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### What is stem cell therapy?

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By: Ask Dr. Watts - Dr. Michael Watts

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Q: What is a stem cell?

A: Stem cells have the potential to self-replicate and develop into many different cell types. During development and growth "fetal" stem cells specialize into the various tissues that make up the body. There are also stem cells in fully developed animals that act as an internal repair system. These "adult" stem cells replenish damaged cells and provide chemical signals to other types of healing mechanisms in the body.

Q: What is stem cell therapy?

A: The term "stem cell therapy" can be applied to various medical treatments that utilize stem cells to promote healing. Due to the vast potential of [stem cells](#), there is currently a great deal of research interest in the subject.

The procedure involves harvesting a small amount of fat from under the skin. Fat tissue contains a high number of adult stem cells. The tissue is sent overnight to a specialized laboratory that extracts and concentrates the cells. The stem cells are then returned to the veterinarian to be implanted into the area of tissue damage.

Once the concentrated [stem cells](#) are in place, they are able to enhance and amplify the body's natural healing mechanisms.

Q: What conditions can stem cell therapy help?

A: In horses and dogs, stem cell therapy is becoming more common in the treatment of degenerative joint disease, arthritis, osteochondrosis, subchondral bone cysts, meniscal damage, and bone, tendon, or ligament injuries. This type of therapy is also available in [Europe](#) for people, although it is not yet approved for human use in the United States.

Ongoing research is showing promise for repair of heart, blood vessel, liver, muscle, and even nervous system tissue. Additional studies are looking into stem cell use for kidney disease, inflammatory bowel disease, and immune-mediated processes, including allergic skin disease. Veterinarians who are experienced in [stem cell therapy](#) can get approval for experimental treatment of these tissues in some cases, especially when all other areas of therapy have been exhausted.

Q: How does stem cell therapy help arthritis?

A: Placing regenerative stem cells within a joint may provide long-term anti-inflammatory effects, stimulate regeneration of cartilage, slow ongoing degeneration, reduce pain, and initiate or accelerate the healing process. Dramatic improvement can be seen within days or weeks.

Q: Can stem cell therapy be used with other treatments?

A: Absolutely! The cells can be implanted in association with surgical or medical management of degenerative disorders or injuries of joints, tendons, ligaments, or bones. The only therapies that should not be used with stem cells are steroids, shockwave therapy, therapeutic ultrasound, or tens unit. Otherwise, the therapy can be added to the other treatments your veterinarian may prescribe.

Q: Why do some people consider stem cell therapy controversial?

A: Generally, the controversy involves the use of fetal stem cells. First, use of human fetus tissue for research or treatment is widely considered immoral. Second, several animal models using fetal stem cells have resulted in tumor growth after treatment.

The adult stem cell therapy described above is not subject to these concerns. First, the stem cells are taken from the very individual they will be used in. There are no fetuses harmed and there is no risk of tissue rejection caused by donor-recipient mismatch. Second, when adult stem cells are taken from a patient and returned to the same patient without modification, there have been no reports of tumor development.

Q: Where can I get more information?

A: To learn more about veterinary stem cell therapy, or to find a veterinarian who performs the procedure, visit vet-stem.com. If you live within driving distance of my practice and you are interested in discussing stem cell therapy for your specific pet, you can make a consultation appointment with my office by calling 540-428-1000 or by using the contact form at ClevengersCorner.com.

*Dr. Watts is a companion animal general practitioner and owner of Clevengers Corner Veterinary Care. He can be reached through ClevengersCorner.com or by calling 428-1000.*

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