

**Biomet Spine  
Traditional 510(k) Premarket Notification**

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OCT 07 2008



### 510(k) Summary

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirements of 21 CFR § 807.92.

**Preparation Date:** July 7, 2008

**Applicant/Sponsor:** Biomet Spine  
100 Interpace Parkway  
Parsippany, NJ 07054

**Contact Person:** Vivian Kelly  
Phone: 973-299-9300 x2214  
Fax: 973-257-0232

**Trade name:** Synergy™ Spinal System (6.35 Polaris)

**Common Name:** Non-cervical spinal fixation system

**Classification Name  
(Product Code):** Posterior, noncervical, nonpedicle use (KWP)  
Anterior/anterolateral noncervical use (KWQ)  
Noncervical pedicle applications (MNI, MNH and NKB)

**Device Panel - Regulation No.:** Orthopedic - 21 CFR 888.3050, 888.3060 and 888.3070

#### Device Description:

This submission is a line extension to the Synergy Spinal System to add new 6.35 Polaris components, which may be used with the 6.35mm components of the Synergy™ Spinal System in order to build various types of spinal constructs. The new components include various types of bone screws and bone hooks.

#### Indications for Use:

The Synergy Spinal System implants are intended to be used as a temporary construct that assists normal healing and are not intended to replace normal body structures. They are intended to stabilize the spinal operative site during fusion procedures and should be removed after fusion. The implants are attached to the spine posteriorly by means of hooks and/or screws joined with rods and anteriorly by means of vertebral screws joined with rods.

As a pedicle screw system, the Synergy Spinal System is intended only for patients: (a) having severe spondylolisthesis (Grades 3 and 4) of the fifth lumbar-first sacral (L5-S1) vertebral joint; (b) who are receiving fusions using autogenous bone graft only; (c) who are having the screws fixed or attached to the lumbar and sacral spine; and (d) who are having the device removed after the development of a solid fusion mass. The levels of screw fixation are L3 to S1/Ilium.

In addition, the pedicle screw system may also be used to provide immobilization and stabilization of spinal segments, in skeletally mature patients as an adjunct to fusion in the treatment of the following acute and chronic instabilities or deformities of the thoracic, lumbar, and sacral spine: degenerative

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spondylolisthesis with objective evidence of neurologic impairment, fracture, dislocation, scoliosis, kyphosis, spinal tumor, and failed previous fusion (pseudarthrosis).

As a posterior, non-pedicle, screw and hook system, and an anterolateral, intervertebral body screw system, the specific indications for the Synergy Spinal System are:

1. Degenerative Disc Disease (as defined by chronic back pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies).
2. Idiopathic scoliosis.
3. Kyphotic deformities of the spine.
4. Paralytic scoliosis and/or pelvic obliquity.
5. Lordotic deformities of the spine.
6. Neuromuscular scoliosis associated with pelvic obliquity.
7. Vertebral fracture or dislocation.
8. Tumors.
9. Spondylolisthesis.
10. Stenosis.
11. Pseudarthrosis.
12. Unsuccessful previous attempts at spinal fusion.

For posterior, non-pedicle, screw use, the Synergy screws and lateral connectors are intended for sacral/iliac attachment only, and the Synergy hooks and transverse connectors are intended for posterior thoracic and/or lumbar use only. As a whole, the levels of use are T1 to the Sacrum/Ilium.

The Adjustable Length Rod is intended for in situ adjustment after placement of the hooks or screws during spinal fusion surgery.

For anterior use, the recommended levels of attachment are: T10 to L3 for the double rod constructs and T5 to L5 for the single rod constructs. The 4.75mm diameter rod system can be used in single and double rod constructs while the 6.35mm diameter rod system is to only be used in single rod constructs. In all cases, instrumentation must be at least 1cm from any major vessel.

**Summary of Technologies:**

The technological characteristics (material, design and sizing) of the Synergy 6.35 Polaris components are the same as, or similar to, the predicate devices.

**Substantial Equivalence:**

The Synergy Spinal System is substantially equivalent to its predicate devices with respect to intended use and indications, technological characteristics, and principles of operation and do not present any new issues of safety or effectiveness. Example of predicates include Synergy Spinal (K061441 and K041449) and the Array Spinal System (K061563). Based upon the mechanical testing, the Synergy Spinal System is substantially equivalent for its intended use to other spinal systems currently on the market.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

OCT 07 2008

Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

Biomet Spine  
% Ms. Vivian Kelly  
Regulatory Affairs Project Manager  
100 Interpace Parkway  
Parsippany, New Jersey 07054

Re: K081952  
Trade/Device Name: Synergy Spine System  
Regulation Number: 21 CFR 888.3070  
Regulation Names: Pedicle screw spinal system.  
Regulatory Class: III  
Product Code: NKB, MNI, MNH, KWQ, KWP  
Dated: July 07, 2008  
Received: July 09, 2008

Dear Ms. Kelly:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

Page 2 – Ms. Vivian Kelly

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Center for Devices and Radiological Health's (CDRH's) Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding postmarket surveillance, please contact CDRH's Office of Surveillance and Biometric's (OSB's) Division of Postmarket Surveillance at (240) 276-3474. For questions regarding the reporting of device adverse events (Medical Device Reporting (MDR)), please contact the Division of Surveillance Systems at (240) 276-3464. You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at toll-free number (800) 638-2041 or (240) 276-3150 or the Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,



Mark N. Melkerson  
Director  
Division of General, Restorative  
and Neurological Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

Indications for Use

510(k) Number (if known): [REDACTED]

Device Name: Synergy Spine System

Indications for Use:

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As a pedicle screw system, the Synergy Spinal System is intended only for patients: (a) having severe spondylolisthesis (Grades 3 and 4) of the fifth lumbar-first sacral (L5-S1) vertebral joint; (b) who are receiving fusions using autogenous bone graft only; (c) who are having the screws fixed or attached to the lumbar and sacral spine; and (d) who are having the device removed after the development of a solid fusion mass. The levels of screw fixation are L3 to S1/Ilium.

In addition, the pedicle screw system may also be used to provide immobilization and stabilization of spinal segments, in skeletally mature patients as an adjunct to fusion in the treatment of the following acute and chronic instabilities or deformities of the thoracic, lumbar, and sacral spine: degenerative spondylolisthesis with objective evidence of neurologic impairment, fracture, dislocation, scoliosis, kyphosis, spinal tumor, and failed previous fusion (pseudarthrosis).

As a posterior, non-pedicle, screw and hook system, and an anterolateral, intervertebral body screw system, the specific indications for the Synergy Spinal System are:

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5. Lordotic deformities of the spine.
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7. Vertebral fracture or dislocation.
8. Tumors.
9. Spondylolisthesis.
10. Stenosis.
11. Pseudarthrosis.
12. Unsuccessful previous attempts at spinal fusion.

Prescription Use **X**  
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

K081343 Indications for Use (continued)

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Prescription Use **X**  
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

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**(Division Sign-Off)**  
**Division of General, Restorative,**  
**and Neurological Devices**

510(k) Number K081952