

BECKER'S  
**ORTHOPEDIC, SPINE  
 & PAIN MANAGEMENT**

REVIEW  
 Business and Legal Issues for Orthopedics, Spine and Pain Management

**VISIT WATKINS SPINE.COM**



[Print Issues](#)

[Conferences](#)

[E-Weekly](#)

[Resources](#)

[Pain Management](#)

[Webinars](#)

[About Us](#)

[100 Best Places to Work](#)



[Print](#) | [E-mail](#) | [Be the first to comment!](#)

## Dr. Robert Watkins : 4 Points on Biologic Solutions for Spine Surgery

Written by Laura Miller | June 24, 2011

[Social sharing](#)

Robert Watkins, Jr., MD, orthopedic spine surgeon and co-director of Marina Spine Center at Marina Del Rey (Calif.) Hospital, discusses four points on biologics in spine surgery.

**1. Harvesting bone from iliac crest vs. BMPs.** For several years, harvesting bone from the iliac crest for spinal fusions has been the gold standard, but making a separate incision increases the risk for pain and complications. To avoid these risks, surgeons and researchers have been developing synthetic products to promote fusion. The first product proven safe and effective was Medtronic's Infuse, which is now commonly used as a biologic agent in spine surgery. Bone morphogenetic proteins stimulate an inflammatory reaction in the body, inducing cells and chemical mediators to travel to the surgical site and produce bone.

"The main investigation of biologics in spine surgery right now has to do with synthetically produced proteins," says Dr. Watkins. "These products save the surgeon from performing an extra procedure to take the bone from the patient for fusion. Synthetic proteins are where all the growth and explosion in biologics has been over the past 10 years."

Dr. Watkins still uses iliac crest bone on difficult cases, such as when a patient has undergone a previously failed fusion.

**2. Improving today's BMPs.** Although BMPs have advanced since their inception a decade ago, there are still complications associated with using the material. For instance, Dr. Watkins doesn't use BMPs during cervical spine procedures because the inflammation could irritate the esophagus. A negative inflammatory reaction can occur after BMP use anywhere in the spine, but Dr. Watkins says that adverse reactions are rare. However, there is still room for product enhancement.

"Currently, there aren't any BMPs that have 100 percent fusion rate, so all of the products could be improved to make them more effective," he says.

**3. Injecting growth agents into the disc.** While orthopedic surgeons can inject biologic agents, such as platelet-rich plasma, into knee and shoulder joints to promote healing, surgeons aren't able to use the same techniques on the spine. "The most common injuries that occur in the spine are tears in the disc and the injection procedure is more invasive and riskier for the spine than the extremities," says Dr. Watkins. "During the procedure, you have to go past the nerves to get to the disc. Injecting any substance near the spinal canal can irritate the nerve and have an adverse effect."

Additionally, injecting growth agents into the disc doesn't deal with the entire problem. In many patients, there are biomechanical forces that contribute to the degeneration which must be addressed. "If there is an imbalance, injecting the biologics into the spine won't help," he says. "Injecting biologics into the disc space and getting scientific evidence of the results is a far off because we have to address the biomechanics of the situation at the same time."

**4. Regenerating the disc.** The next big development in spine surgery biologics will most likely include disc regeneration. A huge portion of the population suffers from degenerative discs, and theoretically a solution to regenerate these discs should exist. "One of the biggest research areas right now is the development of a chemical that you could place into a disc that would regenerate it," says Dr. Watkins. "Whoever develops that will help a lot of people. Disc degeneration is such a common problem that there's no question in my mind that we have the resources and intelligence to develop it, it's just a matter of when."

search...

*Becker's Spine Review E-Weekly*

Sign up for **FREE**

### Channels

[Improving Orthopedic & Spine Practice Profits](#)

[Spine Procedures, Practices & News](#)

[HIT/Meaningful Use/EMR](#)

[Sports Medicine Procedures, Practices & News](#)

[Orthopedic & Spine Device & Implant News](#)

[Orthopedic & Spine Practices -- Billing and Coding](#)

[Lists](#)

[18th Annual Ambulatory Surgery Centers Conference](#)



For now, a huge hindrance to the development of biological solution for spinal disorders is the cost. There are some hospitals in the country that won't allow surgeons to use standard products, because they are too expensive, which means more experimental technology is out of the question. However, as healthcare dollars become more competitive, and more companies enter the biologics market, the prices will be forced down.

"One of the developing factors is that when there are products rivaling each other on the market, the prices will come down for all of them," says [Dr . Watkins](#) . "That's one of the reasons why companies are still putting resources into spine biologics."

Learn more about [Dr . Robert Watkins , Jr.](#)

#### Related Articles on Spine Surgery:

[Dr . Richard Kaul: 5 Points on Outpatient Surgery for Adolescent Spondylolisthesis](#)

[3 Misconceptions About the Use of Navigation Systems for Spine Surgery](#)

[Dr . Fred Sweet: 4 Points on a New Method Proven to Reduce Spine Surgical Site Infection](#)

Like this? Tweet it to your followers!

#### Tagged under

spine DISC surgeons growth surgery biologics procedure bone spinal fusion products [watkins](#) injecting bmps points crest iliac proteins biologic robert

0 Comments and 0 Reactions

Like

#### Add New Comment

Login



Showing 0 comments

Sort by oldest first

[Subscribe by email](#) [RSS](#)

Trackback URL

[http://disqus.com/forums/beckersorthopedicandspine/dr\\_robert\\_watkins\\_4\\_points\\_on\\_biologic\\_sc](http://disqus.com/forums/beckersorthopedicandspine/dr_robert_watkins_4_points_on_biologic_sc)

blog comments powered by [DISQUS](#)

[back to top](#)

[back to top](#)



Ambulatory Surgery Center Association (ASCA) members get answers to their questions about regulatory compliance, reimbursement and much more FREE when they call ASCA's Member Services Team. Make sure your ASC has access to the expertise and resources ASCA offers. Become an ASCA member today!

For more information, call 703.836.8808 or email [asc@ascassociation.org](mailto:asc@ascassociation.org).

## 10 Orthopedic & Spine Best Business Articles


1. What Role Does Biologics Play in Sports Medicine?: 4 Physician Responses
2. 6 Big Questions to Ask Before Pushing Forward With a Comprehensive Orthopedic or Spine Center
3. Free 1-Year Subscription to Becker's Orthopedic & Spine Review
4. 8 Statistics on the Hours Orthopedic Surgeons Spend Seeing Patients Per Week
5. 5 Tips for Marketing Orthopedic Practices Using New Media
6. Orthopedics in ASCs: 40 Benchmarks
7. Successfully Attracting and Recruiting the Best Physician Partners: Q&A With Tony Edwards of Orthopedic Marketing Group
8. 7 Benchmarks for Physical Therapy at Orthopedic Practices
9. Will There Be a Place for Orthopedic and Spine Surgeon Relationships With Device Companies in the Future? 6 Responses
10. Highest and Lowest Compensated Orthopedists in 2010: 5 Things to Know
11. Changes for CMS Imaging Reimbursement: 6 Things for Orthopedic and Spine Providers to Know



**BLUE CHIP PARTNERS.**

**3 Keys to ASC Success**

Learn More >>



**Subscribe Now**

1 year for \$199  
or 2 years \$299

## Upcoming Becker's Events

1. 2011 ASC and Hospital/Health System Conferences

## Most Read - Spine

1. Spine Society Responds to Florida's Proposed Plan Limiting Spinal Fusion Coverage
2. The '3 Cs' of Spine Care
3. Study: Occupational Back Injuries Associated With

# 18<sup>th</sup> Annual Ambulatory Surgery Centers Conference – Improving Profitability and Business and Legal Issues

The Best Annual ASC Business & Clinical Conference

OCTOBER 27-29, 2011 • WESTIN HOTEL  
CHICAGO, ILLINOIS • BROCHURE NOW AVAILABLE



- 132 Speakers, 90 Sessions
- Outstanding Keynote Speakers Including  
**SAM DONALDSON,**  
**ADRIAN GOSTICK** and **BILL WALTON**
- Earn CME, CEU & CASC credits
- Best Business Speakers

To Register, Call (703) 836-2090 e-mail [registration@ascassociation.org](mailto:registration@ascassociation.org) or visit  
<https://www.ascassociation.org/chicagoOct2011.cfm>

## Further Post-Settlement Legal Cases

4. The Science Channel Documentary to Feature Dr.  
Alex Vaccaro

5. What Minimally Invasive Spine Surgery Means and  
Why it Will Survive: 5 Points From Dr. Frank Phillips

