

**Dariusz Mucha, Tadeusz Ambroży,
Teresa Mucha, Katarzyna Chudyba,
Krzysztof Latinek**

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THE LOCATION OF POINTS WITHIN THE CHINESE MACROSYSTEM IN THE ZONE OF REFLEXOLOGY OF THE MICROSYSTEMS OF FEET AND HANDS

ASSOC. PROF. DARIUSZ MUCHA, PH.D.

*The Faculty of Physical Educ. & Sport, University of Physical Education in Cracow,
POLAND*

ASSOC. PROF. TADEUSZ AMBROŻY, PH.D.

*The Faculty of Physical Educ. & Sport, University of Physical Education in Cracow,
POLAND*

TERESA MUCHA, M.A.

*Podhale State Higher Vocational School, Institute of Biomedical Sciences in Nowy Targ,
POLAND*

KATARZYNA CHUDYBA, M.A.

*The Faculty of Physical Educ. & Sport, University of Physical Education in Cracow,
POLAND*

KRZYSZTOF LATINEK, PH.D.

*The Faculty of Physical Educ. & Sport, University of Physical Education in Cracow,
POLAND*

ABSTRACT

Purpose: The aim of the research was to reflect the location of Biologically Active Points (BAP) in microsystem of feet and hands reflex zone.

Methods: We analysed the database, including the Cochrane Library, Medline, PubMed, etc. on microsystems of hands and feet. The results of the Chinese Reflexology points locations of feet and hands microsystems are shown in the tables.

Results: In the hands microsystem there are 46 points, and in the feet microsystem we located 70 points from the 12 meridians. In the feet and hands microsystem there are

22 independent points, 8 of which are located in the feet reflex zone, and 14 in the hands reflex zone.

Conclusions: In the reflex zone of the „own organs” there are three BAP points – KI1 kidneys meridian points are situated on the sole side of the right and the left foot and the heart meridian point HT8 which is located on the left palm side. It turned out that the majority of Chinese points located within the reflex zone of feet and hands, are located outside the reflex zones of their organs.

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INTRODUCTION

Health security may be described as a lack of health risks, but it may also become a symbol of chances which are given by widely understood preventive and educational activity. Acupressure is a Chinese method of treatment which has been practiced for thousands of years. Human, animal, plants and even rocks have this kind of energy that circulates in the body constantly through delineated pathways called meridians. All meridians consist of specified number of Chinese points. By acting on them we may affect our health and appearance through the nervous system.

Modern reflexology has developed since the research on the central nervous system started and the term „reflex” was coined. Reflex therapy has already been known in ancient times, as evidenced by the wall painting discovered in Egypt in the tomb of an Egyptian doctor – Ankmahor of Saqqara, dated back to 2500–2330 BC, which shows men engaged in feet and hands massage. In the Italian Alps bas-reliefs were discovered, they depict feet with marked zones used in reflexology. Acupressure was used by cavemen 15 000 years ago, which of course were the instinctive actions of pressing the painful spots with fingers and later with stones¹.

In 1930, on the basis of their own research, Riley and Ingham developed the Ingham Method of Reflexology, known as foot reflexology. Ing-

¹ D. C. Beyers, *Better health with foot reflexology*, Ingham Publishing Incorporated, Petersburg 1994, p. 1–44; Z. Garnuszewski, *Renaissance acupuncture*, Medyk, Warszawa 2008, p. 29–37.

ham is believed to be a precursor in foot reflexology since she created the map of foot zones and in her book entitled „Stories the feet can tell” she described the disease units on which she performed a massage².

The first publications on reflexology which were published in Europe and which included theoretical and practical foundations and the methodology of foot reflex zones massage were:

„Foot Analysis: The foot path to self-discovery” by and „Therapeutic microsystems of human body”³. The basis of activity in reflexology is the regulation of the organ and system functional status in the human body by means of the stimulation of biological active spots BAP in the meridian system of the macrosystem and reflex zones located in the microsystems. The microsystems can be broadly divided into diagnostic and diagnostic-therapeutic ones, which include feet and hands microsystems as well⁴.

The macrosystem is related to the following theories: the concept of TAO, the Law of Five elements and the flowing life energy or Qi. This energy flows through energy channels called meridians which create a network in the human body. The connections between organs and meridians are called collaterals. The points located on the surface of the body are called biologically active points BAP, acupuncture points AP or Chinese points. The free flow of Qi is also possible thanks to Luo branches which connect yang and yin meridians in the system of upper and lower limbs, so they appear in feet and hands Microsystems⁵.

² T. Kasperczyk, S. Kmak, *Acupressure and reflexology other methods*, Kasper, Kraków 2003, p. 9–29; T. Kasperczyk, *Meridians, points, and Chinese prescription*, Jet, Kraków 2007, p. 23–86.

³ A. Grinberg, *Foot Analysis: The foot path to self-discovery*, INNE, Bydgoszcz 1993, p. 7–23; D. Mucha, *Microsystems therapeutic of human body*, Terenia, Kraków 1997, p. 147–178.

⁴ W. Batkiewicz, *Microkinesitherapy*, “Reflexology”, 2009), 3, p. 2–10; A. DeSamuel, *Very New waves in very old meridians: Quantum medical physics of the living*, “Acupuncture & Electrotherapeutics Research”, 1996, 21(1), p. 15–20; J. M. Gleditsch, *Forty years of acupuncture experience in an ENT practice*, HNO, 2011, 59(12), p. 1185–1190; D. Mucha, *Diagnostic and therapeutic microsystems of human body*, “Reflexology”, 2009, 1, p. 19–23; D. Mucha, *Reflective zone of hands microsystem*, “Reflexology”, 2009, 1, p. 24–27; P. Wills, *The reflexology manual: an easy-to-use illustrated guide to the healing zones of the hands and feet*, Pagina, Kłodzko 1992, p. 12–45.

⁵ T. Kasperczyk, *Meridians, points, and Chinese prescription*, Jet, Kraków 2007, p. 23–86.

PURPOSE

The aim of this study was to catalog the BAP location within the feet and hands reflexology microsystems. We tried to demonstrate if in the reflective zones of diagnostic and therapeutic microsystems of feet and hands there are the independent BAP and where they are located. We also tried to determine the BAP meridians which are in the own organs reflective zones on feet and hands.

METHODS

We made a review of the database, including the Cochrane Library, Medline, PubMed, etc. on microsystems of hands and feet. On this basis we cataloged reflexology points of the microsystems of hands and feet. The results are presented in the tables.

RESULTS

There are 116 meridian points in the microsystems of feet and hands, including 70 ones located in the feet reflex zones: 35 points on each foot, and 46 ones located on the hand reflex zones: 23 points on each hand (Table 1).

TABLE 1. A LIST OF ACUPUNCTURE POINTS OF PARTICULAR MERIDIANS LOCATED IN FEET AND HANDS

Meridian	Foot left + right	Hand left + right
Lung – LU	0	3
Large intestine – LI	0	5
Stomach – S	5	0
Spleen – SP	5	0
Heart – H	0	3
Small intestine – SI	0	5
Urinary bladder – UB	8	0
Kidney – K	8	0
Pericardium – PC	0	3
Triple burner – T	0	4
Gallbladder – GB	5	0
Liver – LIV	4	0
Total	35 x 2 = 70	23 x 2 = 46

There is one BAP in the sole side of the foot. It belongs to kidney meridian – it is the KI1 point. It is located in the reflex zone of kidney, both on the right and the left feet. This is one of the few biologically active points which are located in the reflex zone of the own organ. The KI1 point is an independent one, which means that if we reflex in the kidney zone, we affect the KI1 point as well, which is used, among others, in the epileptic seizures. There are 14 Chinese acupuncture points on the dorsal side of the foot. These are the points of the four meridians: 4 points of stomach, 1 point of spleen, 5 points of gallbladder and 4 points of liver. The stomach meridian has 5 points located on the dorsal side of the foot: Chongyang (S42), Xianggu (S43), Neiting (S44), Lidui (S45). Jiexi (S41) is located near the tarsal joint. None of them is situated in the reflex zone of the stomach. Whereas one of them, namely S43 is located in the reflex zone of the diaphragm, and the point S44 is an independent one. It is used as a painkiller in limb, spine or head dysfunctions. Spleen meridian has one point situated in the dorsal side of the foot – Yinbai (SP1). It is not situated in the zones of spleen, but in the zone of mandible. The meridian of gallbladder has 5 acupuncture points which are located in the dorsal side of the foot. These are: Qixu (GB40), Zulinqi (GB41), Diwuhui (GB42), Jixi (GB43), Zuqiaoyin (GB44) none of which is located in the reflex zone of gallbladder. Point GB43 is located in the reflex zone of the organ of balance. Liver meridian has 4 points situated in the dorsal side of the foot. These are: Dadun (LIV1), Xingjian (LIV2), Taichong (LIV3), Zhongfeng (LIV4). None of them is located in the reflex zone of the liver, but in the reflex zones of other organs: LIV1 is in the zone of mandible, LIV2 is at the boundary between larynx and trachea zone and the thoracic duct zone, LIV3 is in the thoracic duct zone and LIV4 is at the boundary of inguinal lymph nodes. There are 11 Chinese acupuncture points on the inside part of the foot. These include: 4 spleen points and 7 kidney points. The spleen and pancreas points are: Dadu (SP2), Taibai (SP3), Gongsun (SP4) and Shangqu (SP5). None of them is situated in reflex zones of spleen. Three of them, however, are located in the zones of other organs: SP2 is in the zone of the cervical vertebrae, SP3 is at the boundary of thoracic vertebrae and SP5 is in the zone of visceral lymph nodes. The kidney meridian points located on the inside part of the feet include: Rangu (K2), Taixi (K3), Dazhong

(K4), Shuiquan (K5), Zhaohai (K6), Fuliu (K7) and Jiaoxin (K8). None of the first five points is located in the zone of kidney. Whereas point K7 is not situated in any reflex zone, the rest of them are located in the reflex zones of other organs: K2 is in the zone of thoracic vertebrae, K3, K4 and K5 are in the zone of womb or prostate, K6 is in the hip joint and K8 is in the zone of the esophagus and haemorrhoids. Points K7 and K8 are located in the zone of tarsal joint. There are 8 points on the external part of the foot. These are the bladder meridian points, ranging from Kunlun (UB60) to Zhiyin (UB67). None of them is located in the reflex zone of this organ. Six points are situated in the reflex zones of other organs: (UB60) is in the zone of abdomen, Pucan (UB61) is in the sex glands: ovary, oviduct and testicles, Shenmai (UB62) is in the zone of the hip joint, Jinmen (UB63) is in the zone of the knee, Jinggu (UB64) and Shugu (UB65) are not located in any of the reflex zones, and Tonggu (UB66) and UB67 are at the boundary of the organ of balance (Table 2).

TABLE 2. A LIST OF POINTS OF PARTICULAR MERIDIANS LOCATED IN VARIOUS PARTS OF THE FOOT

Foot left + right					
Meridian	Plantar side	Dorsal side	External side	Internal side	Ankle joint
Stomach – S	0	4	0	0	1
Spleen – SP	0	1	0	4	0
Urinary bladder – UB	0	0	8	0	0
Kidney – K	1	0	0	5	2
Gallbladder – GB	0	5	0	0	0
Liver – LIV	0	4	0	0	0
	1 x 2 = 2	14 x 2 = 28	8 x 2 = 16	9 x 2 = 18	3 x 2 = 6
Total	70				

There are 46 Chinese acupuncture points in the hands microsystems: 23 points on each hand. There are 6 meridian points on the right hand

(including 3 ones on the palm side of the wrist): 2 lungs points Yuji (LU10) located in the zone of intestines and Taiyuan (LU9 situated at the boundary between the coccygeal vertebrae and the spine), 2 heart points Shenmen (H7) located at the boundary between the coccygeal vertebrae and the spine and Shaofu (H8) situated in the zone of lungs/chest/ribs), 2 pericardium points Laogong (PC8 which are not located in the zone of the organ, but in the reflex zone of liver, and Daling (PC7) situated in the zone of lymph/oviduct/deferent duct which is an independent point). Three points: H7, PC7 and LU9 are located in the zone of the carpal joint. There are 17 biologically active points on the upper parts of the hands (including 14 points on the dorsal side of the hand and 3 ones on the dorsal side of the wrist). These include the following meridian points: 1 lung point, 5 large intestine points, 1 heart point, 5 small intestine point, 1 pericardium point and 4 triple burner points. The point of lung meridian, that is located on the upper part of the hand, is Shaoshang (LU11). It is an independent point used in the treatment of burns and is located in the reflex zone of antrum. Therefore, in this case we affect both the point and the zone. The points from Shangyang (LI1) to Yangxi (LI5) are large intestine points on the upper part of right hand, four of which are situated on the reflex zones of other organs: LI1 and Erjian (LI2) are located in the reflex zones of antrum, Sanjian (LI3) is in the reflex zone of lungs and chest; Hegu (LI4) is not located in any reflex zones of right hand. However, there is an independent point used in numerous diseases, that is why it is considered to be a universal one – this is Yangxi (LI5) found in the zone of womb/prostate. The point Shaochong (H9) of heart meridian is located in the reflex zone of the arm. It is an independent point used in treatments of faints and amnesia as a reviving point. By affecting it, we also affect the zone in which it is situated, that is the zone of the arm. Small intestine meridian points, which are located on the upper part of the hand include Shaoze (SI1), Qianggu (SI2), Houxi (SI3), Wangu (SI4) and Yanggu (SI5). All of them are found in the reflex zones of other organs, namely: SI1 and SI2 are in the zone of antrum, SI3 is in the zone of the knee and elbow, SI4 is in the zone of pelvis/hip and sciatic nerve, SI5 is in the zone of ovary or testicle. Points SI1 and SI2 are independent. Whereas the former is used as a reviving point, the

latter is used in epileptic seizures. Both of them are located in the reflex zone of antrum, which means that by affecting points SI1 and SI2 we affect this zone as well. The point Zhongchong (PC9) of pericardium is not located in the reflex zone of its organ, but in the zone of antrum. The acupuncture points of triple burner are Guanchong (T1), Yemen (T2) and Zhongzhu (T3). All of them are located in the reflex zones of various organs: TB1 is in the reflex zone of antrum, TB2 is in the reflex zone of the arm and lungs/chest, T3 is in the zone of liver and Yangchi (T4) is in the zone of lymph/oviduct/deferent duct. Similarly to the palmar aspect of the hand, there are acupuncture points on the upper part of the hand in the area of the carpal joint. These are three meridian points: small intestine point – SI5, large intestine point – LI5 and triple burner point – TB4. The points on the palm aspect of the left hand are located in the same way as on the right hand. The acupuncture points, which are situated in the area of the carpal joint, are located in the same places as well. The only difference is the location of points HT8 and PC8, which results from a different location of reflex zones on the right and the left hands. The point H8 located on the left hand is found in its reflex zone, that is in the zone of lungs/chest/ribs/heart (there is not a reflex zone of heart on the right hand). The point PC8, on the other hand, is located in the reflex zone of pancreas (on the right hand it is located in the zone of liver). BAP on the upper part of the left hand are located in the same way as on the right one with the exception of four points: LI3, LI4, T2 and T3. The point LI3 is located in the reflex zone of lungs/chest/rib/heart (on the right hand it is located in the zone of lungs/chest), the point LI4 is located in the zone of stomach/pancreas (on the right hand it is not located in any zone), the point TB2 is located in the zone of lungs/chest/ribs/heart (on the right hand it is located in T2 zone of lungs/heart), the point T3 is not located in any reflex zone (on the right hand it is located in the zone of liver). The points in the wrist area are in the same reflex zones as those located on the palm aspect of the hand, near the wrist (Table 3).

TABLE 3. A LIST OF POINTS OF PARTICULAR MERIDIANS LOCATED IN VARIOUS PARTS OF THE HAND

Hand left + right			
Meridian	Palmar side	Dorsal side	Carpal joint
Lung – LU	1	1	1
Large intestine – LI	0	4	1
Heart – H	1	1	1
Small intestine – SI	0	4	1
Pericardium – PC	1	1	1
Triple burner – T	0	3	1
	$3 \times 2 = 6$	$14 \times 2 = 28$	$6 \times 2 = 12$
Total	46		

All in all, there are 22 independent points in the microsystems of feet and hands. There are 8 independent points of three meridians located on feet (four on the left foot and four on the right one): one stomach point – S44, one of the bladder – UB60, two kidney points – K1 and K3. There are 14 independent points of five meridians located on hands (7 points on each hand): one lung point – LU11, one large intestine point – LI4, two heart points – H7 and H9, two small intestine points – SI1 and SI2 and one pericardium point – PC7 (Table 4).

TABLE 4. A COMPILATION OF INDEPENDENT POINTS LOCATED IN THE FOOT AND THE HAND

Independent points		
Meridian	Foot left + right	Hand left + right
Lung – LU	0	1 (LU 11)
Large intestine – LI	0	1 (LI 4)
Stomach – S	1 (S 44)	0
Spleen – SP	0	0
Heart – H	0	2 (H 7, H 9)
Small intestine – SI	0	2 (SI 1, SI 2)
Urinary bladder – UB	1 (UB 60)	0
Kidney – K	2 (K 1, K 3)	0
Pericardium – PC	0	1 (PC 7)
Triple burner – T	0	0
Gall bladder – GB	0	0
Liver – LIV	0	0
	$4 \times 2 = 8$	$7 \times 2 = 14$
Total	22	

DISCUSSION

The research on the effectiveness and impact on the human body by macrosystem and microsystems develop independently in several directions. From the earliest years, scientists are trying to describe the changes in the biochemistry of the human body under the influence of stimulation the points of Chinese and reflexology, among others within the microsystem of hands and feet. Individual studies highlight the increased secretion of neurohormones and their role in the intensity of pain, or change in the concentration of vasopressin and oxytocin⁶. It was shown the influence of

⁶ J. Yang, W.Y. Liu, C.Y. Song, B.C. Lin, *Only arginine vasopressin, not oxytocin and endogenous opiate peptides, in hypothalamic paraventricular nucleus play a role in acupuncture*

stimulation of selected acupuncture points on the change in the electrical activity of the brain, which are accompanied by specific clinical effect in the form of changes in heart rate⁷. The tomography of the positron emission was used to locate such brain parts which are available for a significant increase in glucose metabolism after the stimulation of the specific acupuncture points⁸.

The above study did not aim to prove and present the acupuncture, since it is known that acupuncture affects the functioning of the body's multifaceted, and the stimulation of different points within the macrosystem and reflexology within the microsystems bring positive results, while cataloging the macrosystem points within the reflexology of hands and feet should help to strengthen the researches of the usage of the points of Chinese and reflexology which have the same anatomical location.

CONCLUSIONS

In the hands microsystem there are 46 points from six Chinese meridian: lung, colon, heart, small intestine, pericardium, and triple warmer. They represent more than 7% of all the major BAP of the main meridians. In the feet microsystem there are 70 BAP of the six meridians: stomach, spleen and pancreas, bladder, kidney, gallbladder and liver. They represent just over 11% of all the main points of the Chinese main meridians. In the microsystems of feet and hands there are 22 independent BAP, 8 of which are located in the areas of feet reflexology (S44, UB60, K1, K3), and 14 points are located in the areas of hands reflexology (LU11, LI4, H7, H9, SI1, SI2, PC7). They represent 19% of all Chinese points located on the feet and hands. In the reflexology of „own organs”, there are 3 BAP: kidney meridian KI1 – contained on the plantar side of the right and the left foot and the heart meridian H8 – located on the palm of the left hand

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⁷ M.S. Kim, H.D. Seo, K. Sawada, M. Ishida, *Study of biosignal response during acupuncture points stimulations*, [in:] *Conference Proceedings IEEE Engineering in Medicine and Biology Society*, 2008, p. 689–692.

⁸ L. Yin, X. Jin, W. Qiao, J. Sun, X. Shi, J. Tian, D. Yin, S. Yao, M. Shao, H. Zeng, B. Shan, Y. Tang, K. Zhu, *PET imaging of brain function while puncturing the acupoint ST36*, “Chinese Medical Journal”, 2003, 116(12), p. 1836–1839.

side. These three points are slightly more than 2% of all BAP located within the microsystems of hands and feet, and 27% relatively to the number of the independent BAP situated in those microsystems.

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