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BALANCING THE ATHLETE

A New Approach

By

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SUBJECT: Performance Enhancement - The relationship of hypertonic muscles, and the CEREBRAL SPINAL FLUID-ENDOCRINE SACRAL-OCCIPITAL TENDON APPARATUS.

OBJECTIVE: To improve performance physically and mentally through the stimulation of CSF (Cerebral Spinal Fluid) and enhancement of the function of the Endocrinew System, which are critically involved with total brain integration.

METHODOLOGY: This is achieved through the identification and release of hypertonic muscles involved with the sacrum (the CSF pump) and the occiput, a key member of the major cranial bones.

KEY MUSCLES: The muscles involved are divided into PRIMARY and SECONDARY groups. PRIMARY MUSCLES are defined as those muscles having the greatest effect and are most involved in the process. SECONDARY MUSCLES are those that are less important, but whose correction further enhances the process. The following is a list of the most common PRIMARY and SECONDARY MUSCLES, but understand that each person is different and any muscle may be considered a key muscle on any individual. However, the list below will allow you to make a significant improvement the vast majority of the time.

PRIMARY	SECONDARY
FLEXOR HALLUCIS LONGUS	QUADRICEPS
FLEXOR DIGITORUM LONGUS	PIRIFORMIS
GASTROCNEMIUS	GLUTEUS MEDIUS
SOLEUS	SACROSPINALIS
HAMSTRINGS	ABDOMINALS
GLUTEUS MAXIMUS	STERNO-CLEIDO-MASTOID
UPPER TRAPEZIUS	

THEORY: Before getting into the methodology, let us examine th CSF-Sacral-Occipital-Tendon Apparatus, along with the Cranials and the Endocrine Systems and see how they all interact. This will enable us to better understand how the body works in concert with its component parts, and why this system has such a profound effect on total performance. Furthermore, the following provides us with a sound physiological foundation based on scientific knowledge that enables us to explain in terms palatable to those whose minds are not yet open to "holistic" concepts why and how Touch for Health, EK, AK, etc., is able to achieve the results that they do.

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CEREBRAL SPINAL FLUID (CSF)
AND
THE SACRAL-OCCIPITAL-TENDON APPARATUS

THE CRANIALS: For many years, the cranium (skull) was regarded as a rigid shell, and CSF as nothing more than a shock absorber for the central nervous system. However, recent research, notably by RETZLAFF, MICHAEL, PRITCHARD, BOWSHER, BOURNE/SHANTHAVEERAPPA, CSERR, FRYMAN, STEER, HORNEY, and others, has found that the CRANIAL bones move during respiration (and, in fact, have at least four different movement patterns, or rhythms) in concert with the sacrum, spinal process, and the pelvis, and that CSF is "pumped" throughout the central nervous system accordingly.

CEREBRAL SPINAL FLUID: CSF is now known to be a major biological fluid, very similar to plasma, flowing about the brain, down the spinal cord posterially, up anterially, and along all peripheral nerves. In addition to serving as a shock absorber, CSF also serves to remove toxins, transports hormones and nutrients,and acts as a media for transmitting information between the endocrine system and all other systems. Furthermore, the SACRUM, located at the base of the spine, functions as the "CSF pump," also moving during respiration as noted above.

DURA MATER: CSF is contained in membranous tissue surrounding the brain, and the spinal cord. This flexible membrane is attached firmly in only three places; the cranials, the top three vertabrae, and the sacrum. If there is any restriction, or distortion, such as torquing (slight twist) due to skeletel misalignment, the flow of CSF is diminished, creating a "dominoe effect." This membrane is called, the DURA MATER.

ENDOCRINE SYSTEM: The ENDOCRINE GLANDS effect every function of our body. and their functions are interrelated. If one gland disfunctions, all the other glands disfunction, and the function of the endocrine glands are affected greatly by the flow of CSF, and cranial movement. Cranial movement, or lack of movement, has a profound effect on the endocrine system in two ways; first, the movement of the sella turcica-shpenoid bone, which helps form the roof of the mouth, massages, or "milks" the anterior and posterior lobes of the pituitary gland alternately as the cranials move during respiration. Said movement is believed to greately enhance the pituitary function, the pituitary being the "master" gland of the body, which communicates and regulates all other endocrine glands, which control all body functions, directly, or indirectly. Secondly, the venal blood outflow of the cranial cavity may be affected, in as much as the juglar foramen (juglar vein port) is located at the junction of the occipital and temporal bones. According to Goodheart, the lack of cranial movement may cause a back pressure, as well as keep the interior cranial temperature too high (only fractions of a degree may be involved). This affects the performance of the hypothalamus, which is temperature sensitive, which is the control gland for the pituitary, the master gland. Consequently, if there is some restriction, or impairment, of the movement of the sacrum, the CSF is not pumped efficiently, the cranial bones do not articulate approprately, and all the vital functions of the CSF, as well as the endocrine system are diminished accordingly. The results are, among other things, diminished learning capabilities and motor skills.

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Just what is a HYPERTONIC MUSCLE? It is simply a muscle that is too tight, or over tonified, and may become so in many ways, such as:

Exertion - work, athletics, etc.
Injury
Misuse - poor posture, sitting, high heels
Emotional stress - jaw clenching, neck and shoulder tightening
Quick, unexpected movement - slip, jerk, or fall

The tonicity of a muscle changes as the demands are placed upon it, in anticipation of future expected demands. That is, the muscle gets tighter, and thus stronger in order to handle a bigger load. It can also get weaker, of less tonified in the expectation of a lesser load, or in the absence of activity. This is due to the function of the proprioceptors located in the muscle, known as spindle cells and Golgi tendon cells. We will deal with the spindle cells only at this time.

The spindle cells are located in the belly, or center of themuscle, and function somewhat like radar stations, monitoring the distance between stations (cells) and regulate the rate and amount of change in distance (length of the muscle). It is known that we can confuse the spindle cells by jamming the cells together , or spreading them apart. The first will weaken, or de-tonify a muscle, while the latter will cause it to become stronger. Baseball players use this technique before batting, by swinging a weighted bat, thus stretching the muscle, which spreads the spindle cells away from each other, and they react by contracting the muscle, which makes it easier to swing the bat, giving a light feeling temporarily. That is why your knee jerks when the doctor taps the tendon just below the knee. The muscle was quickly elongated, spreading out the spindle cells which interpreted the information as they, the spindle cells as being too far apart. Consequently, they want to get back to their proper distance as quickly as possible and they do.

Lets compare this to someone who wears high heeled shoes. This keeps the gatrocnemius, and other lower leg muscles in a permanent contracted state. Gradually the spindle cells accept this jammed position as the norm, and the muscle becomes hypertonic.

The same thing applies to someone who sits for long periods of time, and don't we all. This places the hamstrings in a contracted positon, and it becomes hypertonic. To counteract this what do we, the enlightened ones do? We run, we get into aerobics, which does what? Gets more muscles to go hypertonic, and also pounds the sacral joint, further agravating the problem.

Also, a quick, unexpected movement, such as a sudden slip on a wet surface, can cause pain, as well as a hypertonic condition, even though no injury exists. This is because there are two kinds of spindle cells; one which regulates the amount of change, and another which regulates the rate, or speed of change. Unfortunatley, this cells transmit their information at different speeds, and the suddeness of the unexpected move causes the signals to be out of sync, thus an erroeous injury is recorded, and the muscle goes hypertonic. The situation will remain until corrected, or until the body kills the pain itself. This may be why we are able to achieve those "miracle" pain cures through manipulation. We have properly re-set the spindle cells and erroneous pain turns off.

PRE-TEST - ENERGY SYSTEMS EVALUATION: Before conducting the Hypertonic Test and Correction, test as many energy systems as is practical to better realize how effective this system is. For Athletes I test for:

COMMON INTEGRATION POINT	AURICULAR REFLEX
OCULAR LOCK	END OF GOVERNING/CENTRAL MERIDIAN
K27 CHALLENGE	TMJ
HYOID	BODY SHOCK
FIGURE 8s	OCCIPUT GAP (Standing and supine)
SACRAL JOINT (Standing/supine)	STANDING GAIT (Knees bent)
*CROSS CRAWL (Touch opst knees)	HOMO-LATERAL MARCH

*To accurately evaluate the cross crawl, it is important that the subject touch the opposite knees while marching, and that the arms SWING FREELY in order to involve as many muscle groups as possible. What often appears as cross crawl is in reallity not truly cross crawl, as the body makes subtle accomodations and can be slightly out of sync, but is not readily obsrvable. Touching the opposite knee with good arm movement makes the cross crawl more definitive, and the body can not "cheat." You may find a good cross crawler to have a difficult time marching and touching the knee smoothly, and may even have difficulty getting started. Also, test more than one muscle group as some muscle groups relate to each other bi-laterally and other muscles relate homolaterally. In addition to the deltoid, other muscles to be tested may include:

LATISSIMUS DORSI
SUPRASPINATUS
PECTORALIS MAJOR CLAVICULAR
ANTERIOR SERRATUS
QUADRICEPS

You may include other muscles as you wish, but these are the muscles that will provide you with a good reference and are standard procedure in Edu-Kinesthetics.

HYPERTONIC MUSCLE TEST: Select any strong muscle as the Indicator Muscle (IM). The Deltoid, as usual, serves best for this purpose. PLACE THE MUSCLE TO BE TESTED IN ITS MAXIMUM EXTENDED POSITION AND APPLY FIRM PRESSURE. TEST THE IM. IF THE IM GOES WEAK, THE MUSCLE IS HYPERTONIC.

CORRECTION: PLACE THE MUSCLE IN IT'S MAXIMUM EXTENDED POSITION. APPLY FIRM PRESSURE. THE SUBJECT TAKES A DEEP BREATH, AND EXHALES SLOWLY WHILE CONTRACTING THE MUSCLE. THE MUSCLE MUST STAY IN MAXIMUM EXTENSION FOR EIGHT (8) TO TEN (10) SECONDS. THE SUBJECT SHOULD APPLY FIRM PRESSURE, BUT NOT ENOUGH TO OVER POWER THE THERAPIST.

Thats all there is to it! It is important that the muscle be contractd for at least eight seconds as it allows the spindle cells to be moved apart in a manner they will accept.

AS THE SUBJECT RELAXES THE MUSCLE, APPLY FIRM, BUT GENTLE PRESSURE, EXTENDING THE MUSCLE FURTHER, WHICH WILL USUALLY HAPPEN, SOMETIMES VERY DRAMATICALLY. REPEAT THE PROCESS TWO (2) OR THREE (3) TIMES UNTIL THE IM TEST STRONG WITH THE MUSCLE IN EXTENTION.
NOTE: IF THE MUSCLE DOES NOT INCREASE IT'S RANGE OF MOTION, AND THE RANGE OF MOTION IS LESS THAN WHAT IT SHOULD BE, AND THE IM TESTS STRONG, GO ON TO OTHER RELATED MUSCLES. AFTER CORRECTING THEM, RETURN TO THE ORIGINAL MUSCLE AND RE-EVALUATE. THIS WILL OFTEN INCREASE THE RANGE OF MOTION. For instance; if the hamstring after correction appeared to have limited range of motion, go on to the gluteus maximus and minimus, and the sacro-spinalis. Then retest the hamstrings.

CAUTION: DURING THE CONTRACTION PHASE, THE THERAPIST DOES NOT ATTEMPT TO FORCE THE MUSCLE INTO FURTHER EXTENSION, BUT RATHER "HOLDS" THE MUSCLE IN MAXIMUM EXTENSION. In evaluating the muscle, communicate with the person being tested as to when they experience muscle tension, or pain. PAIN MUST BE AVOIDED AS THIS WILL CAUSE THE MUSCLE TO OVERTONIFY. This will make it very difficult, if not impossible, to release the muscle.

TFH/AK AND HYPERTONIC TESTING: Adapting to, or utilizing hypertonic correction does nor require one to abandon TFH/AK, or any other methodology, in fact, quite the contrary. We are simply dealing with another aspect of the muscle. Whereas TFH/AK places the origin and insertion as close together as possible and test for weakness, Hypertonic testing moves the origin and insertion as far apart as possible and test for hypertonicity. Hypertonic correction will make all other correction methods infinitely easier and longer lasting, as such problems as switching and polarity are corrected in the process. There may be a bit of confusion in getting the muscle into the proper test position as it is just the opposite of the TFH/AK position. For instance; the gastocnemius is tested with the toes and foot flexed away from the head in TFH/AK. In hypertonic testing the foot is placed with the toes and top of the foot toward the head.

ALARM POINTS: Although the Primary and Secondary muscles are listed, other muscles may be involved. To aid in identifying these "other" muscles the standard alarm point test procedure can be used. When the alarm points indicate there is an over-energy condition, test the muscles related to that meridian for hypertonicity. After correction, retest the alarm point, correction meaning hypertonic release.

PROCEDURE: The procedure that works best, at least for me, is to simply start at the bottom and work up, using the seven (7) Primary muscles listed earlier. I suggest that you learn this procedure first, and then work with it any way that works best for you. The order of muscles to be tested are as they appear under the heading PRIMARY.

FLEXOR HALLICUS LONGUS
The origin is approximately 6 inches below the knee on the posterior of the fibula, and the insertion is the plantar distal phalanx of the great toe. It's function is to flex the great toe and assist in flexing the foot downward.

NOTE: TEST AND CORRECTION POSITIONS ARE THE SAME. You may correct as you go, but for best results, and to obtain as much information as possible it is best to complete all test first before correction.

TEST POSITION - FHL: With the leg relaxed, place the foot so that the top of the arch is bent back toward the head (dorsiflexion) and apply firm pressure on the bootom of the great toe, extending it toward the head. Test the IM. If it goes weak, the FHL is hypertonic.

FLEXOR DIGITORUM LONGUS
The origin is nearly that of the FHL and the insertion is the plantar distal phalanxes of the four remaining toes. Its function is to flex the toes downward and to assist in flexing the foot downward.

TEST POSITION - FDL: Same as for FHL. Apply pressure to the bottom of all four toes and test the IM. In some cases it is necessary to test each toe separately.

GASTROCNEMIUS: Its function is to flex the foot downward. With the leg straight and the foot in dorsiflexion, apply firm pressure to the ball of the foot toward the head. Test the IM.

SOLEUS: Function - to flex the foot downward with the knee bent.
TEST POSITION: With the knee bent and the foot in dorsiflexion, apply firm pressure to the ball of the foot toward the knee. Test the IM.

HAMSTRINGS: Function - to bend the knee.
TEST: With the knee straight, apply pressure at the back of the heel, lifting the leg in an arc toward the head. COMMUNICATE WITH THE TESTEE AS TO WHEN MUSCLE TENSION IS FELT, OR IF PAIN IS BEING EXPERIENCED. This muscle most likely to be very hypertonic, and will show the biggest change in range of motion. It is also the muscle most likely to register pain, so procede with caution. When the testee states the maximum range of motion has been reached, test the IM. You may apply a bit more pressure, providing no pain is present.

GLUTEUS MAXIMUS: GM pulls the leg backward (posterially). With the knee bent, apply pressure to the back of the thigh, superior to the knee, pushing the anterior of the thigh toward the torso. When full range of motion has been reached, test the IM.

UPPER TRAPEZIUS: Function - rotates and flexes the head.
TEST: Tilt the head and flex forward and down with the head rotated to one side as if to lay the cheek against the shoulder. EXAMPLE: Place the left cheek against the left shoulder with the nose pointing to the left and down. Apply firm pressure against the back right side of the head, and brace the right shoulder with the other hand. Test the IM.

SECONDARY MUSCLES
QUADRICEPS: Raises the leg forward and straightens the leg. This test should be done in two (2) positions; supine and prone. Also, it may be tested standing as many other muscles can.
SUPINE - Bend the leg applying firm pressure at the front of the ankle until maximum range of motion is reached. Test the IM.
PRONE - With the testee lying face down bend the leg at the knee, allowing the front of the leg to rise, until full range of motion is reached. Test the IM.

PIRIFORMIS: Rotates the leg in (medially).
TEST: With leg bent at the knee at 90 degrees, rotate the lower leg laterally away from the center line until maximum range of motion is reached. Test the IM.

GLUTEUS MEDIUS: Extends the leg to the side.
TEST: With the leg slightly bent, apply firm pressure to the ouside of the knee, pushing it across the center line until full range of motion is reached. Test the IM.

SACROSPINALIS: Arches the back and holds the torso erect.
TEST: Place the testee in a tuck position. i.e., seated with knees raised and bent with the thighs touching the torso. Apply firm pressure at the back of the shoulders pushing the torso forward. Test the IM.
CORRECTION: Hold the testee in the tuck position as he/she tries to straighten the body. This can be done by placing your chest against the testees upper back while applying pressure with one hand under each knee.

PSOAS: This muscle group is often a primary muscle, and should be tested after the primarys as standard procedure. Its function is to pull the leg forward and across.
TEST: This is done in a semi seated position so that the tail bone is at the edge of the table. With one leg bent and raised, allow the other leg to hang down toward the floor. The lower leg is the one to be tested. Apply firm pressure downward at the knee until full range of motion is reached. Test the IM.

ABDOMINALS - UPPER AND LOWER: Flexes the torso .
TEST: Same position as the psoas, except both legs are down. Apply presure down at both knees. Test IM. This is for the lower abdominals. For the upper abdominals, apply pressure downward toward the back as the testee attempts to raise his upper torso forward as if to sit up. Test the IM.

STERNOCLEIDO MASTOID: Rotates the head and pulls the head down and forward. TEST: In an upright position, or prone, apply pressure under the chin pushing the head backward 'til full range of motion is reached. Test IM. Turn the head left and right and repeat testing the IM. By putting the head in a forward position, the above tests can be performed on the neck extensors.

ADDITIONAL MUSCLES

To test for hypertonicity on any muscle, analyze what the function of the muscle is, observe its contracted position, and move it into the opposite position, which will be at the end of its extended range of motion.

After all muscles have been corrected regarding hypertonicity, retest the energy systems. The testee should test strong in both homo-lateral and heterolateral actvities, and switching and polarity problems should also be corrected, and all other energy systems test should be strong. It may not happen every time, but certainly the vast majority of the time.

LEARNING DISORDERS: For those of you who interested in working with people who having learning problems, this same procedure can be used dealing with the same muscle groups. All that needs to be added are test related to reading, writing, and following verbal directions. In fact, this method is what I use in working with the learning impaired, and is simply geared toward the athlete. Any one can benefit from this method.

SUMMARY

Hypertonic muscle balancing allows the body to operate more efficiently. It promotes the flow of cerebral spinal fluid, and enhances the function of the endocrine system. Energy systems become better intergrated, and balancing of other muscles through AK/TFH et al becomes easier and longer lasting. Also, the individual is less affected by food tolerance problems. One does not have to scrap AK, TFH, or any other system as Hypertonic balancing works with all other systems. To further enhance the process, it is suggested that you learn the Mahony self correction system that closely approximates the Hypertonic corrections we have just discussed.
See Page 9-10.

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ENERGY SYSTEMS - SELF CORRECTION

I ROCKING. OBJECTIVE - TO STIMULATE THE CIRCULATION OF CEREBRAL SPINAL FLUID BY FREEING AND FLEXING THE SACRUM, THE CSF PUMP, A MAJOR FACTOR IN BODY ORGANIZATION.
1. Sit on a firm padded surface with knees raised, heels touching the surface. grasp the knees with the hands, leaning the upper body back until the arms are straight. Weight is on the sacrum. Rock backward exhaling deeply, and forward while inhaling. 10 repetitions,
2. Rock side massaging the sacrum.
3. Repeat #1.

II CALF EXTENSION. OBJECTIVE - TO RELEASE HYPERTONIC MUSCLES IN THE LEG INVOLVED IN THE TENDON GUARDE APPARATUS, WHICH IS RELATED TO THE SACRAL-OCCIPITAL RESPIRATION COMPLEX.
In a standing position lean forward placing both hands on a table, chair,etc. Place one foot directly to the rear, the toes pointing directly forward. Bend the front leg at the knee and lock the rear leg in a straight position. Lean forward keeping the rear leg straight and the heel flat to the floor. Hold this position while exhaling for 8 to 10 seconds. A firm extension with no pain should be felt in the rear leg. Return to the starting position and repeat 3 times each leg.

III HAMSTRING EXTENSION. OBJECTIVE SAME AS IN II.
Half sit on a table or bed with one leg flat on the surface, the toes pointing up, the other foot touching the floor. Lean forward keeping the leg straight until tension, without pain, is felt in the back of the leg or knee. Grasp the underside of the table with the hand(s) pulling your torso down toward the leg, forcing the knee down, exhaling for 8 to 10 seconds. Relax and repeat, 3 times each leg.

IV UPPER TRAPEZIUS EXTENSION. OBJECTIVE - TO RELEASE HYPERTONIC MUSCLES INVOLVED WITH CRANIAL ARTICULATION AFFECTING CSF AND VENAL BLOOD OUTFLOW.
With the head forward and down, turned to the right, grasp the upper trapezius on the right side with the left hand, squeezing and pulling forward as the head is rotated slowly to the left in the forward down position. Then grasp the left trapezius with the right hand and repeat the process rotating the head to the right. Then rotate the head slowly in a circular motion five times, and then reverse the direction for five repetitions. Then cock the head down and forward to one side and place one hand on the back of the head in opposition to the muscle and contract the muscle, while exhaling for 8 seconds. Repeat with the opposite side.

V MARCHING IN PLACE. OBJECTIVE - TO ENHANCE THE INTEGRATON OF THE BRAIN THROUGH CROSS-CRAWL/HOMOLATERAL PATTERNING.
March in place with the head aimed straight ahead, the eyes looking up left while touching the opposite knee with the opposite hand (20 reps). This is the cross-crawl phase. IMPORTANT! The arms should swing freely. With out stopping switch to the homo-lateral pattern, touching the knee with the hand on the same side, looking down left. Alternate the patterns doing fewere and fewer reps until you are doing only 3 or 4 reps in each phase. Then close the eyes and keep patterning. Approximatley two minutes total for this activity is all that is required. Closing the eyes brings the activity into the fore brain.

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