

**Omer Muftić**

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**AND ITS' TREATMENT**



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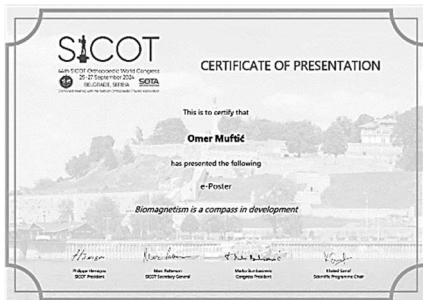
## BAD BODY POSTURE AND ITS' TREATMENT



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OMER MUFTIĆ  
BAD BODY POSTURE AND ITS' TREATMENT

Translated by Lejla Džambazov

Sarajevo, 2023.

## PROLOGUE

Worldwide, including in countries with highly developed civilisations, we encounter individuals with pronounced poor posture, particularly stooped backs in older age.

Posture is a dynamic process that persists throughout life, facilitated by the transition of conditioned reflexes into unconditioned ones. The spine is a marvel of nature, demonstrating incredible mobility due to the numerous vertebrae connected by ligaments and muscles, separated by discs with remarkable shock-absorbing tolerance. Furthermore, the spine serves two opposing physical functions—mobility and stability—even under unfavourable positions and heavy loads. Simultaneously, within its bony canal, the spine protects the spinal cord, medulla oblongata and nerve roots from mechanical injuries.

However, in the absence of appropriate preventive measures, adverse changes in the spine can occur, leading to pathological consequences.

The attached brochure outlines the development of the spine, the changes that can occur, and treatment methods. When an individual remains in an unfavourable position for an extended period, and this is frequently repeated, conditioned reflexes transition into unconditioned ones within several weeks, stabilizing the posture in that position. Once the individual notices the issue and attempts to return to an optimal posture, they only partially succeed, experiencing static strain on certain muscle groups, which leads to fatigue and a return to the altered body position.

Modern treatments can be passive or active, and the approach is the same for both men and women, although they naturally assume different body postures. Passive treatment involves the use of orthoses or braces, which leads to hypotrophy of specific muscles and within hypomochlion, in areas of pressure, disruption of normal tissue nutrition. Active treatment, through kinesitherapy, strengthens the musculature, particularly in the dorsal region, thereby slowing the progression of deformities.

A new treatment method is simple, painless, and can be independently implemented by patients of various ages following specific instructions until full recovery. Young children can follow the program in collaboration with parents or physiotherapists. Patients without structural changes stimulate the neuromuscular system according to the prescribed scheme and thanks to the balance of the appropriate muscle tone of agonists and antagonists in the motor cortex of the brain and transition of the conditioned into unconditioned reflexes in the spinal cord, recovery occurs within a few weeks, akin to learning to ride a bike, ski, or swim. For individuals with developed structural changes, stretching of contracted muscles and ligaments should be performed multiple times a day without overexertion, gradually correcting posture based on the prescribed scheme. If ankylosis is present, corrections are made according to the segment affected by ankylosis.

## **BAD BODY POSTURE AND ITS' TREATMENT**

Upright posture, upright walk and upright sitting are very important for health and aesthetics of every person, because it enables proportional development and balanced function of all the body organs. Adversely, posture with overloading bone structures, muscles and ligaments, especially the spine fastens the development of degenerative changes.

Due to the large number of joints with proper ligaments and discs and with the muscle help, the spine enables the body incredible mobility and conjunctively protects the spinal cords in its' central channel from the mechanical injuries. The spinal cord links to the nerves which link the spinal cord with the brain and different body parts, including the electrical impulses which transmit the information to different body parts.

This is especially important in case of children and youth in development, because certain parts of the body could develop slower or faster depending on their relations with other parts of the body. This is notable in case of congenital curved neck which was not treated during early years, therefore it develops asymmetrical shape of the face, which later cannot be treated neither with surgery. If the congenital curved neck is treated in early years using conservative or surgery methods and if one achieves correct relation between head, neck and the body, then there will be no asymmetry of the face. I am stating this even though there is no discussion on this topic here, however there is an analogy of the

kyphosys of the chest spine and lordosys of the groin part of the spine in children in development which is not so feasible as curved neck.

Correct body posture leads to correct posture of the bones which allows the joints, ligaments and the muscles to obtain their function properly and in the best way. Correct body posture also allows the most important organs to remain in optimal state in order to obtain the best functioning, which also supports good nervous system. Older persons often face thoracic kyphosys as curved back and slouch ribs, which reduced expansion of the chests, therefore the lung ventilation is also reduced and there is a pressure upon the heart which leads to irregular oxygen dosage. Further on, it is especially bad in case of heart and blood vessels sclerosys. With proper body posture, blood vessels dilate, resistance is lower, and blood circulation is faster.

It should be underlined that these degenerative changes of verterbra and the spine as inadequate pressure don't have to cause problems of the spine, but rather nerve endings problems can create painful hardships across the whole limb, lumbago, painful back, neck pain followed by a headache, breathing difficulties, urination, and often tiredness and unwillingness.

Factors influencing bad body posture:

- Anatomy characteristics
- Inheritable characteristic,
- Outside influences (disease, habits, work, profession, etc.)



Straight body position has non-pressure posture, where the profile has medium neck lordosis (cervical vertebrae), thoracic kyphosis and lumbar lordosis (lumbar vertebrae), shoulders are slightly pulled towards the back and the thorax points to the front, curve of the pelvis are 60% in relation to the transversal plane-more feasible in women, rather than men.

Body posture is based and formed on unconditional and conditional reflexes. Conditional reflexes develop under the influence of the outside environment, so the body posture of each person develops differently.

There are three most important stages of the development of the body posture:

- Transition of baby from crawling to walking
- period at the beginning of the primary school attendance
- period of puberty

After the child is born, the spine is straight. During child's first year of life, the child will firstly raise up his head and this is the period of physiological thorax development with convex towards the back. This mostly happens when child learns to sit while developing neck lordosis, as well as groin lordosis which final stage of development is when the child learns to walk. This development depends on the bone, muscle, ligament as a whole system development, therefore, standing in straight position shouldn't be forced, which is often the case with parents enthusiasm.

Childrens' body is the smartest mechanism which determines by itself how much pressure it can handle on its' muscles and ligaments. If any stage of the development is pre-mature, while bone structures and muscles are not strong enough, there would be anomalies or at least basis for there development in the future. When the child starts the school it is a rite of passage between free movements, play and body activities to calm sitting position in school which is often tiring if school chairs and tables are not suitable for the child's size. This is pretty much a huge change in child's body development. If the muscles are overwhelmed, body will lean downwards, lower stomach will also lean upwards, therefore there is bad body posture. In rare cases, there could be developed straight back which can lead to lower local kyphosis between chests and the spine, therefore there is flat chest kyphosis and increased lordosis of the lower part of the spine. During the puberty it comes to the accelerated development of the ligaments and muscle structure and if there is too much pressure before these tissues strengthen it will lead to the bad body posture.

According to this there are three main stages in early life at risk of bad body posture development, however this could also happen in late years of our lives from different reasons.

Factors influencing the development of bad body posture can be internal and external:

Internal factors:

- condition of the skeleton, musculature and skin (skeleton anomalies from birth or developed by the trauma to the body as well as major inflammation problems, miopathy or huge scars on the skin due to major burns or trauma)

- Neurological condition (parese and paralysis).

- Sensor functions (sense of vision, hearing, vestibular system).

- General health condition (anemia, respiratory diseases, cacheixa).

External factors:

- Bad working space (non-proper sized school chairs and tables, office furniture, etc.).

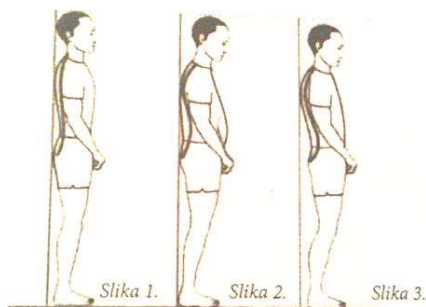
- Bad sleeping furniture (soft mattresses or with huge deformations)

- Mancraft professions while body is still developing may also put an extra preassure on ligaments and muscul system.

Bad body posture make conditional reflexes who maintain muscle tone (agonist and antiagonist) whic contributes to the bad body posture. In the first stage of this condition, the flexibility of the spine is not decreased, however the thorax muscles will become shorter, while ligament system also becomes shortened, resulting in fixed deformity.

Correct body posture has an important function role in order to achieve correct functioning of the locomotor mechanism as well as internal body organs and aesthetics. For persons in development, correct body posture plays an important role for correct and symmetrical development of the body as a whole. It is important to underline that children in development due to biomagnetism of different body parts, their development can increase or decrease. Evenmore, in final stage of development the biogmagnetism also plays an important role when it comes to the function of the organs.

There are three main types of bad body posture:



Picture 1.      Picture 2.      Picture 3.

Picture 1. shows straight back where physiological curves are expressively straight,

Picture 2. shows curved back and increased lumbar lordosis, the thorax is pulled downwards and

Picture 3. shows curved back with feasible lumbar lordosis which partially compensates thoracic kyphosis and here the thorax is not pulled towards the back and downwards.

## **Treatment of bad body posture**

In this introduction, I would like to point out that early intervention is crucial for prevention of bad body posture, before there are any developed changes on the body. By implementing and using the simple schemes I have written here, bad body posture will become rarity as it is rare today to see any hips deoformation thanks to Pavlik's straps. Pavlik observed that in China the hip deformations are rarity, thanks to the fact that their mothers carry them on their backs, with children's knees widely separated, so the hips remain in their natural position in order to develop correctly. Pavlik invented his straps based on this concept. However, there is difference between these two treatments, because hips development becomes stable, while body posture development is dynamic process that should be maintained throughout the whole lifetime.

Child should be provided with natural development. If a child has been pressured to stand up in a straight position too early, it could be damaging. The child's body will determine by itself the period of sitting and standing up according to its strength. By lying down on the stomach and crawling, the neck, back and above thigh muscles are strengthening.

During the primary school period, children should do stretching exercises, also the school chairs and tables should be proper size and shape. There is a need of regular systematic checks for children with bad body posture who should be referred to further orthopaedic treatment.

Bad body posture can be developed during any stage of our lives, therefore, all the external factors should be excluded in order to prevent the damage. While treating the bad body posture, firstly we aim to exclude these factors when possible, as an example removing skin scars and replacing it with plastic, correcting bad eye vision, etc.

Skeleton serves as subsidy, while musculature maintains the body position, therefore in treatment of bad body posture strengthening the musculature doing exercises plays an important role especially when it comes to the strengthening of dorsal (back) musculature.

Kinotherapy therapy and other physical therapies can slow down the progression of the bad body posture, however, developing conditional reflexes which endeavour the new position do not correct the bad body posture. Also, forced correction, meaning pulling the shoulders to the back and pulling the thorax to the front and breathing in the stomach, results in tiredness of the certain muscles groups and it does not provide us with good results. Orthostatic corsets make pressure on certain tissues by interrupting the normal diet, therefore leads to the hypertrophy of the muscles which causes more damage.

Until now there is no ideal method of the bad body posture and it has been completely neglected that there is a different body posture when it comes to women and when it comes to men.

Women have their shoulders slightly bent forward and chest protruding forward, and they perform chest breathing so pregnancy does not interfere with breathing. Pelvic tilt is greater than  $60^\circ$ . In men, the shoulders are spaced in the latero-lateral direction and are more tightly connected to the shoulder blades and ribs so they can bear greater physical loads, and breathing is abdominal. Pelvic tilt is less than  $60^\circ$ .

I will present the solution of the bad body posture separately for women and men - the simplex method, which can be used to treat thoracokypnosis at any age until a permanent cure. Without expressed coercion, the muscles - agonists and antagonists - will be activated in an appropriate manner and will immediately lead to the correction of bad posture in people with no pronounced rigid deformation of the spine. In the case of rigid deformation, the correction will be carried out gradually with appropriate exercises, and after the completed correction, with time, as in the previous case, the conditional reflexes will shift into unconditional ones and a permanent cure will occur, that is, if there is ankylosis, the correction will be kept at the level that the existing ankylosis allows.

Furthermore, these persons will have flexible movement walking and it will decrease the traumatic effects on ankles of the knees, hips and spine. While stretching the stomach musculature there will be pressure on the stomach which will decrease over intake of the food and because

of the proper position of the lungs and diaphragm, snoring will decrease or disappear completely. By correcting the bad posture, painful discomforts caused by it will be decreased which depends of degenerative changes caused by bad body posture. By the elongation of the blood vessels and decreasing the pressure on the heart and the lungs, it will provide their proper work, meaning better blood flow of the organs and better function of the organism as a whole.

Further mentioned methods of treatment will help in the treatments of scoliosis, scapula alata (a winged scapula) and Pectus excavatum (hollowed chests).

### **Bad body posture correction methods of women and female children above the age of 6 (Picture 4 and 4a):**



Picture 4    Picture 4a

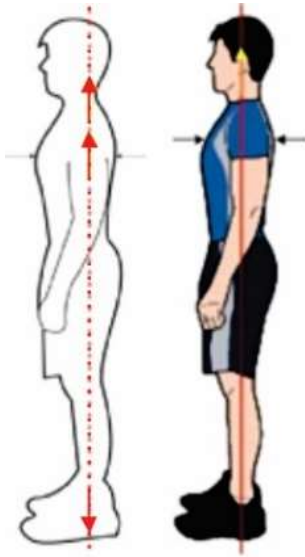
1. In a standing position, the body should be held in a vertical plane and slightly backward, the knees extended, the shoulder blades (scapulae) slightly pressed against the chest. The knees should be pulled down towards the imagined point under the feet,
2. When walking it is the same method as previously mentioned in number 1, including the knees which should be stretched alternately and completely,
3. When sitting knees should be pulled in front of, and

thorax keep same as in number 1.



4. When lying down on the back, act as the same pulled out as mentioned in 1, just in horizontal line,
5. Patient which does not have a rigidly bent back, should perform light exercises, especially those that strengthen the dorsal musculature 3 x 10 minutes daily, after 3 to 4 weeks, when conditioned reflexes turn into unconditional ones and a scheme is created in the motor zone of the cerebral cortex, the treatment is finished,
6. Patient with rigid deformation of the spine such as thoracic kyphosis and lumbar lordosis should perform work outs intensively including stretching out of the wriggley chest muscles and ligaments while strengthening back musculature 10 minutes, several times per day. A gradual correction of poor posture is performed, and after the correction is completed and the appropriate time has passed, in the nervous system a new scheme is created with optimal body posture. If there is ankylosis, correction will be performed up to the ankylosis segment,
7. The bed should be long enough without visible deformations,
8. The pillow should be comfortable for the head. Plumage pillow is often not loaded enough and it does not support properly, besides that feather and wool are good basis for parasites and that is why the orthopaedic pillow is strongly recommended.
9. In order to have an insight into the progress of the correction, one should made profile picture wearing bathing costume on a regular basis.

## **Bad body posture correction with man and male children above the age of 7 (Picture 5 and 5a):**



Picture 5    Picture 5a

1. In a standing position, keep the body in a vertical plane, knees fully extended, slightly tilted back. Pull the knees up towards the imaginary point above the head,
2. When walking, everything should remain the same as previously said, with knees alternately stretching out. When walking on a flat surface, do not lean forward, but pulling body upwards and slightly back.
3. When sitting, pull the knees back, and hold the chest as under point 1,
4. When lying on your back, do the same as under point 1, only in the horizontal plane.

Further recommendations of correcting the bad body posture are the same as the treatment with women.

## **IRREGULAR BODY POSTURE TREATMENT WITH STRUCTURE CHANGES**

During the late years of life very often we meet people with thoracic kyphosis and lumbar lordosis, including those who had the treatment earlier in their life. It is because nowadays treatment, stretches our joints and makes our muscle stronger which slows down the deformation, but it doesn't correct the bad body posture.

It is a repercussion of forming conditional reflexes inside the spinal cord which maintains the existing state.

We are born with unconditional reflexes for body posture having in mind that it is possible to form bad body posture during any age of our lives by forming conditional reflexes maintaining this status. There were attempts to establish proper body posture with orthotics, but this resulted with more damage, because of atrophy of musculature and tissue nuisance on the constant pressure.

There were also attempts of wittingly maintenance of body posture in restated posture in a way that stomach is indented and the person is coughed up which does not result in satisfying restated posture, because certain muscles groups are rather overwhelmed and the person will soon go back to the previous original position. In addition, women have different body posture than a man, so the treatments must differ.

In order for these people to maintain correct body posture, I have determined simple schemes – simplex.

Correction of bad body posture with female body: See Picture No. 4 and the decription.

Correction of bad body posture with male body: See Picture No. 5 and the decription.

Human body posture is a dynamic process through lifetime. Therefore, applying these methods in an early faze when the bad body posture is barely visible, without making condition reflexes in bad posture, we can produce fast and complete correction. The control of the good body posture should be applied through our whole lifetime.

Bad body posture with developed structured changes, especially in late years demands complex treatment. Nowadays it is not rare to meet a man in his nine decade of life. If we observe the life time of different vertebrates, we can see that it is five times longer than complete development (growing). According to this, a man who lives in moderate climate zone, should have life expectancy approximately 120 years.

Probably, it will be even longer in the future, therefore it is very important that a man preservers his status of good psycho-physical health as long as he can.

That is why humans should accept that there is a biological basis for motion. Everyday exercises of joint ankles, strengthening of bone-muscle structure should be a habit, while waking, picnic, skiing,

swimming and other sports activities should serve as pleasant activities. According to this, it is also important during the late years of life, not to over exceed optimal loads of the body. Food consuming should be diverse and moderate and if there is a nicotine or alcohol habit, the person should reject it with his own will, not waiting for certain medical treatments. However, some persons, especially elderly, have huge barriers of accepting this preventin way of treatment. As a matter of fact, their lungs and hearts are trapped in small space as a consequence of the rigid curved back.

When under the pressure, lungs and heart manage to obtain minimal oxygen and sometimes even under the minimum which threatens the whole organism, especially vital organs.

In order to set it free, person should exercise regularly on a daily basis, several times a day, at least ten minutes for each exercise showed in the appendix of this article. Parallel with these exercises, one should practice the body posture correction on a daily basis as well, always one level up according to the scheme. Such persons should be persistent with straining shortened ligaments and shortened muscles, having in mind that every relaxation, body will brought itself in the first bad posture because of the formed conditioned reflexes and changed articulated structure of the spine. Nevertheless, exercises which will at the beginning evoke pain will gradually decrease the pain pressure. There is no need to intake large doses of analgesics, because the desire to accomplish the goal, the brain

itself will help by producing the substance equal to nalorphine which will reduce the pain. Control profile pictures should be obtained every fifteen days in order to have an insight of the progress. Persistent persons will correct their body posture completely, unless there is a bone blockade between certain whorls, because the spondyloarthropathy changes, meaning that the correction will be obtained according to the level of curve which these changes obtain. When there is maximum possible correction, new conditional reflexes are formed in new position depending of the length everyday body posture in corrected position. There will be relatively pressure of the back musculature at the first stage, but with the development of the conditional reflexes this correct body posture will be easier and with fewer bargains, and in the end, unconditional reflexes will be created in the nervous system with a stable pattern for proper body posture.

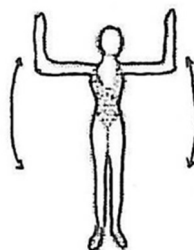
Exercises which are preferred in this kind of treatment are retrieved from the internet.



Picture 6.



Picture 7.



Picture 8.

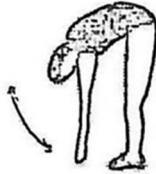
*Picture 6.* Joint heels, separated fingers, position "straight", one hand downwards-in the back, the other one upwards, two times switched (straight elbows).

*Picture 7.* Crossing straight hands in front of the thorax (1-2), widening to the back (3-4)

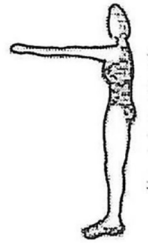
*Picture 8.* Under elbow in relation to above elbow should be in the right angle, bringing down the fists and under elbows alternately, while above elbows remain in right angle in relation to the body.



Picture 9.



Picture 10.



Picture 11.

*Picture 9.* Hands straight above the head and from this position lean the body sideways to the right (1-3), then to the left (3-4).

*Picture 10.* With straight back put the hands downwards to the feet fingers, then go upwards with hands toward straightening the body (3-4 times).

*Picture 11.* Squat on the whole feet on the ground, then straight position with the horizontal position of the hands (3-4)



Picture 12.



Picture 13.

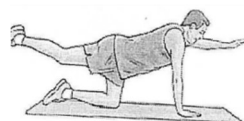
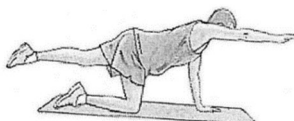
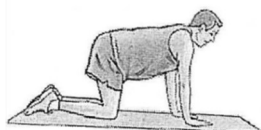


Picture 14.

*Picture 12.* Straddle stand, lean the body sideways, hand down to the knees, alternately 2x on the left, then 2x on the right.

*Picture 13.* Squat position with the full curve in knees and the back leaned towards the chests on top of the thigh, then pull the head and shoulders to the maximum.

*Picture 14.* Sitting on the chair, completely curved body in order to the thorax to lean on the knees, fists on the back of the head, pull the head and and shoulder



Considering that biomagnetism plays an important role in organism development, I have included in this brochure a chapter "Biomagnetism is a compass for development the organism" aiming to make an impact on the interests of biology-genetics researchers as a target group.



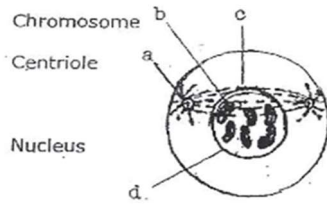
## **BIOMAGNETISM IS A COMPAS FOR DEVELOPMENT OF THE ORGANISM**

Based on the obvious evidance one can claim that the existence of every organism is a result of bichemichal reactions with chemical structure basis. These chemical structures evoke biomagnetism which activates proper genetic messages, while complex organisms detarmain cell differenation and the shape and dimensions on the new tissues which further on use their biomagnetism in order to produce new genetic messages. Therefore, there is a process of short phylogeny recapitulation of the certain organism development.

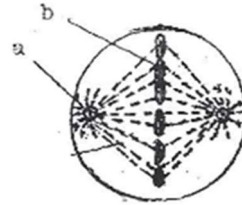
Finally, we differentiate four stages of human organism development:

### **First stage:**

The fertilized ovule is divided by mitosis into two blastomeres. In prophase, as illustrated in Picture 15 the centrosome divides into two centrioles and they travel to opposite sides under the influence of biomagnetism. The microtubules are gathered around the centrioles to form the mitotic spindle in the shape of the symmetrical, arch-shaped bundles connecting both centrioles and corresponding to the lines of magnetic force of the centrioles.



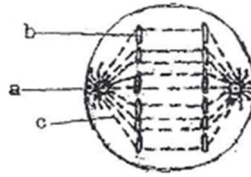
Picture 15.



Picture 16.

In metaphase, as illustrated in Picture 16 the nucleus membrane is broken down, the chromosomes are connected to the centrioles through the chromatides, each by one spindle fiber, and the free ends are situated in the equatorial plane facing towards the periphery. Their behavior shows that chromosomes are charged with the same type of electricity and due to the mitotic spindle, the electrons are situated equivalently in the chromosomes, where the spindle fibers serve as the conductors of the electrons and they maintain the centripetal connections with the centrioles, while the chromosomes because of the same type of electricity act centrifugally and move apart equally.

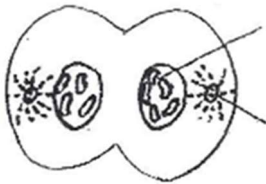
Anaphase, as illustrated in Picture 17 is when the chromosomes separate to situate at an equal distance from the equator and the centriole. The parts of the mitotic spindle between the chromosomes are situated on a parallel straight line. It should be assumed to have the same function as in metaphase. Some medical scientists think that these parts of the spindle press back the chromosomes, but in that case they should be spirally bended in a string shape.



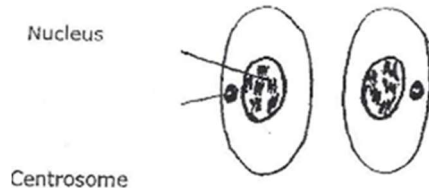
Picture 17.

In telophase, as illustrated in Picture 18, new nucleus and other cell structures are formed, the cytoplasm divides and two cells are produced, as illustrated in Picture 19, by the equatorial insertion of the membrane. In this process of formation of two cells, the nucleus and centrosome take a place in both cells, by the action of biomagnetism.

The first division groove passes through both cell poles (ovulum). The second groove also passes through both poles, but its plane stands vertically to the plane of the first groove. The plane of the third groove stands vertically to the plane of the first two grooves and the morula is produced by this mitotic division. This kind of divisions shows the performance of lines of biomagnetic force, acting vertically to the plane of previous divisions.



Picture 18.



Picture 19.

In the process of the forming the first blastomeres no genetic information are released in term of the cell differentiation, and in case of seperation of those blastomeres there is a normal development of both twins rised from the seperated blastomeres.

In further division of the cells, chemically different areas of the egg cytoplasm belong to some blastomeres, the different influence on genes occurs and different genetic information release, the blastula follows the morula and the germinal leaves are formed meaning that the second phase of development begins.

### **Second stage**

This phase is characterised by the formation of the germinal leaves and the development of gastrula. The formation of the substance, called organizine, occurs in the dorsal lip of the gastrula to perform morpho-genetic induction of the non-differentiated cells.

This supstance doesn't loose its' function after mashing, boiling, freezing, drying or staying dipped in alcohole. It can activate surronding undiferrentiated cells to react on the biomagnetism of the dorsal lip gastrule, therefore it could be called catalizine (accelerant) that is sending proper genetic messages depending of the cells localization. It could not be accepted that organizine as a local supstance in different segments of its' function allows different genetic messages inside the cells. Thanks to biomagnetism the creation of neural panel makes way

for the organization centre which has different functioning in different projections and because of the forming of new chemical structures who modify functions of the same thing in different locations, meaning that forming of the new chemical structures allows new morpho-genetic messages.

By functioning of the neural panel there is a result of aperture nerve, myotome and nephrotome.

Now, the embryo has the organization centre, cranial and caudal part, and the sagittal and frontal plane (the embryo is of an arch shape) and there is a particularly focused biomagnetism in these directions.

The morphogenetic induction has been proved in the Spemann/Mangold experiment. So, if a part of the dorsal lip of gastrula of the non-pigmented *triturus vulgaris* is taken to transplant under the abdominal epiblast of the pigmented species, the epiblast in touch with the transplanted dorsal lip forms the neural plate, nervous groove, myotome and nephrotome.

### **Third stage**

This stage is characterised by the formation of the primitive organs and a brief recapitulation of the phylloogenesis, and the genetic information for the formation of organs like in the remote ancestors are released. Newly produced organs and systems originate from the host tissue, not the transplant's tissue.

### **Fourth stage**

This phase is characterised by the development of the primitive organs to take the final shape and specific structure as well as the corresponding external shaping. There is a complex action of the lines of biomagnetic force during this formative stage, both between some organs and between some tissues, as well as between the cells of the same tissues, and, although each cell has the same number of the chromosomes with the same genes, genetic information are released depending on local action of biomagnetism. Such behavior illustrates well the formation of the eye lenses after the transplation of the optic bubble, even at the places where it does not usually occur, because some organs are developed by the action of biomagnetism from a separate organizational center. This is because each blastomere in its genes has a complete program of successive release of genes in the appropriate phase, depending on the location in relation to other blastomeres and the chemical structures created in the previous phase of development.

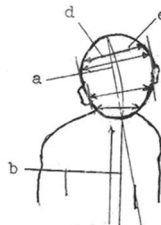
Biomagnetism acts radially and there is a synchronized and combined action in various topographical places and coordination of the creation of new chemical structures with adequate dimensions and distances.

The development of the the body and organs also occurs after the birth until the end of the growth. At any rate, the normal development needs optimal nutrition and different functions of the organism, without harmful influence on the physical and chemical agencies, and without

hereditary burdens. Harmonious development of the body depend on biomagnetism acting in several directions. The main direction is the axial direction passing along the axis of the body. The tissues along which is passes produce the lines of biomagnetic force vertical to axial biomagnetism with specially expressed bundles of lines for axial action in the extremities. This axial action of biomagnetism must be uniform. When the direction of its action is permanently changed, an asymmetrical development occurs in that region like the hereditary weyneck and the knee varus or valgus, etc. regardless of the cause of these deformations. When there is congenital neck deformation, etymology of the face symmetry is explained as a damage produced by pressuring blood cells and nerves, which was not proved nor accepted by the academy, therefore it is still unknown. I will be brave to claim it is a consequence of biomagnetism. We can see on Picture 20 the asymmetry of the face with a diminution in the bent-down part (the one which is nearer to the shoulder. The deviation of the head axis from the body axisis illustrated in Picture 21-a & b.



Picture 20.



Picture 21.

Axial biomagnetism of the head is twisted with a concavity on the bent-down side and with convexity on the opposite side. While passing through the head tissues this twisted biomagnetism causes the production of biomagnetism with the lines vertical in relation to axial, meaning that field lines on concave side-*d* are convergent, while the field lines on the convex side are divergent-*e*.

Further on, biomagnetic fieldlines inside the tissue evoke biomagnetism with perpelicular fieldlines in relation to filedlines responsible for inducing.

Their direction is introduced by tangents on the top of the head.

Tangents are shorter where the head is aslope and they are longer on the opposite side.

This shows us that biomagnetic fieldlines where there is aslope, mutually connect producing decreased effect on the face development. However, the convex hemisphere gets more bioenergy because it aims to maintain the axial position of the body growth.

Even with asymetrical face development the total weight of both hemicranium is equal to the weight of the head with symetrical propotions of both hemicranium, thanks to the axial biomagnetism whose role is to preserve the mass equivalent in different body parts.

Similar changes occure if there is alteration of the limb axis.

It was determaind long ago that straight up position of the anciant man was a result of the human evolution. In this evolution process it is



important to say that it is noticed how there is proper relation between head and the body torso. Penguins also have straight up position, however the relation between head and the body torso is the same as other birds and their evolution has no crucial changes as well as other bird species.

We can also influence artificially the action of biomagnetism.

Ilizarov noticed that in the process of limb extension with a bone that had been cut and the fragments gradually pulled apart, the new bone had formed in the gap between the bone ends and all tissue element had grown at the site of limb extension. This method is widely used in the elongation of the limbs.

In this process of above lengthening a biomagnetic impulse is produced causing the growth of the tissues, analogous to the increased growth of the face at the side opposite to the head inclination, that is, prolongation of action of the lines of biomagnetic force occurs.

The reverse case is the use of some moulds preventing the normal growth of the tissues. Thus in ancient China the 7 year old girls wore shoe-shaped moulds until they grow up in order to have small feet. In this case the lines of biomagnetic force had a constant relationship maintaining the feet in an appropriate proportion in relation to moulds.

Biomagnetism plays a very important role in interrelations of the different tissues. Thus the impressions of the convulsions of the brain at the inner side of the skull are not formed by mechanical force, since we know that the bone substance is harder then the cerebral one and the

interaction of the lines of biomagnetic force harmonizes here the mutual growth of different tissues.

It should be assumed that the evolution of humans was largely affected by biomagnetism, thanks to the proper head position in relation to the body. Equally, one should ask in what extant gene mutation lead to these changes and to what extent the way of life lead to certain changes?

Further on, evolution of the giraffe shows us how much the way of life as neck stretching occurred (similar changes are noted by Ilizarov). It was a natural choice of life which resulted with generations of long neck giraffes. If there was gene mutation, there was also a huge shift in evolution of the long neck giraffe.

According to the above, we can not accept the fact that the evolution of the animal species went only by random accidental mutation in the genes and by natural selection.

Lately, the treatments based on initiated regenerative possibilities of the organisms is highly progressing. As an example, if once finger was removed, there is a use of pig bladder powder which contains a substance of regenerative characteristics, the stem cells will reproduce fastly into proper tissues which will completely regenerate the finger. This finger will be completely identical with the finger before the amputation, including the finger tips. There is no question that the substance which is responsible for regeneration did not produce differentiation of the stem

cells into proper tissues as well as producing the correct reconstruction of the amputated finger, but it was rather biomagnetism of the finger where chemical structures opened certain genetic messages in order to develop further chemical structures with certain limitations.

In this case new blood cells are formed as well as new nerves, muscles, tendons, bones, joint ancles and nails. Even more interesting, the skin was identical, so it was possible to make the same fingerprint copy like it was before the finger amputation.

It is important to mention that the process of biomagnetism was successive, therefore the producing new chemical structures resulted with new specific activity of biomagnetism as well as producing new genetic messages. In other words, the development of chemical reactions are directed by proper function, shape, size and relations with other structures.

There is similar case with tail regeneration of the reptile.

If we remove all the living cells from the pig's bladder and input embryo cells of a person, there will be newly produced bladder which in biological means is equal to the bladder of that person. In this particular way, new organ is produced and even more, it is not rejected because of new antigen-antibody reactions.

In order to simplify the production of the bladder without living cells, but instead using embryo cells of the donor, I will compare it with audiotape which under the influence of electro-magnetic waves produces

sounds. Also, under the influence of living cells of the donor and their mutual activities with the chemical structures of the dead bladder, there is biomagnetism influencing embryo cells of the donor by sending out genetic messages into the embryo cells. The embryo cells are being differentiated into same cells as the donors' inside the bladder.

It would be very interesting to conduct an experiment on young monkey (a chimpanzee) related to the relationship of the head and the torso of a monkey, comparing the same development with children in early age. Also, it would be interesting to conduct an experiment with mice stretching their necks for few generations in order to see if their descendants would have longer neck than the case at the moment.

## MAGNETISM

Considering that magnetism from the outside sources is influencing biomagnetism, its' function and regeneration of the tissue inside the organism, I will shortly introduce abstracts regarding magnetism and its' usage in medical treatments, retrieved from internet sources. Nature has built the first magnet-lodestone from chilled lava which became magnetized by Earth's magnetic field.

It is interesting that older civilizations such as China, Japan, India, Egypt and Greece were familiar with the influence of magnetism on the human organism and we also know about magnetism healing which was firstly practiced by these civilizations. It is a known fact that Cleopatra wore amulet on her forehead in order to preserve her youth. It is considered that magnets have a good influence on pituitary, which is responsible for excrete of growth hormone, but also influences other glands and their extracts and their mutual balance.

Franz Anton Mesmer (1734-1815) was successfully treating many ailments in Vienna and later in Paris. Royal Society for Medicine was investigating the usage of magnets. The results showed that magnets are successfully used against nerve diseases, cramps and pain. Magnetic bracelets, amulets and belts were highly recommended for this treatment. Mozart was so thrilled with the success of Mesmer that he even mentioned the power of magnets in his opera 'Cosi van Tutti'. The

Mesmer's magnet became famous in Germany and France as well. However, there were some controversies about magnetic treatments, so Lui XVI founded a commission of well-known scientists in order to investigate the accuracy of Mesmer's treatment. The member of this commission completely opposed and devalued this kind of treatment. Nowadays, there are around 5 million Americans whose chronic illness treatments are based only on magnetic therapy. Bill Clinton and Anthony Hopkins are also known as persons who use magnetic therapy treatments.

Magnet (Greek-magnetis lithos=magnetic stone) is material or the body which has its own magnetic field. People were aware of magnetic healing power back in the ancient history. History of magnet usage is proved to exist even before Christ. Chinese doctors recognized the influence of magnetic fields on human health and used magnets in combination with acupuncture. Even the body itself is producing magnetic fields through chemical reactions inside the tissue. This is why usage of situated magnets on specific body points balances natural magnetism inside the body. The appliance of magnetic therapy connotes therapeutic usage of static and pulsating magnetic field for purposes of healing. Magnetic field surrounds the magnet and within this field the magnetic force influencing human body can be measured. Magnetic force can be felt through repulsion and attraction of two magnets situated next to each other which also determines the density of the force.

Tesla is newer unit of measurement of the strength of the magnetic field. Further on, the Earth's content consists of magnetic field which emerges by rotation of incandescent lava inside the Earth's core and this force can be felt outside the Earth's (magnetic cladding-magnetosphere), so called Earth's magnetic field. There is also another Earth's force-gravitational force which besides the magnetic force also has a significant influence on humans. Power of magnetic field varies through time and depends on geographical latitude. The weakest field is on equator and some other parts of the World (Japan, North Africa) and the strongest one is around poles.

By stimulating the magnetic field, biological organism has been induced which triggers immune and regenerative process, which is medically proven fact. This is why the last few decades' medical industry noted a considerable rise of interest and funding the development of new mechanisms and increased encouragement of different scientific studies of magnetic field. Magnetic field lines go through the body and make stimuli on the function of the tissues, meaning organs, therefore balancing the organism as a whole. In order to understand better the magnetic field therapy, it is necessary to underline that the Earth itself is a magnet. The direction of magnetic field lines is measured by compass and it is 50mT while the intensity falls from the poles towards the equator. The intensity is changeable by daily and yearly rhythm, while magnetic field protects our planet from

overwhelming solar influence. In modern, developed world, we are surrounded by electric and electromagnetic radiation which we consider as responsible for different diseases and health struggles such as allergies, tumors and psychological problems.

### **How magnetic fields act?**

Primarily, magnetic therapy can be divided by lower-frequency and high-frequency magnetic therapy. The most common usage is one of the lower-frequency magnetic fields which are determined by intensity and density. Biological influence of magnetic field is its' flowing through the human body stimulating the power force inside. Intensity of the inside forces, types and levels of biological influence depends on frequency of the magnetic field, its intensity on the body surface and density of the magnetic field. Flowing of the magnetic field through the body, every tissue is affected and its function is improved especially metabolism, energy production and oxygen usage. The results are improved blood-flow, better biological cell activity and tissue which are influenced. Magnetic therapy can't influence dead cell, only the cell with weak function.



## **Syndrome of the absence of magnetic field**

Research of space has showed what consequences people have when separated from the influence of Earth's magnetic field. After the return of Russian astronauts scientists noticed an emersion of osteoporosis and deep depression. Building the magnetic fields into spaceships made these phenomena decreased significantly. Magnetic field of Earth (magnetic force influencing every being) has decreased in the last 500 years for 50%, and it is only cca 0,5Gs (Gauss).

Dr. Kyiochi Nagakawa (Tokyo) has described in his scientific article from 1976, a state of illness as Syndrome of the absence of magnetic field. This syndrome includes stiff shoulders, pain in the back, headaches, fibromyalgia, insomnia, problems with digestion and circulation and tiredness.

Dr. Kyiochi Nagakawa researched magnetic bandages and necklaces and more than 90% of the people he investigated felt efficient results of magnetic usage. Life in concrete buildings and steel, cars, trains, airplanes, etc. decreases the influence of Earth's magnetic field. Electro smog from computer monitors, cell phones and so on is a new element of disturbance.

Garner in his book 'Magnets of health' compares the Syndrome of the absence of magnetic fields to the absence of vitamins. Decreased power of magnetic fields produces functional disturbances inside the central nervous system, making the nerve processes unbalanced, while

vegetative nervous system is affected by disturbance of the mechanisms for regulation. Immune system is also very sensitive to disruption of the magnetic field and it results in decreasing numbers of T-lymphocytes including the decrease of immunity linked to IgA and IgG immunoglobulin, also it increases concentration of immunoglobulin E which contributes to increased number of allergies in hypo-magnetic conditions.

### **The magnetic influence on life**

All scientific ambitions by now regarding ambiguous interdependence of the existence of a life itself never gave precise answer. However, some the newest research shows highly significant influence of the magnetic field on many chemical processes inside the cells.

This is how research on certain photosensitive bacteria revealed that even weak magnetic field (20mT-only 400 times more powerful than the Earth's) stabilizes chemical processes inside the bacterial cells, prevents their damage from the oxidation of radicals and provides them with better growth. Besides that, many other researches on magnetic influence on biochemical and metabolic processes of the organism are positive as well, even though sometimes the mechanisms that act are not known. The processes depending on electric power as part of life, as it is the case of functioning of nervous cells and their linkages, the possibility of

power induction through magnetic field are certain elements of indirect magnetic field influence on life. This is how the therapeutic methods for health improvement through magnetic field are determined with a goal of induction of electrical forces on certain segments of the tissues-especially nervous tissues.

### **Mental illness**

Almost 10% of the population suffers from depression and some of the types of this mental illness cannot be treated with classical medicine and medication methods.

An amount of research on treatments of various mental illnesses lately is mostly based on rTMS methods and its encouraging results. It is widely implemented in the treatment of depression which correlates with the activity of the front, left side of the brain. By simulating this side of the brain beta-adrenergic receptor is affected which increases dopamine and serotonin. This therapy method also makes indirect influence on healing through trans-synaptic effects on parts of the brain which are usually not available to the direct function of magnetic fields. Possibility to change certain parameters of simulation of parts of the brain and the duration of simulation points out the importance and usability of therapeutic potential in order to treat depression, because it is suitable for any individual with all the unique characteristics. The research of rTMS methods in therapeutic usage shows enormous potential in order to treat

many other mental diseases, also because of the possible selective approach to the treatment by increasing or decreasing neuron actions in discrete parts of the brain. Some studies dealing with research of Parkinson disease treatments, schizophrenia and other mental disturbances, also encourage with the positive outcomes.

### **Arthritis and fibromyalgia**

It is a well-known fact that people throughout the centuries use magnets to relieve pain especially treating arthritis and fibromyalgia using magnetic gloves. This kind of approach was considered non-realistic for years and even today there are many scientists neglecting the any therapeutic effect. Nevertheless, some of the newest British research with people affected by arthritis and fibromyalgia that even usage of very weak static magnets on affected spots relieve pain (without side effects) equally as usage of the whole spectrum of familiar medication (newest studies confirmed that usage of classical medication on long-term basis presents a risk element for brain or heart stroke).

Scientists did not completely manage to explain the effect of magnet on the tissue and why the pain is relieved. This is why these results are still in first-stage research and assumptions starting from possibility to improve blood circulation to better balance for renewing cells, meaning better balance for a dying cells and the once who regenerate. The research on effects of magnetic field on the processes of organisms are

promising and give new hopes in order to better recognize function of life and it also opens new possibilities in treatment of many different diseases.

According to the article retrieved from the internet, by Laurance Johnston therapeutic effects of treatments using magnetism are the following:

- Increase blood flow, bringing in more oxygen and nutrients, and flushing away waste products.
- Modulate calcium flow through the body, which is essential to many physiological processes. Magnetic fields can attract calcium ions to heal a broken bone or help move calcium away from painful arthritic joints.
- Alter the acidity or alkalinity of body fluids, which are often out of balance with illness;
- Affect hormone production (including those of the brain's all-important pineal gland), which initiates a cascade of biological effects.
- Alter enzyme activity and other biochemical processes, such as the production of ATP, a molecule that provides cellular fuel for the entire body.
- Stimulate electromagnetic energy flow through acupuncture meridians.
- Alter cell chromosome alignment.

Considering this, magnetism is used in treatment of various diseases around the world. For example, 80 % of Americans have severe back pain sometime in their lives, 40-million suffer from arthritic pain, and 40-million have recurrent headaches. Chronic pain alone costs the economy nearly \$100 billion a year.

Studies go in favour to the treatment of before mentioned difficulties using magnetism where the results are better, than regular drug treatments.

Individuals with post-polyo syndrome experience pain for a variety of reasons, such as overuse injuries or joint and muscle inactivity and magnetism reliefs the pain in such cases.

There was an implemented research with double secrecy. Patients didn't know there was a real magnet and placebo, nor did the researchers. Overall, 76% of the subjects who received the active magnet reported a decrease in pain. In contrast, only 19 % with an inactive magnet felt an improvement.

In case of multiplosclerosis the magnetic therapy was used with alternate magnetic fields, also with active and placebo magnets with double secrecy as mentioned before, which resulted in reduced pain, better blood flow and reduced muscle cramps.

If bone marrow is injured magnetism treatment uses variant magnetic fields which gave extra ordinary results in sense of neurological regeneration-axon growth (nerve endings) as proper functioning.

Furthermore, studies suggest that magnetic fields alter the physical matrix of the tissue scar that forms after spinal cord injury in a way that is less inhibitory to neuronal regrowth.

Next to before mentioned diseases treated with magnetic therapy with success and improvement, magnetic healing is also used in treatment of Alzheimer diseases, in treatment of wrench bones and joints, arthritis, bronchitis, cardiovascular difficulties, varicose veins, depression, dermatomyositis, headaches, haemophilia, hepatitis, disk-herniation, multiple sclerosis, muscle injuries, painful neck, osteoporosis, pancreatitis, neuritis, lung infections, disturbed sleep, synovitis, urinary problems and other diseases.

### **When not to use magnetism treatments**

Magnetism treatment should not be used when a patient has stenosis or abnormal narrowing in blood vessels. Also, it shouldn't be practiced in cases of diabetic angiopathy, angina pectoris or coronary artery disease. Main contraindications are implemented heart simulator, acute tuberculosis, digestive and urogenital bleeding and in case of pregnancy.

### **Biografy of the author:**



Doctor Omer Muftić was born August 25th, 1933 in Užička Požega with mother Olga and father Tadžudin.

His elementary and high school education was obtained in Sarajevo, while he graduated Medical Science in Belgrade.

After his work in general medical practice, he specialized at Orthopaedic Clinic in Sarajevo where he also worked until midle 1995. Afterwards, he retires as distinguished doctor, orthopaedic surgeon and the Chief of Second Department and counsellor of the Orthopaedic Clinic in Sarajevo.

This brochure was written based on his scientific articles published in journal DOCTOR between 2014. and 2015. And his article "Biomagnetisam is a compas fir development of the organism" in internet 1/16/2009.