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The History of Artificial Disc Replacement

How Long Has This Spine Procedure Been Used?

Submitted by [Scott L. Blumenthal, MD](#) on **September 10th, 2012**

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[Artificial disc](#) replacement (ADR) or total disc replacement (TDR) is a surgical procedure which replaces a degenerated disc in the spinal column with an artificial motion device. It has been used in the United States since the year 2000, but it originated in Europe almost 30 years ago.

Before performing the first ADR in the United States in March 2000, I did a lot of research on the procedure, including visiting with a number of surgeons in Europe as well as the inventor of the first FDA-approved ADR, Karin Buttnar-Janz. Besides inventing the artificial disc, she is well known for being an Olympic and world champion gymnast from East Germany.

With 12 years of experience, we have now performed more than 1,400 disc replacements in our private practice alone. Patients now have access to [spine surgeons](#) with extensive experience in disc replacement right here in the United States.

Total disc replacement is an alternative to spinal fusion. It is an innovative process of surgically removing a damaged disc from the spinal column and replacing it with an artificial disc. This procedure can significantly benefit patients who suffer from herniated discs or [degenerative disc disease](#) with or without leg or arm pain.

Artificial disc replacement gives patients an opportunity to retain mobility in both the neck (cervical spine) and lower back (lumbar spine). By replicating the movement of a normal disc, ADR helps to alleviate adjacent disc degeneration minimizing the need for additional [spine surgery](#) due to disc degeneration or herniation.

Since 2000, a number of FDA studies of other artificial discs began enrolling patients in the United States. Over a dozen studies have been completed in the United States and currently there are four discs approved for use in the United States.

The FDA-approved disc available for the low back (lumbar spine) is the ProDisc-L. For the neck (cervical spine), the Bryan, Prestige, and ProDisc-C are available.

Looking forward to the future of artificial discs in America: at least a dozen or so discs are either currently in-trial or have completed the trials for FDA approval and will hopefully be available in the US soon.

Updated on: 09/10/12

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