and inactivation of pain sensing nerves in the disc tear. The first THERMAL ANNULOPLASTY’s were performed in 1995 and the procedure was formally approved by the FDA in 1998. Most studies have shown that 60 - 70% of patients have at least some improvement in low back pain after the THERMAL ANNULOPLASTY procedure. There has recently been a placebo controlled study published that shows that the procedure is more effective than placebo¹. All these studies have been done using the original technique and we use the newer Radionics technique for most lumbar THERMAL ANNULOPLASTY procedures and we are finding better results because this new technique more directly heats the tear in the disc, and we can control the temperature of the tear better.

Prior to the THERMAL ANNULOPLASTY procedure, the patient undergoes a discogram. This is a test used to confirm the diagnosis of a painful tear in a disc. If the discogram reveals a degenerated and painful disc or two, that patient may be a candidate for the THERMAL ANNULOPLASTY procedure.

¹ Pauza A Spine 2004 Jan-Feb;4(1):27-35

Who might benefit from it?

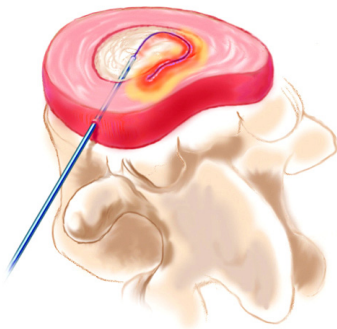
People with moderate to severe upper or lower back pain that has not gotten better with physical therapy, and which has been bad for at least 4 months.

Who should not have thermal annuloplasty?

- Patients whose back pain is not from a disc tear
- Patients whose x-rays show very severely degenerated discs
- Patients who are very overweight
- Patients who have been diagnosed with spinal instability or severe spinal stenosis
- Patients with pressure on nerves that is causing severe weakness, numbness, or changes in bowel or bladder control. Patients with these symptoms need urgent medical evaluation for possible surgery.
- People with active infections.
- Pregnant women.
- Patients taking blood thinning medication who cannot stop the medication for a week.

How is it actually performed?

THERMAL ANNULOPLASTY is an outpatient procedure. Patients will go home the same day.



An anesthesiologist or nurse anesthetist administers a mild sedative to reduce the discomfort during the procedure. You are awake so that you can give valuable feedback to the physician during the insertion of the needle into the discs and the heating of the catheter that follows. You are on your stomach during the procedure and the back is “numbed” with a local anesthetic. With the guidance of x-ray images, a needle is inserted into the disc and a catheter is passed through the needle. Once the catheter is in the appropriate position, it is heated for about 10-15 minutes. After heating is completed, the needle and catheter are removed. A band-aid is placed

over the needle insertion site and your back brace is applied. You are taken to the recovery area and, when you are recovered from your anesthetic, you are discharged home with a friend or family member.

How long does the procedure take?

The procedure may take 30-90 minutes, depending on the number of torn discs and the difficulty of catheter placement.

Will I be “put out” for this procedure?

No – an anesthesiologist or nurse will be with you to give you sedation and pain relievers, but you are awake enough so you can give the physician valuable input during the procedure.

Will the procedure hurt?

The procedure involves inserting a needle through the skin and underlying tissue into the disc, so some discomfort is involved. However, we will numb the skin around the injection area with a local anesthetic using a very thin needle before inserting the procedure needles. An anesthesiologist or nurse will be available to give you medications to make you more comfortable during the procedure.

What are the risks and side effects?

This procedure is safe compared to other back surgery procedures. However, as with any procedure, there are risks, side effects and the possibility of complications. The most common side effect is pain at the site of the needle insertion, which is temporary. The other risk factors involve bleeding, infection, damage to nerves and injection into blood vessels and surrounding nerves. Fortunately, serious side effects and complications are uncommon. A rare complication of this procedure is an infection in the disc, which is referred to as discitis. The procedure has not been in use long enough to know if there are delayed problems that might occur 15 or more years after, but there is *no* sound reason to suspect that there will be problems late after the procedure.

Will my insurance cover THERMAL ANNULOPLASTY?

Some insurers do and some do not. To see the reasons that Blue Cross/ Blue Shield has decided to cover the procedure, link to <http://www.regence.com/trgmedpol/surgery/sur118.html>. Other insurers look at the same information and come to a different conclusion than BCBS: that there is not enough research on the procedure to satisfy them.

What should I expect after the procedure?

Discomfort from the disc heating may take several days to subside. The following are things you can do for pain control:

FOR PAIN

- Apply ice 1 to 3 times a day
- If your physician has prescribed an anti-inflammatory medication, take this as prescribed for pain
- If your physician has prescribed a pain medication, take this as prescribed for pain
- If your physician has prescribed a TENS unit, use this as directed for pain control

THERMAL ANNULOPLASTY

ACTIVITY RESTRICTIONS – DOs AND DON'Ts FOR THE FIRST SIX WEEKS

- Wear your back brace as much as you can for the first six weeks. You may take it off at night.
- Rest the first three days after the THERMAL ANNULOPLASTY procedure. You are not restricted to bedrest, but no bending, lifting, standing or sitting for more than 30 minutes at a time.
- After the first three days:
 - You may begin walking for exercise
 - Do not sit longer than 30 minutes at a time
 - You may return to light activity and light duty work, as you are able to tolerate without increasing pain or fatigue
 - Avoid sudden or frequent bending or twisting
 - Do not lift anything over 15 pounds
 - You may drive after three days if your pain level is mild. If it is still moderate to severe at 3 days post-procedure, wait to drive until it becomes mild.
- If pain increases in intensity or is severe, wait until your pain level has decreased enough to work with reasonable comfort. The same is true for driving. **Use good sense:** if a particular activity increases your pain, wait a few more days before resuming that activity.
- After one week, you may begin light housework. You may lift up to 30 pounds. You may resume gentle pool exercises if you had been doing these before surgery. Do not swim laps for exercise.

ACTIVITY RESTRICTIONS – SECOND SIX WEEKS

- You may discontinue using the back brace
- You will have a "check up with your doctor and the physical therapist.
- Increase your exercise routine, involving upper body, leg strengthening and lumbar stabilization exercised on a daily basis as instructed by your physical therapist
- You may begin swimming laps for exercise
- You may begin riding the exercise bike. Again, **use good sense:** if a particular activity increases your pain, wait a few more days before resuming that activity. If you feel stiffness in your back, this is normal. It is part of the healing process

TWELVE TO SIXTEEN WEEKS POST PROCEDURE

- You may return to unrestricted work guided by your pain level. Again, **use good sense:** if a particular activity increases your pain, wait a few more days before resuming that activity.
- Avoid heavy exercise and athletics such as tennis, competitive running, weight lifting, snow or water skiing and similar activities

SIXTEEN WEEKS POST PROCEDURE

- You may resume your accustomed activities/pursuits