Shoulder Resurfacing & Joint Preservation

"I got rid of my Shoulder pain and got my swing back!"
Do you have pain in your shoulder that prevents you from doing the activities of daily life?

Has your doctor told you that you might need a joint replacement?

Now there is a less invasive solution that might be right for you.
Anatomy

Have you become frustrated because of the limitations of a painful shoulder?

Before we begin to explore a possible solution, it is important to understand the problem.

**What is a joint?**

Joints are the locations in your body where two bones meet. Movement of these bones at the joint permits our bodies to move. Cartilage is a specialized tissue in the joints which caps/covers our bones where they meet. It is a smooth, slippery tissue that allows the bones to slide against one another with minimal friction.

**How does cartilage get injured?**

A variety of events can damage cartilage, some include trauma (injury), infection, inflammation, osteonecrosis (dead bone) and malalignment. A traumatic injury can cause an isolated defect just like a golfer creates a divot in the grass. Malalignment can cause damage to the joint surface similar to the way the tires on a car lose their tread if the wheels are not properly aligned. In many instances, physicians elect only to fix the damaged surface rather than replacing the entire joint.
Osteoarthritis

Side View of a Cartilage Lesion

Osteonecrosis (AVN)

Healthy Shoulder

Exposed Bone

Lesion (cartilage damage)

Healthy Cartilage

Traumatic Lesion

Humerus (upper arm bone)

Osteoarthritis

Side View of a Cartilage Lesion

Osteonecrosis (AVN)
**What is Osteoarthritis?**
Osteoarthritis is a disease process causing the deterioration of the articular cartilage usually occurring in the major joints.

**Can arthritis get worse?**
Any event that injures the cartilage may cause joint damage or arthritis. A small cartilage injury with time, may become larger and lead to widespread cartilage loss or degenerative joint disease.

**What is Osteonecrosis?**
This conditions literally means bone death (osteo=bone, necrosis=death). Also known as avascular necrosis (AVN), this condition is caused by lack of blood supply to the bone. It is triggered by a variety of factors including trauma, alcohol abuse, blood abnormalities, pregnancy, corticosteroids used in medical treatments (e.g., cancer treatments and organ transplantation), but in approximately 25% of the patients, the cause is unknown.

**What are treatment options for injured cartilage?**
Depending on the degree of cartilage injury, patients may be candidates for either a microfracture, allograft a more invasive total joint replacement, or now with the advent of resurfacing technologies a less invasive procedure such as the Arthrosurface® HemiCAP® system.
Cartilage defects can be problematic because they can either cause pain and/or increase the risk of spreading damage to surrounding areas of normal, undamaged cartilage. The damaged area of cartilage becomes the weak link for the rest of the joint and the damage spreads.

Damaged cartilage on one surface left untreated may lead to further joint degeneration.

Joint resurfacing with a HemiCAP® implant creates a new congruent joint surface.
A Patient’s Story

Being a former Senior Power Lifting Champion, being in a lifting gym, it is crucial to my work and life to lift weights. For the last 11 years, I have had to live every day with pain. For the last few years, it got so bad that I couldn’t sleep at night because I was being awakened by the pain. In fact, when I tried to use my left arm to change the gears or even a bit too much to use my shoulder. I went to see several doctors, and they all told me the same thing “you need a total shoulder replacement” because I wouldn’t be able to lift weights again and that was the end of my career.

Finally someone referred me to a doctor who had trained on this device called the Hemalux®. He had trained on this device called the Hemalux® just resurface my joint. Using the Hemalux® technology, he was able to reconstruct my shoulder without coming into contact with muscles and tendons.

Not only did the pain go away in a matter of weeks, but for the first time in over 10 years, my shoulder was pain-free. I am able to sleep through the night and I am back to full time lifting and competing in all my competitions. Given my history that’s nothing short of fantastic. I wouldn’t be able to do this if it wasn’t for this technology from Arthrosurface®. I would highly recommend this technology to anyone suffering from shoulder pain.

-L.S., Ohio
mpion and owner of a prestigious power
to be able to use my shoulder. Over the
everyday with pain in my shoulder. In the last
drive my truck, I would have to
everal shoulder surgeons and they all told
ulder replacement". For me, that meant that
nd that just wasn't an option.

Doctor who might be able to help me.
HemiCAP® implant he was able to
compromising any of the muscles

a matter of weeks but also for the
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fantastic!! My pain is gone, I sleep through
g and working out. Without my surgeon and
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lt powerful and strong. ”

Restoring the Freedom of Motion
What is a Hemiarthroplasty versus a Total Shoulder Replacement?
The shoulder joint is a ball and socket joint and in many cases the “ball” or humerus is damaged but in more damaged joints the “socket” or glenoid can be worn as well and require attention. When the surgeon replaces the ball (humeral) side that is called a hemiarthroplasty and when the surgeon needs to replace both the ball and socket that is referred to as a total shoulder replacement.

What is the difference between Resurfacing and Replacement?
Resurfacing a joint surface is a less destructive procedure and simply places a new smooth surface in the place where the cartilage used to be. Imagine this as a smooth patch for a pothole. A replacement involves removing the entire humeral head and replacing the head with a new surface that is mounted onto a long stem that goes into the shaft of your humerus.
What about Joint Replacement?

This is major surgery designed to relieve the pain of widespread arthritis. It removes all of the cartilage in the shoulder and a significant amount of bone from both sides of the joint. Joint replacement was originally indicated for patients aged 70 years and older. Total joint replacements have a lifespan of approximately 10-12 years in younger patients. This may not be an acceptable choice with patients now living longer lives and for those who want to remain active.

What about the Arthrosurface HemiCAP® implant?

The HemiCAP® implant is a technologically advanced system designed to match the shape and contour of the individual patient’s cartilage surface. It is a “patch” for the damaged cartilage designed to protect the remaining tissues in an attempt to prevent further damage. The HemiCAP® system is approved for disabled shoulder joints resulting from post-traumatic degenerative disease or avascular necrosis.
The HemiCAP® system matches not only the diameter of the damaged area but also the precise radius of curvature of the patient’s joint surface in two planes. The technology for mapping the joint curvatures comes from eye surgery where it was used to make products to protect the corneal surface. The mapping is done in the operating room by the surgeon. Once the mapping points are defined, an appropriately sized implant is chosen and then implanted into the patient. Different diameters & curvatures are available to provide a proper fit for each patient.

Is this different than a joint replacement?

The HemiCAP® implant is matched and fit to a patient’s joint size and shape. It removes a much smaller amount of cartilage and bone than traditional joint implants. It is placed “into” the surface leaving the joint less surgically altered.

Simply put—

“This is not your grandparent’s joint replacement.”
Existing Devices

Spherical implants may not match the patient’s unique curvatures.

**HemiCAP® Benefits**

- anatomic fit
- less invasive
- joint preserving
How long will the HemiCAP® implant last?
Your surgeon expects the devices to last as long as similar metallic devices but it will depend on your general health, activity level, and adherence to your doctor’s orders following surgery. Currently over 30,000 patients have been treated with Arthrosurface® implants.

What happens if it fails?
If it ever fails, it can be replaced with another HemiCAP® device or, if necessary, it may be converted to a joint replacement.

Does it “burn any bridges”?
Compared to existing joint replacements there is minimal bone loss with the HemiCAP® implant. With a joint replacement, the entire bony surface, sometimes even both sides of the joint, are surgically removed to facilitate the implant being placed. This means there is far less of the natural bone to work with if future surgery is required. The HemiCAP® system leaves more bone intact therefore leaving more options should future surgery be required.

Will I feel it?
No. The implant is surgically placed so there are no protruding edges. The bone and the implant become a smooth surface you will not feel.
Will it set off airport security alarms?
It should not. However, after receiving the HemiCAP® implant you can ask your surgeon to give you an implant identification card (similar to your driver’s license) that can be shown to anyone should there be any question.

How long will I be off of work?
This will be dependent on your muscle strength, range of motion and the type of work you do. Many patient’s have experienced a rapid return to daily activities. However, as with all medical treatments, your results may vary.

What type of physical therapy will I need to do?
Your doctor and therapist will design a rehabilitation protocol to return strength to your muscles so that you can return to your original lifestyle.
Due to its general applicability, do not rely on information in this brochure to assess any particular patient condition. Seek professional medical advice for specific personal care. Do not delay seeking professional medical advice or disregard professional medical advice because of something you have read in this brochure.

To find a Doctor, visit our website: www.arthrosurface.com