

#560 Degeneration Model Scripting

Degeneration Model

Maximize the Impact of Your Anatomical Model

Photo: Postcard photo of anatomical model

Caption: An anatomical model set showing three stages of bone, nerve, and soft tissue degeneration. Each model set attaches magnetically to the highly-polished black base.
Handmade in Australia to our exacting specifications.

Why a Three Phase Model?

Many degeneration models and “phases” of degeneration in the chiropractic profession. Our intent with the three-stage approach was two-fold.

1. The three-phase approach makes the differences between each phase great enough for lay patients to see the distinction. Because the degeneration process is a continuous process and not a three stage event, use the “tenths of a phase” hash marks between each phase to phase place the patient with accuracy.
2. Using the three-phase approach reflects the latest published research, particularly that of Kirkaldy-Willis in his book, *Managing Low Back Pain* (3rd Edition, Livingstone, 1993.)

The Continuum Approach

“This is a model showing the progressively worsening effects of spinal degeneration to the bones in the lower part of the spine. This process can happen anywhere in the spine, or to any joint in the body. In fact, while we call it Subluxation Degeneration, because its cause is from the Vertebral Subluxation Complex, elsewhere in the body we would call this process osteoarthritis-osteo, meaning bone, and arthritis, meaning inflammation of a joint.

“When there is trauma or injury to the spine, the Phase One stage of degeneration is usually seen as a loss or change of curve and a reduced range of motion. Apparently, the body sees this malfunctioning joint as a ‘weak link,’ and starts depositing calcium on adjacent joint surfaces. It’s too early to see, but the process has started.

“Then, with the passage of time and neglecting this problem, in Phase Two, the calcium deposits can be clearly recognized as bone spurs. You can have this problem without obvious symptoms. Chiropractic care at this stage is designed to slow or stop this process from getting worse, and to help other areas of the spine that have to compensate, due to this problem.

“Finally, with the passage of still more time, and without appropriate care, the bone spurs and abnormal bony growths have practically fused these two bones into a solid block of mineral as the spine enters Phase Three.

“At this stage, there’s not too much we can do, except keep the other areas of the spine as healthy as possible.

“The key ideas I want you to understand is that this degeneration process is the result of misalignment, trauma, or injury. It gets worse with time and can be present without obvious symptoms.”

The Bone Spur Approach

“This is a model showing the progressively worsening effects of spinal degeneration to the bones in the lower part of the spine. This process can happen anywhere in the spine, or to any joint in the body. In fact, while we call it Subluxation Degeneration, because its cause is from the Vertebral Subluxation Complex, elsewhere in the body we would call this process

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"The thing about this model that many patients find the most interesting is the depiction of the bone spurs, growing larger and larger, and finally fusing the two bones together.

"I'd like you to feel how sharp these are."

(Patient feels Phase Two spurs.)

"Imagine what these bone spurs can do to irritate the nerves and other soft tissues surrounding these bones!

"Fortunately, we've caught this problem at a stage where we can at least help prevent your problem from getting worse. While I can't promise that we can dramatically improve or reverse the degeneration process, I can promise that if you neglect your problem, it can get progressively worse, like this Phase Three model."

The Soft Tissue Approach

"Besides the bone degeneration that this three phase model represents, you'll notice that the discs, nerves, and related soft tissues degenerate as well.

"Here on the textbook normal example you can see the disc on top. Imagine that we've taken the bone directly above it, off, revealing this disc. A healthy disk like this one has a soft pulpy center, surrounded by dense, fibrous tissue. The purpose of the spinal discs is to separate the bones above and below, act as kind of a "shock absorber" for the spine, plus provide the proper spacing so these nerves roots that exit the spinal cord on both sides, are not entrapped or irritated by the bones. A lot of people think a disc can slip, but the way it is attached to the bones above and below, a disc can't slip. Instead, it can tear, bulge, or herniate.

"In the Phase One Model you'll notice that the soft tissues have begun to thin and degenerate. When the disc narrows like this, it can often cause nerve irritation because the size of the nerve opening has been compromised.

"In the Phase Two Model you can see that this problem has become more serious. Here you can see disc herniation, where the soft, pulpy contents of the disc have leaked out and migrated to one of the nerve openings. This can be a very painful situation.

"Down below, you can see how this same type of bulging disc can put pressure directly on the nerve. The resulting nerve irritation can have a profound affect on the tissues and organs these nerves control.

"And sadly, in Phase Three, the disc is thin and dry, and no longer provides the shock absorber effects of a healthy disc. This compression is one reason why many people appear shorter as they age. Multiply this shrinking effect by 21 discs and you can lose an inch or two of height.

"Notice how the spinal nerve roots get smaller and less healthy as you go from left to right. At the spine itself we see these bone spurs and soft tissues degenerating. However, in terms of your overall health, I'm most interested in the health and function of your nervous system."

The Loss of Motion Approach

"On future visits to our office you'll notice that I will have you turn and bend and I'll feel your spinal bones move with my fingers."

(Doctor grasps the two spinous processes of the textbook normal model with thumb and index finger, gently squeezing them together showing normal joint motion.)

"Notice how the healthy 'textbook normal' spinal joint moves easily. This way you can turn and bend."

(Doctor repeats the squeezing motion with the Phase One model.)

"But when the spine is experiencing Phase One degeneration, with a loss of curve and reduced range of motion, the discs, ligaments, tendons, and other connective tissue has become stiff and doesn't move well."

(Doctor repeats the squeezing motion with the Phase Two model.)

"In Phase Two, there is even less motion. As these two facet joints degenerate in the back, there can be an increased symptoms of pain."

(Doctor repeats the squeezing motion with the Phase Three model.)

"And finally, in Phase Three, the joint is practically fused together, severely reducing nerve and joint function. This can lead to problems both at the spine, and throughout the body, as the organs and tissues these nerves control are affected negatively."

Conclusion

Choose one or more of these suggested scripts and adapt them to match your philosophy and the clinical objectives of each patient. Make sure you have patients handle these models, touching the bone spurs, testing the motion, and feeling the difference in the soft tissues. Point out the facet joint degeneration and correlate their X-rays with the model that comes closest to matching their phase of degeneration.