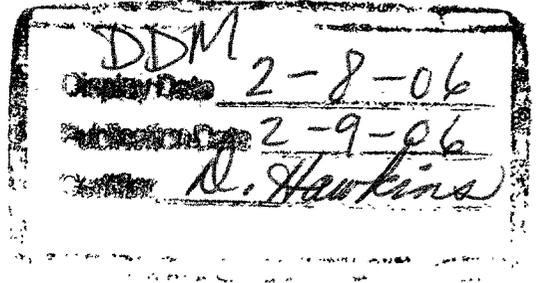


DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Part 888



[Docket No. 2006N-0019]

**Orthopedic Devices; Reclassification of the Intervertebral Body Fusion Device**

**AGENCY:** Food and Drug Administration, HHS.

**ACTION:** Proposed rule.

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**SUMMARY:** The Food and Drug Administration (FDA) is proposing to reclassify intervertebral body fusion devices that contain bone grafting material, from class III (premarket approval) into class II (special controls), and retain those that contain any therapeutic biologic (e.g., bone morphogenic protein) in class III. Elsewhere in this issue of the **Federal Register**, FDA is announcing the availability of a draft guidance document that would serve as the special control if FDA reclassifies this device. The agency is proposing this reclassification based on the recommendation of the Orthopaedic and Rehabilitation Devices Panel (the Panel).

**DATES:** Submit written or electronic comments by [*insert date 90 days after date of publication in the Federal Register*]. See section X of this document for the proposed effective date of a final rule based on this proposed rule.

**ADDRESSES:** You may submit comments, identified by Docket No. 2006N-0019, by any of the following methods:

### *Electronic Submissions*

Submit electronic comments in the following ways:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Agency Web site: <http://www.fda.gov/dockets/ecomments>. Follow the instructions for submitting comments on the agency Web site.

### *Written Submissions*

Submit written submissions in the followings ways:

- FAX: 301-827-6870.
- Mail/Hand delivery/courier (for paper, disk, or CD-ROM submissions):  
Division of Dockets Management (HFA-305), Food and Drug Administration,  
5630 Fishers Lane, rm. 1061, Rockville, MD 20852.

To ensure more timely processing of comments, FDA is no longer accepting comments submitted to the agency by e-mail. FDA encourages you to continue to submit electronic comments by using the Federal eRulemaking Portal or the agency Web site, as described in the *Electronic Submissions* portion of this paragraph.

*Instructions:* All submissions received must include the agency name and docket number for this rulemaking. All comments received may be posted without change to <http://www.fda.gov/ohrms/dockets/default.htm>, including any personal information provided. For additional information on submitting comments, see the “Comments” heading of the **SUPPLEMENTARY INFORMATION** section of this document.

*Docket:* For access to the docket to read background documents or comments received, go to <http://www.fda.gov/ohrms/dockets/default.htm> and insert the docket number, found in brackets in the heading of this document,

into the “Search” box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.

**FOR FURTHER INFORMATION CONTACT:** Jodi N. Anderson, Center for Devices and Radiological Health (HFZ-410), Food and Drug Administration, 9200 Corporate Blvd., Rockville, MD 20850, 301-594-2036, ext. 186.

**SUPPLEMENTARY INFORMATION:**

**I. Background (Regulatory Authorities)**

The Federal Food, Drug, and Cosmetic Act (the act) (21 U.S.C. 301 *et seq.*), as amended by the Medical Device Amendments of 1976 (the 1976 amendments) (Public Law 94-295), the Safe Medical Devices Act of 1990 (Public Law 101-629), the Food and Drug Administration Modernization Act of 1997 (Public Law 105-115), and the Medical Device User Fee and Modernization Act of 2002 (Public Law 107-250), established a comprehensive system for the regulation of medical devices intended for human use. Section 513 of the act (21 U.S.C. 360c) established three categories (classes) of devices, depending on the regulatory controls needed to provide reasonable assurance of their safety and effectiveness. The three categories of devices are class I (general controls), class II (special controls), and class III (premarket approval).

Under section 513 of the act, devices that were in commercial distribution before May 28, 1976 (the date of enactment of the 1976 amendments), generally referred to as preamendments devices, are classified after FDA has done the following: (1) Received a recommendation from a device classification panel (an FDA advisory committee); (2) published the panel’s recommendation for comment, along with a proposed regulation classifying the device; and (3) published a final regulation classifying the device. FDA has classified most preamendments devices under these procedures.

Devices that were not in commercial distribution prior to May 28, 1976, generally referred to as postamendments devices, are classified automatically by statute (section 513(f) of the act) into class III without any FDA rulemaking process. Those devices remain in class III and require premarket approval, unless and until the device is reclassified into class I or II or FDA issues an order finding the device to be substantially equivalent, under section 513(i) of the act, to a predicate device that does not require premarket approval. The agency determines whether new devices are substantially equivalent to predicate devices by means of premarket notification procedures in section 510(k) of the act (21 U.S.C. 360(k)) and part 807 (21 CFR part 807) of the regulations.

A preamendments device that has been classified into class III may be marketed, by means of premarket notification procedures, without submission of a premarket approval application (PMA) until FDA issues a final regulation under section 515(b) of the act (21 U.S.C. 360e(b)) requiring premarket approval.

Reclassification of classified postamendments devices is governed by section 513(f) of the act. This section provides that FDA may initiate the reclassification of a device classified into class III under section 513(f)(1) of the act, or the manufacturer or importer of a device may petition the Secretary of Health and Human Services (the Secretary) for the issuance of an order classifying the device in class I or class II. FDA's regulations in 21 CFR 860.134 set forth the procedures for the filing and review of a petition for reclassification of such class III devices. In order to change the classification of the device, it is necessary that the proposed new class have sufficient

regulatory controls to provide reasonable assurance of the safety and effectiveness of the device for its intended use.

Under section 513(f)(3)(B)(i) of the act, the Secretary may, for good cause shown, refer a proposed reclassification to a device classification panel. The Panel shall make a recommendation to the Secretary respecting approval or denial of the proposed reclassification. Under section 513(f)(3)(B)(i), any such recommendation must contain the following: (1) A summary of the reasons for the recommendation, (2) a summary of the data upon which the recommendation is based, and (3) an identification of the risks to health (if any) presented by the device with respect to which the proposed reclassification was initiated.

## **II. Regulatory History of the Device**

The intervertebral body fusion device is a postamendments device classified into class III under section 513(f)(1) of the act. It is intended for intervertebral body fusion. The intervertebral body fusion device cannot be placed in commercial distribution for implantation unless it is reclassified under section 513(f)(3), or subject to an approved PMA under section 515 of the act.

Based on information discussed at a December 11, 2003, Panel meeting (see section IV of this document) regarding the intervertebral body fusion device, the FDA believes potential risks associated with the intervertebral body fusion device, except those that contain any therapeutic biologic, can be addressed by special controls in the form of a guidance document. Thus, FDA is proposing to reclassify intervertebral body fusion devices that contain bone grafting material from class III into class II. Consistent with the act and the

regulation, FDA referred the proposal to the Panel for its recommendation on the requested changes in classification.

Intervertebral body fusion devices that include any therapeutic biologic (e.g., bone morphogenic protein) will remain in class III. FDA believes that there is insufficient information to determine that general and special controls would provide a reasonable assurance of their safety and effectiveness.

### **III. Device Description**

The following device description is based on the Panel's recommendation and the agency's review:

An intervertebral body fusion device is an implanted single or multiple component spinal device made from a variety of materials, including titanium and polymers. The device is inserted into the intervertebral body space of the cervical or lumbosacral spine, and is intended for intervertebral body fusion.

### **IV. Recommendation of the Panel**

At a public meeting on December 11, 2003, the Panel recommended unanimously that the intervertebral body fusion device, except those that contain any therapeutic biologic, be reclassified from class III into class II (Ref. 1). The Panel believed that class II with special controls, in addition to the general controls, would provide reasonable assurance of the safety and effectiveness of the device. The Panel also recommended that the proposed special controls for the device be mechanical, animal, and clinical testing, labeling, sterilization, and biocompatibility as suggested by FDA staff.

### **V. Risks to Health**

After considering the information in the Panel's recommendation, as well as other information, including Medical Device Reports (MDRs), FDA has evaluated the risks to health associated with use of the intervertebral body

fusion device that contains bone grafting material and determined that the following risks to health are associated with its use:

*A. Infection*

Infection of the soft tissue, bony tissue, and the disc space is a potential risk to health associated with all surgical procedures and implanted spinal devices. Material composition or impurities, wear debris, operative time, and operative environment may compromise the vascular supply to the area or affect the immune system, which could increase the risk of infection. Improper sterilization or packaging may also increase the risk of infection.

*B. Adverse Tissue Reaction*

Adverse tissue reaction is a potential risk to health associated with all implanted devices. The implantation of the intervertebral body fusion device will elicit a mild inflammatory reaction typical of a normal foreign body response. Incompatible materials or impurities in the materials and wear debris may increase the severity of a local tissue reaction or cause a systemic tissue reaction. If the materials used in the manufacture of intervertebral body fusion device are not biocompatible, the patient could have an adverse tissue reaction.

*C. Pain and Loss of Function*

Pain and loss of function are risks to health associated with any implanted spinal device. Some device-related complications that may cause pain and loss of function include device fracture, deformation, loosening, extrusion, or migration due to inappropriate patient or device selection. The wear of materials, which may cause osteolysis (dissolution of bone), and component disassembly, fracture, or failure may also result in pain and loss of function.

#### *D. Soft Tissue Injury*

Soft tissue injury is a risk to health associated with all spinal surgery. This includes injury to major blood vessels, viscera, nerve roots, spinal cord, and cauda equina.

#### *E. Vertebral Endplate Injury*

Vertebral endplate injury is a risk to health associated with the insertion of an intervertebral body fusion device. Surgically inserting a device with a different geometry and modulus of elasticity than bone may lead to vertebral fracture, sinking of the device into the vertebral endplate (subsidence), collapse of the local blood supply, and collapse of the vertebral end plate.

#### *F. Reoperation*

Reoperation is a risk to health associated with any surgery. The need for reoperation could result from a failed intervertebral body device or component of the device, from nerve root decompression or adjacent level disease, or from reasons related to any surgery, e.g., infection or bleeding.

#### *G. Pseudarthrosis (i.e., non-union)*

Pseudarthrosis (i.e., non-union) is a risk associated with all spinal fusion surgeries. It signifies failure of the bony fusion mass and results in persistent instability.

### **VI. Summary of the Reasons for the Reclassification**

FDA believes that the intervertebral body fusion device that contains bone grafting material should be reclassified into class II because special controls, in addition to general controls, will provide reasonable assurance of the safety and effectiveness of the device. In addition, there is sufficient information to establish special controls to provide such assurance.

## VII. Summary of the Data Upon Which the Reclassification is Based

As discussed previously in this document, FDA is proposing this reclassification based on the Panel's recommendation. In addition FDA has reviewed MDRs related to this device. After evaluating this information, FDA believes that the potential risks to health associated with use of the intervertebral body fusion device described in section V of this document can be addressed by special controls. In addition, there is reasonable knowledge of the benefits of the device, including the provision of mechanical support, which aids in fusion procedures of the anterior spinal column.

## VIII. Special Controls

FDA believes that the draft guidance document entitled "Class II Special Controls Guidance Document: Intervertebral Body Fusion Device" (the class II special controls guidance document), in addition to providing general controls, can address the risks to health associated with the use of the device and described in section V of this document. FDA believes further that the class II special controls guidance document, which incorporates voluntary consensus standards and labeling recommendations, addresses the Panel's concerns regarding the content of a special controls guidance document. Elsewhere in this issue of the **Federal Register**, FDA is publishing a notice of availability of the draft guidance document that the agency intends to use as the special control for this device.

The class II special controls guidance document contains specific recommendations with regard to device performance testing and other information FDA believes should be included in premarket notification submissions (510(k)s) for the intervertebral body fusion device that contains bone grafting material. Sections of the draft special controls guidance

document address the following topics: Material characterization, mechanical testing, animal testing, clinical testing, sterility, biocompatibility, and labeling. FDA has identified the risks to health associated with the use of the device in the first column of table 1 of this document and the recommended mitigation measures identified in the class II special controls guidance document in the second column.

TABLE 1.

Identified Risk	Recommended Mitigation Measures
Infection	Sterility
Adverse Tissue Reaction	Biocompatibility
Pain and Loss of Function	Mechanical Testing Animal Data Clinical Data Labeling
Soft Tissue Injury	Labeling
Vertebral Endplate Injury	Material Characterization Mechanical Testing Biocompatibility Labeling
Reoperation	Labeling
Psuedoarthrosis (i.e., non-union)	Labeling

Following the effective date of a final rule based on this proposal, any firm submitting a 510(k) premarket notification for an intervertebral body fusion device will need to address the issues covered in the special controls guidance. However, the firm need only show that its device meets the recommendations of the guidance or in some other way provides equivalent assurance of safety and effectiveness.

## IX. FDA's Findings

FDA believes the intervertebral body fusion device that contains bone grafting material should be reclassified into class II because special controls, in addition to general controls, can provide reasonable assurance of the safety and effectiveness of the device. In addition, there is sufficient information to establish special controls to provide such assurance. FDA, therefore, is proposing to reclassify the intervertebral body fusion device that contains bone

grafting material into class II and establish the class II special controls guidance document as the special control for that device, and to retain in class III those devices that contain any therapeutic biologic.

#### **X. Effective Date**

FDA proposes that any final rule that may issue based on this proposal become effective 30 days after its date of publication in the **Federal Register**.

#### **XI. Environmental Impact**

The agency has determined under 21 CFR 25.34(b) that this proposed reclassification action is of a type that does not individually or cumulatively have a significant effect on the human environment. Therefore, neither an environmental assessment, nor an environmental impact statement is required.

#### **XII. Analysis of Impacts**

FDA has examined the impacts of the proposed rule under Executive Order 12866, the Regulatory Flexibility Act (5 U.S.C. 601–612), and the Unfunded Mandates Reform Act of 1995 (Public Law 104–4). Executive Order 12866 directs agencies to assess all costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity). The agency believes that this proposed rule is not a significant regulatory action as defined by the Executive order.

The Regulatory Flexibility Act requires agencies to analyze regulatory options that would minimize any significant impact of a rule on small entities. Reclassification of this device from class III to class II will relieve all manufacturers of the device of the costs of complying with the premarket approval requirements in section 515 of the act. Because reclassification will reduce regulatory costs with respect to this device, the agency certifies that

the proposed rule will not have a significant economic impact on a substantial number of small entities.

Section 202(a) of the Unfunded Mandates Reform Act of 1995 requires that agencies prepare a written statement, which includes an assessment of anticipated costs and benefits, before proposing “any rule that includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100,000,000 or more (adjusted annually for inflation) in any one year.” The current threshold after adjustment for inflation is \$115 million, using the most current (2003) Implicit Price Deflator for the Gross Domestic Product. FDA does not expect this proposed rule to result in any 1-year expenditure that would meet or exceed this amount.

### **XIII. Federalism**

FDA has analyzed this proposed rule in accordance with the principles set forth in Executive Order 13132. FDA has determined that the proposed rule, if finalized, would not contain policies that would have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, the agency tentatively concludes that the proposed rule does not contain policies that have federalism implications as defined in the Executive order and, consequently, a federalism summary impact statement has not been prepared.

### **XIV. Paperwork Reduction Act of 1995**

FDA tentatively concludes that this proposed rule contains no collections of information. Therefore, clearance by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (the PRA) (44 U.S.C. 3501–3520) is not required.

FDA also tentatively concludes that the special controls guidance document does not contain new information collection provisions that are subject to review and clearance by OMB under the PRA. Elsewhere in this issue of the **Federal Register**, FDA is publishing a notice announcing the availability of the draft guidance document entitled "Class II Special Controls Guidance Document: Intervertebral Body Fusion Device;" the notice contains an analysis of the paperwork burden for the draft guidance.

#### **XV. Comments**

Interested persons may submit to the Division of Dockets Management (see **ADDRESSES**) written or electronic comments regarding this proposal. Submit a single copy of electronic comments or two paper copies of mailed comments, except that individuals may submit one paper copy. Comments are to be identified with the docket number found in brackets in the heading of this document. Received comments may be seen in the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

#### **XVI. References**

The following reference has been placed on display in the Division of Dockets Management (see **ADDRESSES**) and may be seen by interested persons between 9 a.m. and 4 p.m., Monday through Friday.

1. Orthopedic and Rehabilitation Devices Panel Meeting Transcript, pp. 1-141, December 11, 2003.

#### **List of Subjects in 21 CFR Part 888**

Medical devices.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs, it is proposed that 21 CFR part 888 be amended as follows:

**PART 888—ORTHOPEDIC DEVICES**

1. The authority citation for 21 CFR part 888 continues to read as follows:

**Authority:** 21 U.S.C. 351, 360, 360c, 360e, 360j, 371.

2. Section 888.3080 is added to subpart D to read as follows:

**§ 888.3080 Intervertebral body fusion device.**

(a) *Identification.* An intervertebral body fusion device is an implanted single or multiple component spinal device made from a variety of materials, including titanium and polymers. The device is inserted into the intervertebral body space of the cervical or lumbosacral spine, and is intended for intervertebral body fusion.

(b) *Classification.* (1) Class II (special controls) for intervertebral body fusion devices that contain bone grafting material. The special control is the FDA guidance document entitled “Class II Special Controls Guidance Document: Intervertebral Body Fusion Device.” See § 888.1(e) for the availability of this guidance document.

(2) Class III (premarket approval) for intervertebral body fusion devices that include any therapeutic biologic (e.g., bone morphogenic protein). Intervertebral body fusion devices that contain any therapeutic biologic require premarket approval.

(c) *Date premarket approval application (PMA) or notice of product development protocol (PDP) is required.* Devices described in paragraph (b)(2) of this section shall have an approved PMA or a declared completed PDP in effect before being placed in commercial distribution.

Dated: 2/1/06  
February 1, 2006.

Linda S. Kahan

Linda S. Kahan,  
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Center for Devices and Radiological Health.

[FR Doc. 06-????? Filed ??-??-06; 8:45 am]

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