

Knee Cartilage, cont.

and matrix that closely resembles normal articular (hyaline) cartilage.

Recovery and long-term results of treatment of different types of cartilage injuries depend upon the type of pathology, the age of the patient, and the presence (or absence) of associated pathology, such as arthritis. Except in very young patients, an isolated tear of a meniscus is uncommon, as a large number of patients have coexisting degeneration of

joint surface (osteoarthritis). In these patients, it is not unusual to continue to have some symptoms after removal of a damaged meniscus, even if there were no symptoms from the osteoarthritis before the injury to the meniscus occurred.

Knee "cartilage" injuries are serious insults to the joints. Present treatments are usually successful in decreasing the symptoms from these injuries, although total resolution of the problem is usually not possible.

Howard Miller, M.D.
Orthopaedic Surgeon
Huntsville, AL

Quote of the Day

Remember, if you ever need a helping hand, you'll find one at the end of your arm. As you grow older, you will discover that you have two hands, one for helping yourself the other for helping others."
Unknown

Wellness Works, cont.

can be very expensive, and the advent of workplace wellness programs has dramatically helped to reduce those costs.

Corporate wellness programs began back in the 1970's and continue to flourish today. In 1989, at least one type of wellness activity was offered at 65% of all workplaces with 50 or more employees. In 1992, that number rose to 85%. Most companies have found great financial rewards from their wellness programs. The Adolph Coors Company has saved \$6.19 for every dollar they spend on their program. AT&T has projected savings over the next 10 years of \$72 million from reduced heart attacks and \$15 million from

reduced cancer cases. In addition to these financial rewards, companies are finding other tangible and intangible benefits, such as improved productivity, reduced sick leave, reduction in workers' compensation costs, fewer injuries, lower turnover and improved morale.

Obesity, osteoporosis, high blood pressure, high cholesterol . . . they not only plague your employees, they cost you money. With 40% of illness and death related to lifestyle, it only makes sense and cents to keep people healthy. Good health is just good business.

Jennifer Geist, M.S.
Wellness Coordinator
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Teamwork

A Periodical for Providers and Clients of Comp1One®

Comp1One®

Comp1One is a comprehensive injury management company and Preferred Provider Organization located in Huntsville, Alabama.

We feature an exhaustive provider network that extends throughout Alabama and into Southern Tennessee. This workers' compensation network has grown to over 1500 physicians, hospitals, and specialists that offer preferred rates and services, which generate direct cost savings to business and industry.

Comp1One is certified by the state of Alabama Department of Industrial Relations Workers' Compensation Division, and has been recognized for Best Practices in Injury Management in the state of Alabama.

Is Self-Insurance Right For You?

Employers are constantly searching for new ways to reduce expenses. In the private sector we all can agree that the bottom line for any successful business is profit. Achieving a profitable margin can best be accomplished by improving revenues and lowering costs.

In Alabama, a large financial responsibility of any employer who employs more than 4 employees is workers' compensation. In 2001, employers in Alabama paid out over \$607,000,000 in workers' compensation losses. It is a huge business in this state. Many employers continue to question how they can reduce their workers' compensation costs. The basic premise—cut your losses and you cut your premiums—at least that's the theory. Cutting your losses, however, is not always a complete solution. There are still other ways of reducing your costs and improving your results. An option for you to consider may be whether it is worth the time, risk and effort to self-insure your workers' compensation program.

One function of the Alabama Department of Industrial Relations, Workers' Compensation Division, is the regulation and management of individually self-insured employers. As the regulator, the

Department is constantly striving to ensure that all self-insured employers are financially qualified to handle any injury or loss that they are expected to incur. There can be nothing more detrimental to such a program than to have it fail in its essential purpose. The continuing financial strength of any employer wishing to self-insure its workers' compensation liability is not only important to the division, but it is equally important to every other employer wishing to avail itself of this privilege.

An important thing for all employers to remember, whether you're already self-insured or

whether you're thinking about applying for approval, is that self-insurance is a privilege of substantial value. It is a privilege that must be vigorously supported and conscientiously protected. The privilege carries with it certain attendant responsibilities, the most obvious and important of these being to insure that all legitimate claims are paid.

There is a trend for self-insurance participation to grow when insurance markets are "tight" and premiums become high. When an organization considers self-insurance, its advantages must offset even the

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Wellness Works



Jennifer Geist, M.S.
OHG Wellness Services

It's that time of year again, when many employers are being hit with rising insurance premiums. As health care costs continue to increase, more and more employers are turning to health risk reduction and wellness programs.

Healthcare in the U.S. is a \$1 trillion industry. Studies have shown that unhealthy habits, such as smoking, poor nutrition and inactivity can contribute to approximately 35%-40% of health care costs. According to

Healthy People 2000, lifestyle factors incur huge annual costs to employers. For example, a 1-pack per day smoker costs a company \$1,902 more each year than a non-smoker.

Not only are lifestyle factors costly, but according to the Office of Disease Prevention and Health Promotion, the average cost to treat preventable illnesses is huge. Heart disease treatment can cost more than \$30,000 in the first year, cancer - \$29,000, hip fracture - \$40,000, drug abuse - \$63,000. As evident, unhealthy lifestyles

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Community News



Dr. Brian Carter, M.D.
The Orthopaedic Center

CompOne welcomes Dr. Brian R. Carter as the new physical and rehabilitation physician at The Orthopaedic Center in Huntsville, AL. Dr. Carter is board-certified in physical and rehabilitation medicine. He received his undergraduate degree from Florida State University and his medical degree from the University of Miami School of Medicine. After completing his physical medicine residency at the University of Virginia, Dr. Carter joined the Non-Surgical Orthopaedic and Spine Center in Marietta, Georgia. He has held numerous professional and sports medicine appointments.

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Company News



Jamie Fagan, R.N.
COMPONE

Congratulations to Jamie Fagan, occupational health nurse at the Boeing facility in Huntsville, AL. Jamie received an award recognizing her efforts in coordinating the Huntsville Health Fair held October 2-3 at the Jetplex. Participants were screened for high cholesterol, body fat percentage, skin cancer, glucose level and bone density.

Is Self-Insurance Right For You?, cont.

most competitive insurance prices. Organizations must be careful not to get caught up in the rush to self-insure. They should look at all aspects of self-insurance before deciding.

The growth in the number of self-insureds certainly does not mean that self-insurance is the answer for all organizations.

There is no doubt, however, that for many companies and public entities, self-insurance can offer significant advantages.

There are many reasons an organization wants to self-insure. Some of these reasons might include: (1) a desire for improved claims control; (2) improved public relations; (3) cost savings; (4) improved and less expensive coverage in the excess market; and (5) an inability to obtain coverage elsewhere.

The decision to self-insure is far from a one-step process. It should not be made just because an organization feels self-insurance might cost less than buying insurance. As with any other management decision, the self-insurance decision must be carefully examined and all considerations evaluated fully. Managers must examine the factors critical to the self-insurance decision and focus not just on quantitative, but also the qualitative factors. Management must realize that there can be many reasons a seemingly ideal subject for self-insurance is far from suitable, and that moving in and out of self-insurance programs is not only costly, but can pose substantial risks.

Under a self-insured program, an employer accepts primary financial and administrative responsibilities of work-related injuries to employees without the intervention of insurance companies. The disadvantage is that if you are not successful you could quite easily find yourself in worse shape than if you had just bought insurance through the voluntary market in the first place.

Companies wishing to self-insure their workers' compensation risks must meet certain financial criteria before applying for approval of a self-insurance certificate. Rule 480-5-2-.02 (5)(a) of

the Alabama Department of Industrial Relations Administrative Code states that "an applicant for a certificate of authority to self-insure, other than municipalities or political subdivisions, must have and maintain, at all times, a net worth of not less than \$5,000,000, a current assets to current liabilities ratio of at least 1.0, and a

"There is a trend for self-insurance participation to grow when insurance markets are "tight" and premiums become high."

positive net income for the past three years, shown on the submitted audited financial statements." When applying, a non-refundable application fee of \$500 must accompany the application.

Other cost factors to consider:

Self-insured entities are required to submit to the Division an audited financial statement every year. The Division will not accept a reviewed financial statement. There may be substantial cost differences in having an audited statement versus a reviewed one.

Self-insured entities are required to submit to the Division an actuarial study every three (3) years. An actuarial study shows current and projected workers' compensation losses for your company. These studies can be costly, depending on the size of your company and the actuary hired by you to perform the study.

Self-insurers are required to be members of the Alabama Workers' Compensation Self-Insurers Guaranty Association. The amount of membership in the fund is dependent on certain factors.

Specific excess insurance coverage is required from all self-insurers with a retention amount of \$250,000 or greater.

Claims-handling costs—whether you choose to use the services of a third-party administrator or handle claims in-house.

To receive an application and a complete copy of the Alabama Rules for Self-Insurance, please contact Bertha Bonny at (800) 528-5166.

Joseph S. Ammons, Assistant General Counsel
Alabama Department of Industrial Relations

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Clinical Comments

"I Tore My Knee Cartilage"



Howard Miller, M.D.
The Orthopaedic Center

Cartilage is a very specialized tissue that is located throughout the body. Cartilage provides support that gives shape to the nose and ears, forms the surfaces that articulate as joints, and forms the separate structures known as menisci that are located between the joint surfaces. Confusion occurs when the term "cartilage" is used to refer both to the joint surface and the menisci.

Cartilage is comprised of a network of fibrous tissue called collagen, in which a rubbery matrix of protein-sugars has been deposited. Interspersed in this matrix are cartilage cells (chondrocytes). The type and arrangement of the collagen fibers determine the characteristics of the cartilage tissue. Fibrocartilage has a tissue mesh of Type I collagen, whereas hyaline cartilage has a finer mesh containing a large proportion of Type II collagen. This difference in the type of collagen in the cartilage is largely responsible for the difference in the biomechanical properties of the tissue, with fibrocartilage forming the structures known as menisci, and hyaline cartilage forming the surfaces of the joints.

When an orthopedist diagnoses a "torn cartilage", this indicates that the structural integrity of the meniscus has been compromised. This can occur either in a linear fashion, vertically or horizontally through the tissue, or in a complex portion, which indicates loss of structure in multiple planes. The vertical tears are frequently a result of trauma, and can occur in normal cartilage, whereas the horizontal and complex tears typically occur in a meniscus that has undergone some degree of age related degeneration. Vertical tears can occur through the more central areas of the structure, known as the "white zone" because of lack of any blood supply to this portion of the meniscus, or in the more peripheral "red zone", so described because

of blood vessels that penetrate into the meniscus through its attachment to the capsular and ligamentous structures of the knee. This presence of blood vessels accounts for the possibility of healing of tears located in this red zone. Unfortunately, most meniscal tears occur in the white zone, without potential for healing, and the usual treatment for these tears is surgical removal of the damaged portion, reshaping the remaining tissue in a tapered manner to resemble the original structure, although smaller. Prior to the development of arthroscopic techniques, the usual intervention for a damaged meniscus was total removal, but this frequently led to progressive deterioration of the joint surfaces and subsequent osteoarthritis. By removing only a portion of the meniscus arthroscopically, the deterioration of the joint surfaces is usually delayed relative to the progression of degeneration if the entire meniscus had been removed.

Other cartilage injuries to the knee involve the joint surface, consisting of hyaline cartilage. This very specialized type of cartilage has no potential for healing or regeneration of identical tissue, although a fibrocartilage healing sometimes occurs. Traumatic injuries of these surfaces can result in fissuring (a fracture through the surface) or a fracture which results in a piece of that surface separating from the remainder of the joint surface, either with or without a piece of the underlying bone. If the fragment of bone is large enough, it can be secured into the bed from which it separated and if it heals, typically the attached cartilage will remain healthy and often lead to a good result. However, if there is no attached bone, then the fractured piece of cartilage will not re-adhere to the underlying bone. Options at that point include a stimulation of a fibrocartilage

response by either cracking or drilling the underlying bone. This is useful in a relatively small defect where there has been no damage to the opposite surface of the joint that articulates with this injured area. Another option is to harvest a plug(s) consisting of the articular surface and underlying bone, and transferring this (these) to the defect. The indication for use of the technique, known as mosaicplasty, is narrow because of the limited areas from which the graft can be harvested, the difference in the thickness of articular surface in the graft and the locale where it will be implanted, and the difference in the contour of surfaces at the donor and recipient sites.

Larger defects of articular cartilage of the knee can be reconstructed by use of a technique known as autogenous chondrocyte implantation (ACI). This is appropriate only for defects caused by trauma, and not for replacement of a degenerative surface. The technique involves an arthroscopic procedure to diagnose the problem and determine that ACI would be appropriate, and to harvest a specimen of the patient's cartilage. This is then forwarded to a laboratory, which extracts the cells from the cartilage tissue and then grows those cells in culture, which results in a very concentrated fluid consisting of 12-15 million cells. This culture takes four to six weeks, at which time a second operation is performed consisting of harvesting a periosteal patch from one tibia, suturing it to the defect of the joint surface (which then resembles a trampoline pulled taut across the defect), and then injecting the cultured cells beneath that patch, where some will adhere to the underlying bone and then behave like young chondrocytes, producing the collagen

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