

**THE STORY OF THE DEVELOPMENT OF THE EXPERIMENTAL
HORSE MAGNETIC PULSER**
By Gary Wade, Physicist 6/03/2007

One afternoon, a friend of mine, Merlin Wolf, dropped by my place and told me an interesting and puzzling story. Merlin had been scheduled for major reconstructive surgery on the ligaments of his upper right arm around the rotator cuff region. MRI pictures had shown these ligaments to be pretty much shredded and ruptured and therefore poorly functional. Merlin who was about 68 at the time had lead a very active and physical life. He was a smoke jumper in his youth, helicopter/jet engine mechanic, forestry fire fighter crew boss, mining chemist/engineer, and lab research tech. The accumulated injuries over his life including, but not limited to, a helicopter crash, a fall in a hospital and a mining accident had taken their toll on Merlin, particularly in the ligaments of the upper right arm and shoulder region. A few days before the scheduled reconstructive surgery, Merlin came down with a bad case of pneumonia. The surgery had to be cancelled and Merlin lay on his couch with the pneumonia. The continuous aches and pains from the ligament damage persisted.

Merlin had found in the past that he could get some temporary relief from the aches and pains by treating the damaged area with a small magnetic pulser unit made by Sota Instruments in Canada. Merlin placed the small (~3 inch diameter) coil over his pain region and just lay there on the couch and treated himself for five or six hours a day, every day until the pneumonia broke. After about five or six days the pneumonia broke and Merlin went into the kitchen to make some coffee. He reached up and opened an overhead cabinet door. He suddenly realized that this was something that he should not have been able to do without great pain. He moved his arm around in the air and saw that he now had full range of motion without pain. He then brought down a can of coffee. Before he had gotten the pneumonia and before he had used the Sota Instruments magnetic pulser unit so extensively, he could not raise his arms above his shoulders without considerable pain. He definitely before could not raise his arms above his shoulders and pick up a can of coffee and set it down without great pain, but that is exactly what happened. The one particular shoulder Merlin had been treating had been apparently fixed or greatly improved to the point it seemed to be made normal by the use of the Sota Instruments magnetic pulser unit. Merlin now had regained full range of motion and use of his shoulder without pain. Merlin never had the surgery and later on borrowed a magnetic pulser unit from me to hopefully finish up any remaining needed repair work.

Apparently, the ligaments had repaired themselves, but how, what mechanism? Whenever the body tissue experiences a traumatic injury where tissue is ruptured, ripped apart, and smashed, fibroblast cells migrate to that damaged site and setup an emergency patch. These fibroblast cells generate and lay down an interlocking

mesh of collagen protein fibers which provide the structural strength to hold the damaged area together. If the body cannot heal the damaged area/region up properly, then some or all of these fibroblast cells with their collagen remain and become scar tissue. In Merlin's case it was as though the scar tissue holding his damaged ligaments together had been converted over into normal healthy ligament tissue. In other words it was as though the fibroblast cells had converted over into ligament tissue cells. This possibility/probability had been demonstrated by Dr. Robert O. Becker, M.D. and discussed and illustrated in his book *The Body Electric*. In his book he writes about experiments performed in which he was able to get fibroblast cells to dedifferentiate into embryonic looking cells. Furthermore, Becker performed experiments where he was able to re-grow a substantial section of a rat's arm after amputation and his main candidate for the source of cells differentiating into new rat arm tissue were fibroblast cells.

Well Merlin's apparent tissue regeneration experience made me want to look into the whole situation. I contacted a friend, Dr. John Martin, Ph.D. who had a biological lab facility (Center for Complex Infectious Diseases). I asked John if I could come over to his lab and experiment on human fibroblast cells with pulsed magnetic fields. John said yes and I purchased and modified a Sota Instruments magnetic pulser unit for lab work. I found that with twenty plus minutes of pulsed magnetic field exposure I could get the fibroblast cells on the fibroblast cell culture outer perimeter (edge) to convert over to embryonic looking cells. That is the fibroblast cells went from the elongated looking cells to very round looking spheroids, which detached from the cell culture tube wall and hung in solution like a balloon and were tethered to the culture tube wall by a very thin strand. The fibroblast cells in the interior of the cell culture where all the cells are butted up against each other did not differentiate into embryonic looking cells, but did show some subtle morphological changes that lasted for a time.

After the initial success with the Sota Instruments magnetic pulser unit, I decided to build a much more powerful magnetic pulser unit that could treat much larger areas/volumes and would have adjustability of several parameters. This experimental unit became the first version of the current magnetic pulser unit. With this new magnetic pulser unit, I repeated my initial experiments with the same results. I conducted a new experiment in which both fibroblast and kidney epithelial precursor cells were present in the same 4 inch in diameter culture dish and all the cells were physically disconnected and separated from each other. After ten minutes of exposure to the pulsed magnetic field from the new experimental magnetic pulser unit, all the cells both fibroblast and kidney epithelial precursor cells converted within an hour or so into embryonic looking cells.

Immediately following the lab results showing that fibroblast cells could be converted to embryonic looking cells, I started experimenting on myself and others. Around the same time I was approached by a fellow who commissioned me to build him one of my magnetic pulser units to experiment on horses with. He was familiar with another very similar magnetic pulser unit to mine called a Pap-imi

machine and wanted to see if he could get the same good results with my unit as had been found with the Pap-imi. Over the next two years I continually worked on making the magnetic pulser more reliable/dependable operation wise and more effective in its treatment results. The reports coming back from the field on the use of the magnetic pulser unit on horses were generally quite good.

After approximately two years of R and D the experimental magnetic pulser had in my opinion become reliable and rugged enough to sell for veterinarian uses on my web site and be shipped anywhere in the U.S. The fellow that commissioned my first experimental magnetic pulser unit for experimental treatment on horses, had over this two year R and D period purchased several magnetic pulser units for resell to horse owners and, horse trainers. This fellow with my permission now makes his own magnetic pulser unit for horses. There are now several other magnetic pulser units comparable to my unit's ability available on the market. There is the Pap-imi magnetic pulser which is used both on humans and animals such as horses and runs around \$58K when new and around \$24K when used and in good shape. There is the MagnaPulse™ unit which is currently used on horses and runs about \$20K new. There are at least another three comparable pulser units currently only being marketed to alternative health practitioners and private individuals. However, I think these manufacturers will shortly be entering the horse market as they see clearly that there is a great need, how profitable it can be and that the market is wide open and not at all saturated. All three of these units also go for around \$20K, as compared to my unit which goes for \$12.5K.

As time progresses I expect the benefits of experimental magnetic pulser units to become well known and to come into common use for many animal ailments. You can help spread the word to your fellow humans and lower the misery on the planet for animals. In particular veterinarians should have the Horse Magnetic Pulser available to treat large animals such as dogs and horses. In large dogs their hip joints often fail in old age and their owners put them down. Also, horse training facilities should have the Horse Magnetic Pulser because with horses you have all manner and kind of injuries from all the demands made on them in all the various training exercises and competitions they and their rider are involved in. Often these horse injuries can take many months to heal up properly, if at all. The treatments involved can be very time consuming and expensive. However, with the availability of the experimental Horse Magnetic Pulser you now have the possibility/probability of much more rapid healing/recovery from traumatic physical injuries. We cannot and do not make any veterinarian medical claims. The only way to know if the experimental Horse Magnetic Pulser will work on or for your particular situation is to try it and see.

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