



ARTIFICIAL INTERVERTEBRAL DISCS

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Status: Current

I. DESCRIPTION

When conservative treatment of degenerative disc disease fails, a common surgical approach is spinal fusion; over 200,000 spinal fusions are performed each year. However, the outcomes of spinal fusion have been controversial over the years, in part due to the difficulty in determining whether a patient's back pain is related to degenerative disc disease, and in part due to the success of the procedure itself. Additionally, spinal fusion alters the biomechanics of the back, potentially leading to premature disc degeneration at adjacent levels, a particular concern for younger patients. As an alternative, a variety of artificial intervertebral discs have been investigated over the past thirty years. This approach, also referred to as total disc replacement or spinal arthroplasty, is intended to maintain motion at the operative level once the damaged disc has been removed, and to maintain the normal biomechanics of the adjacent vertebrae.

The major potential advantage of a prosthetic intervertebral disc over current therapies for degenerated disks (such as spinal fusion or discectomy) is that the prosthetic intervertebral disk is intended to restore or preserve the natural biomechanics of the intervertebral segment and to reduce further degeneration of adjacent levels. Investigators have found, however, that creation of an intervertebral disc prosthesis poses significant challenges with respect to prosthetic design and materials:

- The biomechanics of the intervertebral segment are difficult to replicate
- It is a challenge to find materials that are both biocompatible and effective
- The prosthetic disc should achieve long-term mechanical fixation.

A number of clinical trials evaluating different lumbar artificial discs are currently enrolling patients, and two lumbar discs (Charité artificial disc by DePuy Spine and ProDisc®-L Total Disc Replacement by Synthes Inc.) have received FDA approval.

The Prestige® Cervical Disc and the Bryan® Total Cervical Disc Prosthesis both by Medtronic Sofamor Danek are FDA approved. The cervical disc will provide an option to the current surgical fusion treatment for cervical degenerative disc disease. In a clinical study, the device showed that it improved neck and/or arm pain, and was as safe and effective as cervical fusion. Advantages of this therapy over surgical fusion include the absence of a donor graft site and the consequent



associated complications of bone grafting, and its ability to help retain cervical mobility. While evidence suggests that artificial cervical disc replacement improves pain and functioning and preserves cervical spine mobility in the short term (1 to 4 years), additional studies to evaluate the long-term efficacy and durability are needed.

II. POLICY/CRITERIA

A. Artificial Lumbar Discs:

Artificial intervertebral lumbar discs are not a covered benefit because there is insufficient evidence on their long-term safety and effectiveness, including impact on other discs and bony structures of the back.

B. Artificial Cervical Discs:

Artificial intervertebral cervical discs are a covered benefit when **all** of the following are met:

1. Disc is FDA approved
2. Single level reconstruction (C3-C7) following discectomy
3. Intractable radiculopathy and/or myelopathy due to herniated disc or osteophyte formation.
4. Symptomatic nerve root and /or spinal cord compression documented by all of the following:
 - i. neck and/or arm pain
 - ii. functional deficit and/or neurological deficit
 - iii. radiographic studies (e.g. CT, MRI, x-rays)

III. MEDICAL NECESSITY REVIEW

Required for cervical discs Not Required Not Applicable

IV. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- ❖ **HMO/EPO:** *This policy applies to insured HMO/EPO plans.*
- ❖ **POS:** *This policy applies to insured POS plans.*
- ❖ **PPO:** *This policy applies to insured PPO plans.*
- ❖ **ASO:** *For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.*



- ❖ **INDIVIDUAL:** *For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.*
- ❖ **MEDICARE:** *Coverage is determined by the Centers for Medicare and Medicaid Services (CMS).*
- ❖ **MEDICAID:** *If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual and the Michigan Medicaid Fee Schedule, the Michigan Medicaid Provider Manual and the Michigan Medicaid Fee Schedule at: http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--00.html will govern.*
- ❖ **MICHILD:** *For MICHILD members, this policy will apply unless MICHILD certificate of coverage limits or extends coverage.*

V. CODING INFORMATION

ICD-9 Codes that may support medical necessity:

- 353.2 Cervical root lesions, not elsewhere classified
- 353.9 Unspecified nerve root and plexus disorder
- 722.0 Displacement of cervical intervertebral disc without myelopathy
- 722.4 Degeneration of cervical intervertebral disc
- 722.71 Intervertebral cervical disc disorder with myelopathy, cervical region
- 722.91 Other and unspecified disc disorder of cervical region
- 723.0 Spinal stenosis in cervical region

CPT/HCPCS Codes

- 22856 Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophyctomy for nerve root or spinal cord decompression and microdissection), single interspace, cervical
No auth required for revision or removal
- 22861 Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical
- 22864 Removal of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical

Not Covered:

- 0092T Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophyctomy for nerve root or spinal cord decompression and microdissection), each additional interspace, cervical (List separately in addition to code for primary procedure)
- 0095T Removal of total disc arthroplasty, anterior approach, each additional interspace, cervical (List separately in addition to code for primary procedure)
- 0098T Revision including replacement of total disc arthroplasty, anterior approach, each additional interspace, cervical (List separately in addition to code for primary procedure)

- 0163T Total disc arthroplasty (artificial disc), anterior approach, including discectomy to prepare interspace (other than for decompression), lumbar, each additional interspace



- 0164T Removal of total disc arthroplasty, anterior approach, lumbar, each additional interspace
- 0165T Revision of total disc arthroplasty, anterior approach, lumbar, each additional interspace
- 22857 Total disc arthroplasty (artificial disc), anterior approach, including discectomy to prepare interspace (other than for decompression), lumbar, single interspace
- 22862 Revision including replacement of total disc arthroplasty (artificial disc) anterior approach, lumbar, single interspace
- 22865 Removal of total disc arthroplasty (artificial disc), anterior approach, lumbar, single interspace

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Special Note: This policy is based on the review and recommendations of artificial lumbar discs by the Technology Assessment Committee on June 4, 2004 and June 1, 2007.

Artificial cervical discs were reviewed by the Technology Assessment Committee on June 1, 2007.

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