

# Diagnostic Provocative Discography

## Introduction

The intervertebral disc is a frequent cause of persistent back pain. Pain may be generated by the irritation of neural structures adjacent to the disc or by a stimulation of the nerve endings in the disc itself. Diagnostic imaging studies such as x-ray, CT scan or MRI are helpful if structural damage to the disc is large enough to cause disc herniation. However, it is often difficult to see small tears in the disc and then diagnostic provocative discography can be very helpful.

This procedure is done by precision injection of contrast dye into the disc nucleus. As a result, nerve endings in the disc are stimulated. The stimulus applied with discography has two components - a chemical stimulus resulting from contact between the contrast dye and sensitized tissues, and a mechanical stimulus resulting from fluid distension. The physician performing discography expects to reproduce your clinical symptoms thereby confirming the disc as a source of pain.

## What's next?

The identification of particular intervertebral discs as a source of pain leads to several therapeutic options. Minimally invasive intradiscal electrothermotherapy is available for treatment of lumbar disc pain. This procedure is relatively new but has already gained wide acceptance in the medical community and shows good promise. Discectomy and spinal fusion are surgical procedures and can be viewed as other options for treating a painful disc. Your neurological or orthopedic surgeon should determine whether you are a candidate for surgery.

## How is it done?

Discography is performed with x-ray guidance in a fluoroscopy suite. Intravenous sedation is available for the procedure. A nurse, who also monitors your vital signs, does this. However, an attempt is made at keeping the sedation minimal because feedback from you is important to the outcome of this procedure. The procedure is done under sterile conditions; local anesthetic is used to numb the skin. Under x-ray guidance a needle is placed into the disc. Several discs usually need to be injected for a study to be complete and meaningful.

Once the needles are in place, the contrast solution is injected. You may or may not have discomfort during this injection. It is very important to communicate any pain or discomfort to your doctor. It is also very important to distinguish between the pain that you usually experience and pain related to the procedure. Since the diagnostic value of this procedure is based to a significant degree on provoking your pain, discomfort during the procedure is to be expected. However, it is very appropriate to request a pause during the procedure if the discomfort is unbearable.

## Is this procedure dangerous?

Most patients tolerate this procedure fairly well. However, you may experience an increase in your typical pain (back, back and leg) after procedure. It usually subsides over the first 1-14 days. The improvement in your symptoms may or may not be fast. If only one disc was treated you should expect to feel the results within 1-2 weeks. Two disc treatments can take longer, 2-4 weeks. The pain medication may be prescribed to you to help with postoperative discomfort.

At this time there are no special guidelines for activity restrictions following this procedure. Rather, activities need to be structured to tolerance with gradual return to baseline level of function over 1-4 weeks. It's recommended to stay of work 2-3 days for those with desk-like job. Patients who are expected to return to heavy physical exertion environment may need to be off work longer, up to 1-2 weeks. Between 2-4 weeks, depending on your comfort level, you may start physical therapy program.

Discography is not considered to be a dangerous procedure. However, there are certain risks associated with it. The most significant complication is infection of the disc. The rate of infection is 0-1.3% per disc according to data available. Recent publications of experience of three centers performing large volume discography procedures showed a 0% rate of infection. You will be given both intravenous and intradiscal antibiotics as prophylaxis against infection. Nevertheless, if you experience intense, unusual back pain, fever and/or chills after the procedure, you should let us know immediately.

Other complications include increased pain after the procedure, infection of the epidural space, which may require surgery, trauma of nerve roots exiting the spinal cord, or pneumothorax (punctured lung). These complications are rare, however, you should be aware of the risk so you can ask appropriate questions and make an informed decision before consenting to the procedure.

Please ask your provider for additional explanation if you have any questions.