



## LCS<sup>®</sup> COMPLETE<sup>™</sup> MOBILE-BEARING KNEE SYSTEM



Our patients who are in need of a total knee replacement have traditionally left the decision entirely in our hands as orthopaedic joint replacement surgeons. A patient rarely comes to the office asking what type of total knee prosthesis will be used. On occasion a patient might ask whether the prosthetic knee components will be cemented or attached to the bone by bony ingrowth into a porous coated prosthesis.

Web sites including **Online Orthopaedics** have given our patients much more information than they previously possessed regarding the types of total knee prostheses that are available. I had pointed out in a previous article about total knee replacements available in the **Online Orthopaedics** Library, that for the surgeon it is much like any of us choosing an automobile.



I have often been amazed how car buyers generally stay with the same company most of their car buying lives. This is a generalization and there are exceptions, I'm sure, but mostly people do not change too often between Ford and General Motors, etc.

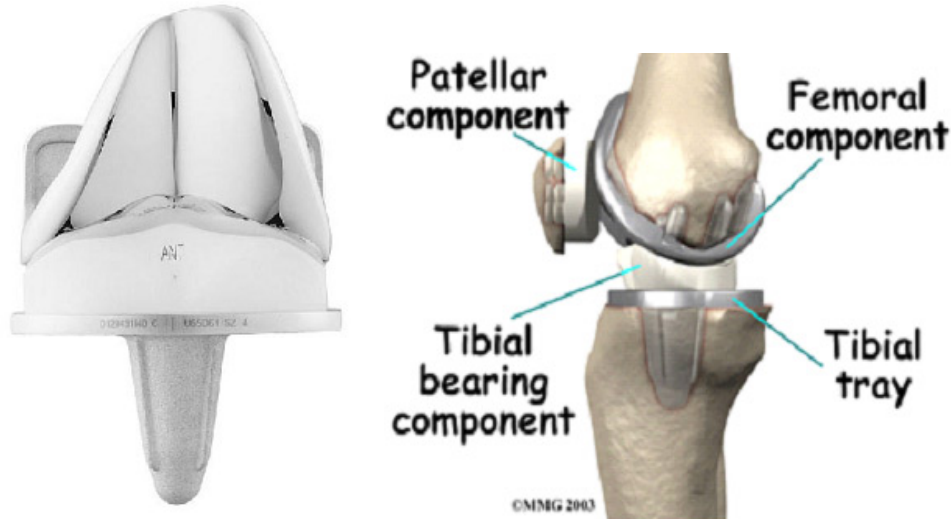
For orthopaedic joint replacement surgeons it is often similar in our practice in how we choose total joint orthopaedic implants. If a surgeon becomes comfortable with the products of a particular company and feels the total knee prostheses, in this case, are functioning well for patients then there is very little reason to change. Also surgical instrumentation differs markedly from one total knee replacement system to another.

To change, a surgeon would have to learn the technique of a new company and use entirely new instruments in order to perform a joint replacement procedure adequately. We all become very comfortable with what we do and how we do it and change does not come easily.

In my particular case I have, for many years, used the prosthetic implants of DePuy Orthopaedics, Inc., a Johnson & Johnson Company, which is the largest manufacturer of orthopaedic implants in the world. DePuy prostheses have performed outstandingly for me over the years and the technical support of the company has been exemplary.

There are many different models, as it were, of total knee prostheses even within a particular company's product line just as there are many different models of Chevrolet, Buick, Ford, etc.

### LCS Mobile Bearing Total Knee



I believe strongly as do four hundred other joint replacement surgeons, that the best total knee replacement available is the LCS Mobile Bearing Total Knee Prosthesis. LCS stands for low contact stress. I believe it is the best because of its unique design and amazingly long life expectancy.

Mobile bearing knee replacement is different from conventional total knee replacement in the following important way. The human knee is ***not a hinge*** even though patients mostly think of it in that way. There is an important rotation component to human knee motion, which is extremely important in how the knee normally functions. It is also critically important in how a total knee prosthesis functions, but in other total knee replacements this aspect is not addressed.

In other total knee prostheses the lower portion of the prosthesis is fixed and this puts additional stress on the plastic or polyethylene component, which is the spacer. In the LCS total knee



prosthesis this lower portion of the prosthesis attached to the tibia allows the polyethylene spacer component to rotate with the upper or femoral portion of the prosthesis.

I know this is getting pretty technical, but if you do not understand it you will be uninformed about why the LCS Total Knee Replacement is superior to all of the others available.

If there is an Achilles heel of total joint replacement, whether it is total knee replacement or total hip replacement, it is wearing out of the polyethylene spacer that keeps the metal parts separated. If the polyethylene wears out, the artificial joint is doomed to fail. As the polyethylene is wearing away, the tiny portions of the polyethylene plastic (in most cases microscopic portions), cause serious damage to the lining of the joint and to the bone, which holds the prosthesis in place.

Furthermore, if the plastic completely wears out in a portion of the joint then the metal parts begin to touch causing metal molecules also to be part of the breakdown process in the joint. As you can imagine, this leads to catastrophic complications within the joint and ultimate failure of the joint. Patients often refer to this as rejection of the prosthesis by the body, but this is not the case. The body is only reacting to what is breaking down in the prosthetic parts.

### Less/Minimally Invasive Surgery

The LCS Total Knee replacement procedure can be done with less invasive or small window surgical methods that are now becoming more available.

Total joint replacement surgery is an evolving art and science that I have been privileged to be part of since my residency at the Cleveland Clinic in Cleveland, Ohio.

We have found that in most patients we can insert the LCS Total Knee Prosthesis through a *four-inch incision*. This varies of course somewhat depending on the patient's size and body mass index.

When the LCS Total Knee Prosthesis is placed through the smallest incision possible and therefore, with the least damage to surrounding tissues our patients have less pain and a much easier time after surgery with physical therapy and rehabilitation exercises.

### Knowledge Heals

This statement applies to many things in health care. I believe it particularly applies to total knee replacement surgery. The knowledge of world renowned joint replacement surgeons and biomedical engineers produced the LCS Total Knee Replacement system. It was introduced in 1977 by DePuy Orthopaedics, Inc.

It was a major development in the evolutionary process of total joint replacement of the knee. LCS Mobile Bearing Prostheses have been implanted in patients in the United States since 1985. To date, worldwide over one half million LCS prostheses have been implanted.

We believe the success of the LCS Total Knee Replacement Prosthesis has been due to the reduction of stress on the polyethylene spacer, which occurs because of the unique design of the prosthesis allowing the knee to flex and extend and also to rotate within the knee joint. That aspect significantly reduces stress on the polyethylene and therefore greatly decreases wear in the joint.

We have recognized the superiority of the LCS Total Knee Prosthesis and have the knowledge to offer our patients the best prosthesis available.



The LCS Total Knee Replacement prosthesis functions more like a human knee joint than any of the other types of total knee prostheses. Even after more than thirty years of total knee replacement experience, the complexity of the human knee joint has prevented joint implant surgeons and biomedical engineers from designing a prosthetic joint that will function exactly like a human knee.

DePuy Orthopaedics, Inc. biomedical engineers continue their search to refine mobile bearing implants in an effort to reduce even further contact stress between the metal and polyethylene and reduce sliding and shear of the prosthetic parts.

### All total knee replacement prostheses are not created equal



**Dr. Haverbush with LCS Mobile-Bearing Knee System**

Fortunately for our patients we have recognized the success of the LCS Total Knee Prosthesis and are using it as the prosthesis of first choice in our practice.

I want to give my patients only the best and I feel that the LCS Total Knee Prosthesis provides this. At its introduction the LCS Total Knee Prosthesis with its unique design was felt to be the prosthesis of the future.

The future is here - now. You can be part of it. It takes fifteen to twenty-five years of experience to realize the success and durability of a particular prosthesis. The LCS Total Knee Prosthesis has demonstrated that success in use throughout the world since 1977.

I feel it is my responsibility to properly inform my patients of what is available to them with this unique prosthesis.



# Online Orthopaedics

Medical Article



Thank you for your interest in learning about the LCS Mobile Bearing Total Knee Replacement. I hope this information and the accompanying pictures will help in the decision about what total knee prosthesis is right for you.

Knowledge heals. **We have the knowledge.** It is up to us to make our patients aware of what is available to them with the LCS Mobile Bearing Total Knee Prosthesis.

An online video about the prosthesis and how the surgery is done is in preparation and will be available in the Online Orthopaedics Library in the near future. Please watch for it.

For more information on knee replacement, please visit [www.kneereplacement.com](http://www.kneereplacement.com).



## Online Orthopaedics

**Thank you for using the Online Orthopaedics Library.**

**We hope it was useful to you. Please check back frequently because new topics and information are being added continuously by Dr. Haverbush.**

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**Please consult Dr. Haverbush or a physician for specific treatment recommendations.**

### **Thomas J. Haverbush, MD. P.C.**

**Office Address:  
315 E. Warwick Dr., Suite A  
Alma, Michigan 48801  
989-463-6092  
Fax 989-463-8914**

**Website Address:  
[www.orthopodsurgeon.com](http://www.orthopodsurgeon.com)**