



UPPER CERVICAL TECHNIQUES

BLAIR UPPER CERVICAL – Dr. William G. Blair

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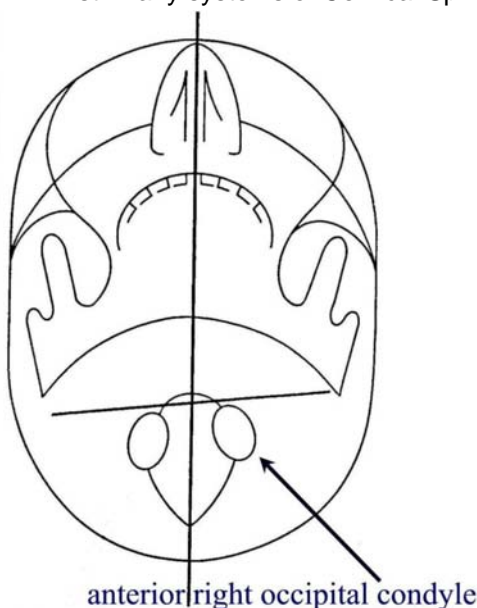
The Blair Upper Cervical approach is unique in the UpC chiropractic profession; in that today it is still the only NON-orthogonal based precision Spinographic (spinal radiographs or X-Rays) and adjustment technique. In geometry 'orthogonal' means 'involving right angles', and orthogonal based UpC techniques require that a line drawn through the middle of the skull be perpendicular to the plane of the atlas vertebra, which should be parallel to the ground. Further orthogonal approaches may require the atlas (in the vertex X-ray view) to again be at right angles to a line drawn through the centre of the skull, although there are now considerations being made with regards to condylar offset. This orthogonal, symmetrical thinking is really the main departure of Dr. Blair's approach to that of orthogonality as Dr. Blair argues, and I think rightly so, that the human spine is more asymmetrical rather than symmetrical. Nevertheless, all specific UpC techniques are having a good amount of success. The Blair technique still addresses the top two cervical vertebrae being the atlas and axis for these are the only two which do not have intervertebral discs, like the rest of the human spine; are the two most freely

moveable vertebrae; are the ones most commonly misaligned and the easiest to be misaligned. Misalignments in other spinal vertebrae, in my opinion, require far more force to occur and are usually as a result of significant trauma. They are usually secondary to an upper cervical subluxation.

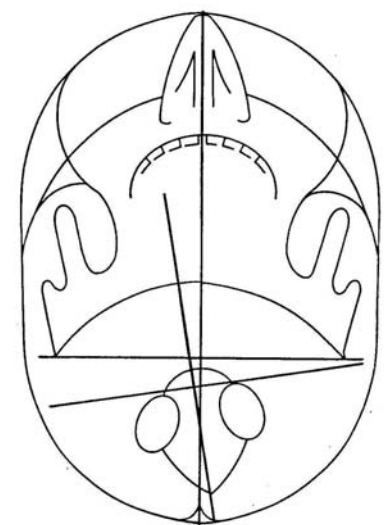
MALFORMATION INFLUENCE ON SPINOGRAPHIC INTERPRETATION

Figure 1: Offset occipital condyle and Figure 2: Offset foramen magnum.

Dr. Blair developed his approach to UpC, he says in his paper "A Synopsis of the Blair Upper Cervical Spinographic Research, November 1964, "after studying hundreds of cranio-atlanto-axial Spinographs, ... and a specimen from B.J. Palmer's Osteological Collection". He discusses in his paper his view that whilst "many systems of Cervical Spinographic Analysis" are "theoretically, mechanically correct ... in



many instances opposite conclusions are reached" and an individual's malformations may be being used to formulate adjustment vectors, which might result in an atlas being adjusted without the need for an adjustment. He found in his research that, there was a frequency of malformations revealing an anterior condyle occurring in 79% of all cases; foramen magnum malformation (with the foramen magnum anterior (A) to posterior (P) plane not parallel with the A to P sagittal plane of the skull) occurring in 77% of all cases; a short occipital condyle in comparison with the orbital



Foramen magnum malformation [not central to skull]

floor in 77% of all cases; short in comparison with the base line of the skull in 64% of cases; short in comparison with the vertical line of the skull in 66% of the cases; transverse measurement of the right condyle being less than of the left condyle, in 83% of the cases. In other words “such malformations are the rule rather than the exception” and “in reality, one of our greatest constants is the presence of non-symmetry in the bilateral formation of these structures.”

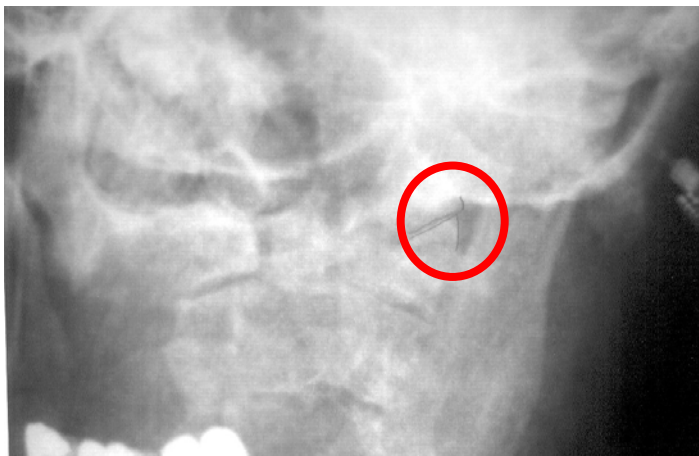
OVERCOMING HAZARDS OF MALFORMATION

Dr. Blair outlines the approach to overcome possible mistakes from misinterpreting malformations by “establishing the Normal for each individual case” ... “the normal position of Atlas and Axis in accordance with the malformations of each individual”. Then it is necessary to “observe and measure the occipito (skull)-atlanto (atlas)-axial (axis) structures to detect deviations from normal relationships.” To do this Dr. Blair advocates the use of stereoscopic X-Ray views, which adds a further complication since these views are very difficult to analyse. He shifted his focus to the neurocanal, that being the canal, which the spinal cord passes through as it makes its way from the brain to the base of the spine. He says “Any encroachment of osseous structure (vertebrae) into the neural canal, due to abnormal relationship of the vertebral rings, contains the potentiality of neurological obstruction...” and “any deviation in the continuity of the vertebral rings can usually be detected on a stereoscopic A to P (open mouth) cervical view and/or on the lateral cervical flat or stereo.”

Further investigations indicate “one outstanding feature of articulations”, “when two bones join together to form an articulation, their two articular surfaces exactly match” and “if any misalignment takes place it must do so at their articulation” and further “this misalignment revealed at an articulation gives Spinographic Science undeniable proof of vertebral misalignment.”

MECHANICAL PRINCIPLE OF ATLAS MISALIGNMENT

The three characteristics of articular surface of the occipital condyles are: 1. Slope; 2. Convexity; 3. Convergence. The amount of atlas misalignment and any rotational component is absolutely limited by the “width of the condyle-lateral mass articular space; any further rotational movement would require a turning of the lateral mass on the convexity of the condyle” and “the only exception to this mechanical limitation of atlas rotation would be condyles possessing little or no convexity” and “we have yet to see only two cases which we feel could have this potentiality.” In fact, if one really thinks about the anatomy and movement as described by Dr. Blair then greater rotation past the osseous lock of the structures and past the strength of holding ligaments must result in dislocation of the occiput off atlas or atlas lateral mass dislocation off axis, a situation, which is obviously potentially fatal or neurologically damaging to a person.



The X-Ray view, Figure 3 and Figure 4 are provided courtesy of Dr. Michael Burcon, D.C. – **Blair Upper Cervical Chiropractor- see website** www.burconchiropractic.com

Figure 3: Stereoscopic X-Ray

As mentioned, the Blair technique utilises a stereoscopic X-Ray approach shown opposite, inside the red circle. This shows the overlap of the left occipital condyle on the left atlas condylar surface. These articulations should line up and there should be no over or underlap of the occipital condyles on the atlas articulating

facets. This is another look at the subluxation as described in my section “[Anatomy of the Atlas Subluxation](#)”, but in a living person. The stereoscopic approach requires much training and understanding of anatomy to interpret and analyse the results. In the hands of the appropriate person this technique provides much needed further information about the articulations in the upper cervical spine.

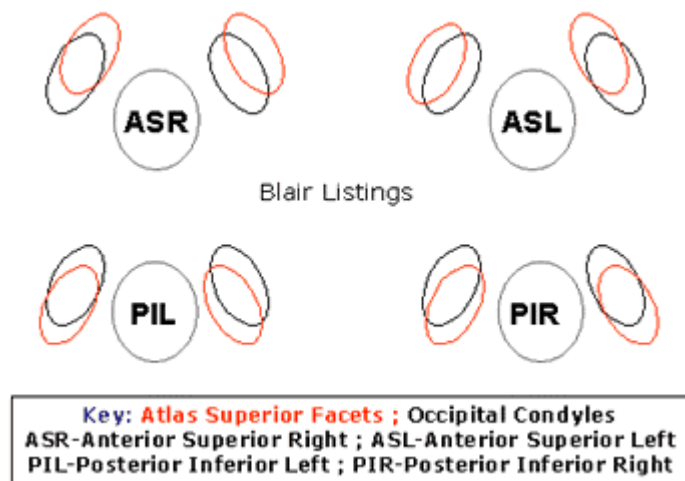


Figure 4: Blair Atlas Listings.

The Blair chiropractor uses this and other views to prepare an atlas listing and then finally atlas adjustment vectors. The 4 Blair Atlas listings are described in Figure 3 opposite. The red 'kidney shaped' objects being the atlas superior facets and the black objects being the occipital condyles. A head injury may result in the skull shifting to one of these four positions, such movement dependant upon the amplitude of the force, the direction it comes from and the anatomy of the person sustaining the force. A consequence of the injury can be ligament stretching, damage and/or tearing, resulting in the person's head remaining in a subluxated position and requiring

intervention of some kind to restore normal skull-atlas relationship and head and neck realignment.

BLAIR CERVICAL ADJUSTMENTS

The above summary is a description of the cervical subluxation analysis utilised in the Blair Upper Cervical approach. The main difference from orthogonal approaches being that Blair emphasizes the relationships of the articulating surfaces of each vertebra. The X-Ray spinographic analysis conducted by the Blair practitioner helps to eliminate asymmetry as a source of error in UpC analysis.

For further analysis of the cervical subluxation an observation of differential paraspinal dermo-thermographic patterns (DPDP) is carried out in the cervical region and functional leg length deficiency is used. For the uninitiated DPDP utilises an instrument that scans the cervical spine and records varying heat patterns indicative of nerve interference. These patterns are observed in the patient before and after cervical adjustments. The functional leg length discrepancy comes about from the unlevelling of the pelvis due to a misalignment at the level of the atlas as described elsewhere on my site "[Anatomy of the Atlas Subluxation](#)". Together with X-Rays, and DPDP, leg length discrepancies are used to monitor correction of the upper cervical subluxation.

The toggle adjustment is a variant on toggle-recoil, as taught at Palmer College in the 1970's.

Blair practitioners use the Blair Toggle-Torque (TT) adjustment approach, which was developed from B.J. Palmer's toggle-recoil technique. Blair TT uses toggle without recoil but incorporates a 180-degree torque (helical twist) force. Theoretically, "torque" is used to decrease the superior or inferior aspect of the misalignment. Note though that this is not torque, per se by definition as a twisting or rotating motion about a central point. The torque may provide extra leverage via a recto-linear force on the transverse process of the atlas.

The patient is placed in side posture with his or her head on a drop headpiece. The Blair TT then is delivered by using the "pisiform lead" where the practitioner's pisiform bone (in the hand, next to the triquetrum and ulna bones), remains in firm contact with the vertebral contact point throughout the adjustment, and torque added resulting in a helical pathway. The adjuster can alter his or her approach depending upon same side or other side of the head, superior or inferior, anterior or posterior. In some cases where no torque is required, the adjuster would recoil his or her hands from the thrust.

Those who have experienced this type of adjustment will testify that apart from a startle due to the collapse of the headpiece, the force applied by a master of this adjustment is very tolerable, moderately gentle and quite effective. Like the majority of upper cervical techniques more time is spent on analysing spinographs and other indicators than actually adjusting.



Figure 5: TOGGLE ADJUSTMENT

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The figure shows Dr. Michael Burcon (see his website) demonstrating the Blair toggle adjustment. Michael is using the 'pisiform lead', placed upon the transverse process of his patient's atlas. He has already determined the 'listing' of her atlas and will make the adjustment by 'pushing' down. The headpiece (shown) will collapse briefly and the adjustment is completed. As mentioned previously this adjustment technique is quite tolerable, non-invasive and involves no twisting or cracking of the neck. Following the adjustment it is necessary for the patient to rest for 20 minutes or so. Michael is a wonderful practitioner

and has recently published a peer-reviewed paper on Meniere's Disease; Burcon DC, Michael T., Upper Cervical Protocol for Ten Meniere's Patients, *Journal of Vertebral Subluxation Research* – www.jvsr.com. I invited Michael to Australia some years ago after corresponding with him for almost a year on email. He was able to help a number of my friends and neighbours; one person in particular suffering the effects of sciatica was totally pain free within minutes of the adjustment. I consider him a close friend. He is a graduate of Sherman College and is a dedicated 'specific' upper cervical chiropractor.