

# Vertebral Subluxation: Give Credit Where Credit Is Due

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*Vertebral subluxation*: have any other words caused as much turmoil and controversy in the chiropractic profession? As a chiropractic term, *vertebral subluxation* did not make its debut until six or seven years after the profession's founding.<sup>1</sup> Today, there are staunch supporters of the concept of the chiropractic vertebral subluxation – and those who deny the existence of such an entity.

As many definitions of vertebral subluxation seem to exist as there are chiropractors. Let's review a few modern definitions of the concept of the chiropractic lesion of vertebral subluxation; discuss the origins of the word in the profession; and finally, give proper credit to the man who injected this most controversial word phrase into the profession.

## A Few Modern Definitions

The International Federation of Chiropractors and Organizations defines *vertebral subluxation* thusly:

A vertebral subluxation is an alteration of the intervertebral relationships of one or more articulations of the spinal column or the immediate weight bearing components of the axial skeleton; accompanied by a change in the morphology of the tissue occupying the neural canal and/or intervertebral foramina; as well as an alteration of neural function sufficient to interfere with the transmission of organizing information, considered to be homologous to the mental impulse.<sup>2</sup>

The Council on Chiropractic Practice and the Association of Chiropractic Colleges define *vertebral subluxation* as follows:

A subluxation is a complex of functional and/or structural and/or pathological articular changes that compromise neural integrity and may influence organ system function and general health.<sup>3-4</sup>

The definitions put forth above were largely created through a political process of consensus with a nod toward the historical use of the words. But what is the actual origin and meaning of vertebral subluxation in chiropractic?

## Origins and Meaning

In an article titled, "Luxation of Bones Cause Disease,"<sup>5</sup> circa 1899-1900, D.D. Palmer states that spinal nerves:

...may become pressed by partial or complete dislocation of the bones forming these orifices [intervertebral foramina] by the contraction of muscular fibers through the action of the motor nerves. A pressure upon a sensory nerve produces pain in the part to which these nerves are distributed.

Diseases are produced by undue pressure upon the nervous system, anywhere throughout the body ... This pressure is caused by the luxation or displacement (partial or complete) of the bones, or by contraction of the muscles drawing on or across the nerves.<sup>5</sup>

So, in this early treatise, Old Dad Chiro essentially described the chiropractic lesion as a partial or complete luxation (misalignment) of vertebra that pressed against nerves and caused interference to the transmission of neural messages - a pretty simple concept. He would continue to use the term *vertebral luxation* for many years until one of his early graduates altered chiropractic lexicon forever.

#### Dr. Oakley G. Smith and the Evolution of "Subluxation"

Chiropractic historian Timothy J. Faulkner, DC, has written extensively about one of the earliest graduates of the Palmer School of Chiropractic, Oakley G. Smith.<sup>1</sup> Much of the remainder of this story is derived from the Faulkner biography of Oakley Smith.

Based upon documents dating from the earliest era of the profession, Faulkner writes that Smith spent the most time under the tutelage of D.D. Palmer. Smith began treatment with D.D. that was sustained over a five-month period. He then studied chiropractic under Palmer as a formal student for six months. Smith would become good friends with D.D.'s son, B.J.

During his time in Davenport, Smith also served as Palmer's apprentice, covering his practice during vacations and other of D.D. Palmer's travels. Later, Smith would become a business partner with the elder Palmer in chiropractic school ventures in Santa Barbara, Calif., and Chicago, Ill.

Smith opened his private practice in January 1902 in Clarinda, Iowa, and on Feb. 4, 1902, became the first in the profession to use the term *sub-luxation* in an advertisement, claiming:

Sub-luxations are caused by falls, over-lifting or violent strains. Who is there that does not remember of ever taking a fall? THAT FALL MAY HAVE BEEN THE BEGINNING OF YOUR TROUBLE. The symptoms - whether a lame back or a lame arm, or a weak or palpitating heart - may or may not follow closely the date of the accident. As a matter of record a majority of cases do not show any serious outward signs for weeks or months and often years.<sup>1</sup>

As was his training under D.D. Palmer, Smith understood the chiropractic vertebral "sub-luxation" to be a spinal bone misalignment that placed pressure on the spinal nerves, resulting in pain or loss of function to the target tissue of those spinal nerves; essentially, altered nervous transmission resulting in disease of the tissue deprived of its proper nerve supply.

#### The Student Becomes the Master: A New Description of the Subluxation

After graduation from the Palmer School, Smith enrolled at the University of Iowa Medical School in the fall of 1899 to learn additional anatomy and physiology he believed he needed to know to be a successful practitioner. Eventually, that additional training would lead him to go on to perform laboratory studies of the spinal joint spaces, intervertebral discs, spinal connective tissues and the intervertebral foramina.

Smith's studies would lead to him to depart from the description of Palmer's vertebral luxation as simply a misaligned bone pressing on a soft spinal nerve:<sup>6</sup>

A simple subluxation is a condition in which the exact relation between the articulating surfaces of bones has been altered from normal, the articulating surfaces still remaining in partial contact. It is a term that has long been used in a very vague and indefinite way when one considers it from the view point of science in perfect simplicity.

In all books and articles heretofore written wherein vertebral subluxations have been regarded as important causative factors in disease, a subluxated vertebra is spoken of as one would speak of an indented, protruding or slanting brick in a solid brick wall. Likewise the reduction of a subluxated vertebra has been talked of as one would talk of lining up the displaced brick and pushing or pulling it into a fixed or permanent position.

When one stops to consider the latitude of motion in each of the twenty-four true vertebrae it becomes apparent the those who have done the most talking about 'lining up the spine' have had little conception of the work attempted.

In case of a simple vertebral subluxation, the vertebra is not lodged in a fixed and permanent abnormal position like the displaced brick in the wall; to consider it so is preposterous for it is a movable bone in a flexible and movable column. A simple subluxated vertebra differs from a normal vertebra only in its field of motion and the center of its field of motion, but because of it being subluxated, its various positions of rest are differently located than when it was a normal vertebra.

A vertebra, because of its peculiar shape, because of its articular cartilages, the intervertebral cartilage above and below it and the muscles and ligaments attached to it, is capable of certain circumscribed movements, and it must, therefore have a certain definite center of movement just as a wheel has a hub. It is therefore, obvious that when a change takes place in the bone itself or when any of the attached muscles, ligaments, or cartilages are changed from normal tonicity, consistency, or tension, the center and also the field of motion of the bone is changed. Like a wheel with its hub off center, its field of motion may be too great in some directions and too small in others.

By positions of rest we mean the positions assumed by the bones while the body maintains certain poses. If by subluxation, the center of motion and the field of motion are changed it follows that the positions of rest will also be changed from normal in case of subluxations.

It is therefore not the business of the chiropractor to move a bone from a fixed abnormal position into a fixed normal position but to change its abnormal positions of rest to its normal positions of rest so that the hub of the wheel will be in the center and the balance of the wheel may travel in the space provided for it without interference to the surrounding mechanism." [Author's emphasis]

In this eloquent description, Smith melds anatomy, physiology and spinal biomechanics into one harmonious whole, describing the interaction of function and structure of the spine. The only element missing in this description is the consequences this abnormal structure and function exert upon the nervous system. Throughout Smith's writings, however, the notion that vertebral subluxations impair nervous system function, resulting in reduced health of the target tissues, is prominent.

Smith went on to be the principal author of the chiropractic profession's first real textbooks, *Modernized Chiropractic, Volumes I & II*.<sup>6-7</sup> Soon, others would adopt Smith's terminology, including B.J. Palmer;<sup>8</sup> Carroll Burtch<sup>9</sup> (one of Solon Langworthy's faculty at his American School of Chiropractic); and Langworthy and Brown,<sup>10-11</sup> the publisher and editor, respectively, of the

profession's first regular journal, *Backbone*.

## From Then to Now

For 116 years, "vertebral subluxation" has permeated chiropractic literature, legislation, professional conferences, and now arguments and discussions on various social media. Our professional identity is forever connected to the words *vertebral subluxation*, and the chiropractic subluxation is codified into both state and federal legislation.

Editor's Note: The Association for the History of Chiropractic has preserved the credible history of the profession as its sole mission through the publication of the scholarly journal, *Chiropractic History*. Stories such as this one may be accessed through the AHC's journal ([www.historyofchiropractic.org](http://www.historyofchiropractic.org)).

## References

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