

## PARTICIPATION OF THE CZECH ASSOCIATION YOGA IN DAILY LIFE IN HEALTH PROMOTION IN CZECH REPUBLIC

David HORNOF, Milada KREJČÍ

### Abstract

*Czech government in the document of “National Strategy for Health Protection and Promotion and Disease Prevention” is going out from the World Health Organization (WHO) document “Health 2020”. On this base, for citizens is guaranteed the right to enjoyment of highest attainable standard of health without any discrimination. Czech Republic belongs among the states that allow and highly appreciate cooperation with public, private, non-governmental organizations and civil society in order to promote health and harmonious development of people. The Czech Association Yoga in Daily Life is a non-profit, non-governmental humanitarian organization. Activities of the Czech Association Yoga in Daily Life are focused specifically to human health promotion, humanitarian activities, to environment protection, tolerance promotion, to liberty and respect among religions, cultures and people, and to world peace protection. Analyses of obtained data from the period 2000-2015 declare that the Czech Association Yoga in Daily Life is the biggest yoga association in Czech Republic in nowadays. Its activities are organized in 26 associations active in 108 cities and villages of the Czech Republic and, primarily are devoted to health promotion through the education and practicing according the education program “Yoga in Daily Life-System” created by Paramhans swami Maheshwarananda. In addition every year the Czech Association Yoga in Daily Life organizes national and international scientific seminars, workshops, conferences relating to human health promotion and development.*

### Keywords:

*Czech Republic; National Strategy for Health 2020; Yoga in Daily Life courses; Health promotion; Application spheres; Research activities.*

### INTRODUCTION

#### **Actual priorities in the National Strategy of Health Promotion in Czech Republic**

Czech Republic is a member of WHO. In the Czech Republic rights to enjoyment of the highest attainable

standard of health without any discrimination to citizens are guaranteed. Czech government highly appreciate cooperation with public, private, non-governmental organizations in order to promote health and harmonious development of people.

Czech Republic adopted WHO strategy of “Health for All in the 21st

Century” in the years 1999 – 2001, and on this base it was created the Czech version of the strategy “Health for All in the 21st Century”. In the document as the highest level of health was first time defined the “health potential” as an ability of individuals to fend for themselves and for others, their own decisions and manage own live. Ethical foundation of the program was based on the three basic premises:

1. Health is a fundamental human right.
2. Principle of fairness and solidarity in health support between countries, groups of people within countries.
3. It is given support to participation and responsibility of individuals, groups, communities, institutions, organizations and ministries of health development.

In 2005 in Czech Republic the conclusions of 6th Global Conference on Health Support were adopted. It was declared that Health support is based on human rights of enjoyment of the highest attainable standard of health for quality of life, while it includes positive mental and spiritual state. Since 2005 was recommended creation of collaboration with public, private, NGOs and civil society to shaping sustainable precautions to health support of inhabitants in the Czech Republic.

During the years 2012 – 2013 in the Czech Republic the new European policy framework “Health 2020” was implemented (according to the resolution of the Regional Committee of WHO for Europe) declaring: "Significant improvement of health and prosperity of

the population, reduce of inequalities in area of health, strengthening of public health and creating an universal, equitable, sustainable and high quality systems focused on human health". On this base in 2014 – 2015 observance, monitoring of “Health care priorities” was running in the Czech Republic. The purpose of the "National Strategy Health 2020" was to start effective and sustainable mechanisms to improve health state of the population. The main output presented the creation and establishment of the “Action plans in health care” (AP), which specifies the key priority issues, responsibilities, indicators, deadlines and framework budgets in the Czech. The support for AP results from the Government Resolution No. 671 dated 20. 8. 2015 and from the related Resolution No. 99 dated 2. 9. 2015 of the Committee of Health Care of Chamber of Deputies.

Currently in 2016, there are valid together 13 “Action plans” to ensure continuity in the direction of health care in the Czech Republic:

- AP 1 Promoting of Physical Activity
- AP 2 Proper nutrition and eating habits
  - AP 2a Proper nutrition and eating habits
  - AP 2b Obesity Prevention
  - AP 2c Food Safety Authority
- AP 3 Mental Health
- AP 4 Reduce of health risk behaviour
  - AP 4a Creation of the interdisciplinary and interdepartmental framework for primary prevention of risk behaviour among high-risk

- groups of children in the Czech Republic
- AP 4b Tobacco control in Czech Republic
- AP 4c Limitation of the damage caused by alcohol
- AP 5 Reducing of health risks of environmental and working environment
- AP 6 Dealing with infectious diseases
  - AP 6a Provacinal AP
  - AP 6b Infectious diseases management, especially new and re-emerging infections, infections associated with healthcare, restrictions to combat antimicrobial resistance
- AP 7 Development of Health screening programs in the Czech Republic
- AP 8 Improving of quality, availability and effectiveness of follow-up, long-term and home care
  - AP 8a Improving of quality, availability and effectiveness of follow-up, long-term and home care
  - AP 8b Improving of the availability of physiotherapy care
- AP 9 Ensuring of health services quality and safety
- AP 10 Lifelong education of health workers
  - AP 10a Lifelong Learning of physicians
  - AP 10b Lifelong Learning for non-medical staff
- AP 11 Computerization of Health Care
- AP 12 Health literacy development

- AP 13 Development of health state indicators of the population

The measures proposed in the AP are realised with relevant ministries, institutions and other representatives from the professional public, non-profit and private sector, professional societies, educational and other institutions in order to set priorities, to develop various projects, including specific funding sources.

### **Characteristics of the Czech Association "Yoga in Daily Life" from the view of focus on the Health promotion in Czech Republic**

The Czech Association Yoga in Daily Life is primarily concerned on the promotion of citizens' health in yoga programs, implemented in area of leisure activities, but it also successfully works as a part of medical, health care and education in the country. In education, physical education, methodology and preventative health activities allows to Czech public, regardless of age, nationality, religion, social status or health status, a systematic yoga training, which cultivates human health in physical, mental, social and spiritual.

In Czech Republic the Czech Association of Yoga in Daily Life represents a globally recognized education and training program "Yoga in Daily Life - the System", whose author is internationally known as the Professor of yoga Vishvaguru Mahamandaleshwar Paramhans Swami Maheshwarananda. The program "Yoga in Daily Life - the System" is based on traditional Indian

concept of Yoga - Vedanta and develops human health potential systematically, from simple exercise units to high sophisticated training techniques. "Yoga in Daily Life-the System" is also unique in containing of methodologically sophisticated, special publications of the author "Yoga in Daily Life - the System", useful for organizing of courses for people with specific needs, such as diabetics, cardiac patients, people with musculoskeletal problems, etc.

The education and training program "Yoga in Daily Life-System" was created and formed on the basis of the yoga tradition passed the line of yoga masters and on the basis of the experience with the mentality and the physical features of man "from the West." In young age Paramhans Swami Maheshwarananda came to Europe from India in 1972 and founded the Austro-Indian society for Yoga and Vedanta in Vienna. In 1973 he came first time to the Czech Republic. His teaching of yoga was very important for development of yoga in the Czech milieu, because implemented very methodically and sophisticatedly all components of human health, including philosophical and spiritual aspects of health. From that time yoga education and training were developed systematically according the best Indian yoga tradition and quickly gained high interest across the country inspiring in the form of lectures and yoga workshops. Paramhans Swami Maheshwarananda gave a high attention to the negative consequences of the sedentary hypokinetic style, which intervened significantly in recent years even in the child population.

Therefore the "Yoga in Daily Life-System" was created by him so, that anyone could gradually begin to practice yoga.

After 1990 Paramhans Swami Maheshwarananda focused particularly on education and training of certified instructors for the "Yoga in Daily Life-System" in Czech Republic. Since the autumn of 1990 to 1994 he held personally the complex of intensive seminars for yoga instructors under his direct guidance. In 1994, in a Slovak town Martin the examination of international certified instructors of "Yoga in Daily Life-System" was conducted. The tradition of preparing and examination of the instructors continues periodically until nowadays. In the same period, from the international view the scientific education program "Yoga in Daily Life-System" gradually began to be practice by millions of people worldwide with a great success.

## **OBJECTIVES**

The main objective of the realised investigation is to prove that the Czech Association Yoga in Daily Life coordinated its activities planned and targeted in accordance with the National Strategy of the Czech Republic to improve the health of the Czech population and reduce the incidence of preventable diseases and premature deaths. The particular objective is to give a vision to further develop of public health using the scientific educational program "Yoga in Daily Life-System" as an efficient mechanism to improve public health

that will be sustainable in the long term. The intention is to help to individuals understand the value of health, to be capable of accepting the share of responsibility for their own health but also the health of those who are in need to help.

## **METHODS**

### **A. Content analysis of literary sources (Molnar et al, 2012)**

The method was used for reflection of the Czech context of investigated problematic via scientific findings that brought the previous and current generations of experts in the years 1970 - 2015.

### **B. Analytical investigative survey**

In regions of the Czech Republic were realised the analytical investigative surveys, namely the prevalence of courses Yoga in Daily Life and client's interest, in further evaluation of the availability, frequency and organization of the yoga courses. Like the main method was used "Investigative pentagram" (Molnar et al, 2012), which included exploration, description, interpretation and explanation of data, following by prediction. During the analytical investigative surveys the representatives of the local Societies Yoga in Daily Life have been contacted in all regions of Czech Republic. Their registers and their statistical reports from 2000, 2005, 2010, and 2015 were collected and analysed. Also the regional and local websites of the Societies Yoga in Daily Life were analysed, and in last the websites of

different types of institutions, which the program "Yoga in Daily Life-System" applied.

The method "Investigative pentagram" was used in its whole complex:

- a) Investigation of the structure (categorization and identification);
- b) Investigation of the reasons and causes of searched qualities tend to explain the relationships (arguments, causality);
- c) Investigation of the changes, procedures, measures (reform, reorganization);
- d) Investigation of possible changes in terms of time (projection);
- e) Investigation of the possible changers (guarantee).

### **C. Statistics**

Statistical data processing was conducted under the leadership of Ing. David Hornof, PhD. The optimal transformation parameter was found with using a linear regression on the maximal compliance of theoretical quantiles of Gaussian distribution with the quintiles of actual distribution of transformed data. Distribution and homogeneity of data and the residue were checked. To the statistical evaluation software Stat graphics Centurion was used.

## RESULTS AND DISCUSSION

### **Analysed application spheres of the program Yoga in Daily Life-System in health support in the Czech Republic**

In last forty years, since its foundation, the program “Yoga in Daily Life-System” absolved demanding tests of quality and fully passed. It finds its application in health promotion in medicine, education, including university education, in spas, in wellness, hospitals and rehabilitation centres. One of very important area, where "Yoga in Daily Life-System" from 2005 is increasingly applied in the Czech Republic, is research about yoga health benefits. The education program “Yoga in Daily Life-System” is in this area very often used for its methodical precision, systematic and repeatability.

### **Health promotion in the sphere “Childhood and school education”**

Global WHO program “Health 21” is based on a very good idea that human in the 21st century has to be systematically educated. The Czech Republic chosen it for the national strategy in the school educational area “Man and Health” including the new school subject - Health education (from kindergarten, primary school to secondary schools). It means that in Czech Republic not only parents and physicians, but also teachers became an important factor in health education. Health education as a separate subject exists at Czech schools since 2007.

Mostly are applied following topics in the subject “Health education”:

- High valuation and understanding of the mental health impact of the environment on individual mental health and on the health of others;
- Learning of mental hygiene techniques and their implementation in daily life;
- Morally ethical principles of decency, tolerance, responsible behaviour;
- Relaxation techniques; Yoga exercises;
- Breathing exercises; Exercise concentration and memory;
- Mastering the techniques of self-regulation, auto-suggestion, meditation;
- Prosocial behaviour; social skills;
- Independency and responsibility to negotiations in solving problems;
- Self-education and health promotion;

From the named topics results that the program “Yoga in Daily Life-System” can be used as part of pre-school and school education in the educational area Man and Health. The program “Yoga in Daily Life- System” is used as a consistent teaching to achieve robust health, inner peace and harmony, principles of physical, mental, social and spiritual health, respect for life, intercultural tolerance, respect for human rights and environmental protection.

## Health promotion in the sphere “University education”

The program “Yoga in Daily Life-System” became a part of many fields in university study in the Czech Republic, in particular, the study programs focusing on physical education and sport, on health education, on nutritional advice, on physiotherapy and rehabilitation, on special education. Publications of Paramhans Swami Maheshwarananda are studied in libraries at Charles University in Prague, Masaryk University in Brno, Palacky University in Olomouc, Ostrava University, University of South Bohemia in Ceske Budejovice, at the University of West Bohemia in Pilsen, at the University J. E. Purkyně in Usti nad Labem, Hradec Králové, etc. In libraries of the universities we found the publications of Paramhans Swami Maheshwarananda in Czech edition:

- *Yoga in Daily Life-System*. Prague: Mladá fronta, 2006. 448 s. ISBN 80-204-1277-8.
- *Yoga against back pain: therapeutic seminars with relaxation and breathing techniques*. Střílky: DNM import-export, s.r.o. 2003. 204 s. ISBN 80-903200-3-1.
- *Yoga in Daily Life and Diabetes: exercise program to support the treatment of diabetes*. Prague: Společnost Jóga v denním životě Praha, 2010. 176 s. ISBN 978-80-904561-0-5.
- *Yoga in Daily Life for children and youth*. Prague: Mladá fronta, 2014. 271 s. ISBN 978-80-204-2914-8.

- *My message of Yoga in Daily Life*. Střílky: DNM import-export, s.r.o. 2007. 151 s. ISBN 978-80-903200-2-4.
- *Patanjali Yoga Sutra. The first episode, Samadhi-pada / commented by Paramahansa Swami Maheshwarananda*. Střílky: DNM import-export, s.r.o. 2006. 215 s. ISBN 80-903200-1-5.
- *Hidden forces in man*. Prague: Mladá fronta, 2004. 244 s. ISBN 80-204-1141-0.

From the publication “Yoga in Daily Life-System” foreign students, studying relevant field in Czech universities, can also study, because it is available in the electronic version in English, German, French, Czech and Hungarian.

The education program “Yoga in Daily Life-System” is used as an exact method in dozens researches of graduate works (bachelor, master, doctoral, habilitation) and in the granted research projects.

Graduate works:

We give only some examples of topics of graduate works from different Czech universities:

*“Yoga in Daily Life: traditions, practices and transfer to the Czech Republic”;*

*“Influence of the system Yoga in Daily Life on muscle imbalance in general population”*

*“Yoga in the prevention and treatment of metabolic syndrome”;*

*“Availability, organization and health - social benefits of controlled physical activity for children with disability”;*

*“Application of yoga in re-socialization process of children and youth”;*

*“Importance of rotation in three-dimensional concept of scoliosis”*

Research projects granted by Grant Agency Czech Republic or EU funds:

We give only some examples of topics of extensive research studies, in which were applied methodology “Yoga in Daily Life-System”, where common examined were the effects of stress and unhealthy lifestyle:

*“Health Education - teaching strategies of mental hygiene in school education”;*

*“Positive Effects of Self-control and Self-esteem in weight reduction through yoga practice”;*

*“Emotional determinants of learning and teaching”;*

*“STRESSLESS - Improving Educator's Resilience to Stress”.*

In frame of the projects were created publication outputs archived in universities.

### **Health promotion in the application sphere “Medicine”**

From the perspective of medicine, yoga represents thousands of years of practical experience and ways how to achieve a good physical, mental as well as social and spiritual health. Currently, interest to understand the complex changes boosted physical and psychological influences on the formation of illnesses is growing. Yoga techniques have particularly very significant impact on human

psychosomatic balance and thereby significantly help to manage current civilization diseases associated with increased stress and reduced physical activity.

Practical importance of yoga techniques in health care is possible to apply in three basic levels - prevention, treatment and supportive therapy alone. Yoga is most commonly used in preventive medicine. An equally important element is the support of standard treatments. This support can be implemented either on a physical level but also at the level of psychosomatic balance settings. Still debated, but regularly observed, the therapeutic effect of yoga, which is usually achieved by the so-called malfunctions, that still did not proceed to full structural body changes.

In medicine the Yoga in Daily Life-System is applied mostly in professional rehabilitation, orthopaedic, neurological, cardiological branches in the Czech Republic. Yoga is used mainly in functional causes of back pain, muscle imbalances in the axle, centring of joints, flexibility development, etc. Significant positive effect yoga brings in nutrition of articular cartilage and thereby contributes to the prevention of arthritic problems.

The Yoga in Daily Life-System incorporates aspects of all three options affecting human health complex. It also offers special programs for back pain, for healthy joints, for healthy heart and in the case of diabetes. Strategic objectives in the application sphere “Medicine” are prevention and treatment about lifestyle diseases. In the frame of application of the “Yoga in Daily Life-



System” were conducted research studies on hypertension, type 2 diabetes, cholesterol disorders, asthma and back pain in collaboration with the University Hospital and Palacky University in Olomouc University Hospital MU Brno.

### **Health promotion in the application sphere “Wellness”**

In the definition of Wellness, declared by WHO in 2000, states: “Wellness is the optimal state of health of individuals and groups. There are two focal concerns: the realisation of the fullest potential of an individual physically, psychologically, socially spiritually and economically, and the fulfilment of one’s role in the family, community, place of worship, workplace and other settings”.

Everybody wishes to live in harmony with oneself and with the environment. Postmodern society in many areas of life poses high physical and mental stress, and therefore more and more people suffer from stress situations. In Czech wellness centres begin to be gradually implemented yoga to calm, to improve concentration skills, to reduce anxiety in clients. The increase of the quality of “wellness” through yoga education program “Yoga in Daily Life-System” in wellness centres, it is the main intention of the Czech Association Yoga in Daily Life for the years 2016-2020. On the basis of scientifically proven yoga intervention by the program “Yoga in Daily Life-System” is real, that courses in wellness centres present really great

support for the implementation of lifestyle changes in terms of wellness based on positive psychosomatic consciousness that develops during a yoga workout, and which encourages the adoption of healthy behaviours.

### **Results and discussion of participation of the Czech Association Yoga in Daily Life in the field Public Health Support through public yoga courses**

The Czech Association “Yoga in Daily Life” was founded in Czech Republic in 1995. During the period 2000 – 2015 the number of local Societies Yoga in Daily Life oscillated in interval 26 – 31. In the last decade are the numbers fixed around 26 - 27 societies. It seems that this amount is optimal in terms of organization work and geographic coverage of the Czech Republic. In 2016, it brings together and coordinates activities of 27 local Societies Yoga in Daily Life, which are active in 108 cities and villages of the Czech Republic (see Table 1, Figure 1), centrally provide training of yoga instructors, granting and renewing licenses. Each of the 27 independent societies has its residency in town/township and coordinates training courses and programs in territorial micro-region (i.e. in other townships and places). From this it follows that the courses are not running only in the 27 towns/townships, but in fact in 108 towns/townships of Czech Republic (see Figure 1).

**Table 1 Development of number of the local Societies Yoga in Daily Life grouped under the Czech Association Yoga in Daily Life in years 2000, 2005, 2010, 2015 in the Czech Republic**

Year	Number of Societies
2000	26
2005	31
2010	26
2015	27

Every day in average rate of 508 “Yoga in Daily Life” courses are running in Czech Republic.

The public courses start regularly from September and are realized until June. In July and August clients can attend ongoing summer courses. Moreover, particularly in the summer months, but also during a year there are held regularly weekend or week resort yoga courses, in various locations of the Czech Republic. The offer of program in courses is broad with respect to age, level of exercisers and educational or health focus. Significant in this context and contribution to international fame of Czech Republic are International Courses of Yoga in Daily Life, realized

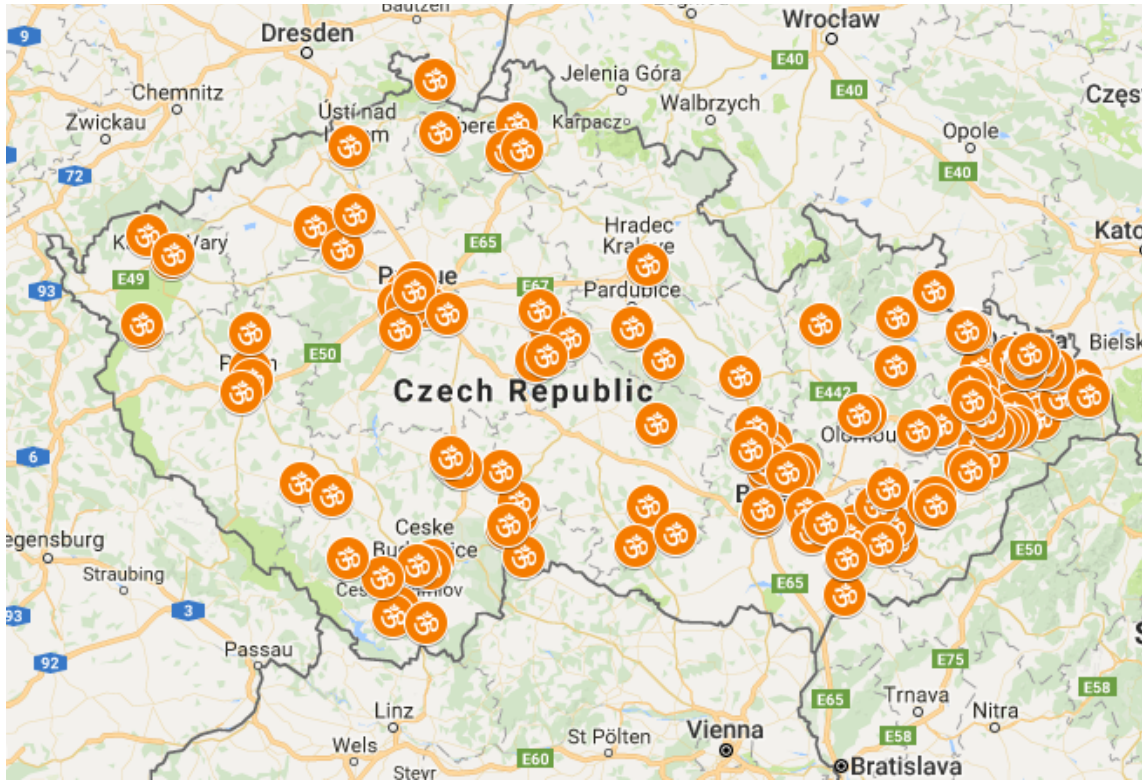
in Czech territory with high quality and variety of programs.

For example, in first half of 2016 there were offered followed weekend courses: Nature of health and disease from wellness perspective; Spring purgative cures Shank prakshalan under guidance of physicians; Meditation against stress; Yoga training for parents and children; Courses for female health; Exercises for vitality, etc.

Summary overview of the number of courses, clients and instructors per year in the years 2000, 2005, 2010, 2015 in the Czech Association Yoga in Daily Life are presented in the Table 2.

**Table 2 Summary overview of the number of courses, clients and instructors per year in the years 2000, 2005, 2010, 2015 in the Czech Association Yoga in Daily Life**

Category	Courses				Instructors			Clients			
	2000	2005	2010	2015	2005	2010	2015	2000	2005	2010	2015
Sum	736	942	1200	950	299	317	303	4981	6036	6263	6661



**Figure 1** Summary overview of locations, where “Yoga in Daily Life” courses are running in the Czech Republic (n=157 places)



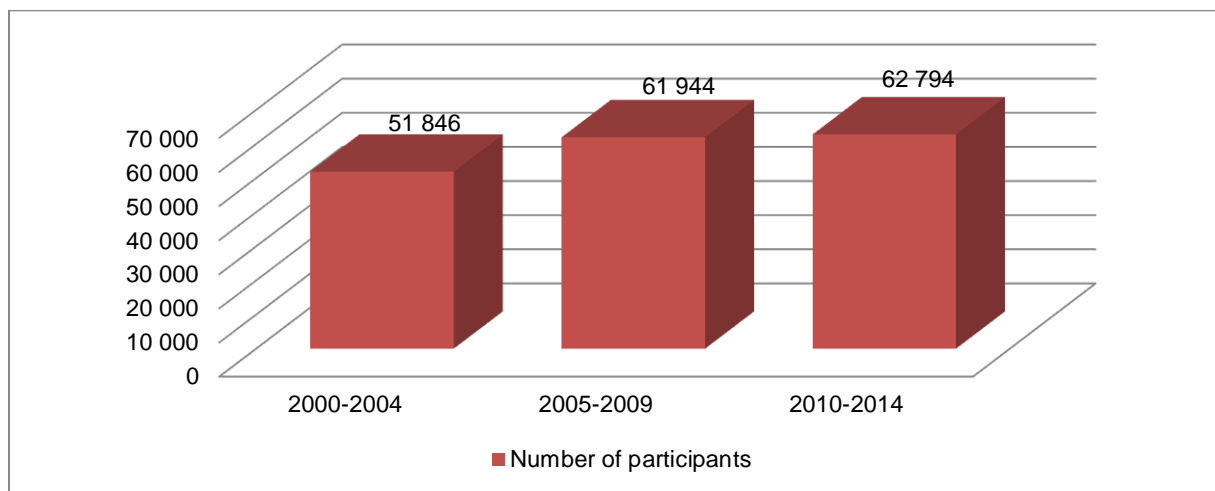
**Figure 3** Development of number of courses and clients in 2000, 2005, 2010 and 2015

Record number of the realised courses “Yoga in Daily Life” in the Czech Republic was found in the year 2010. This year is also declared the highest number of the instructors. But

in 2010 was not analysed the highest number of participated clients in the courses (see Figure 3, Table 2). It is very positive fact that number of the participated clients in the courses

“Yoga in Daily Life” is continuously increasing from 2000 until 2015. This indicates a significant stake in the health promotion of the Czech population in the long period of years

2000 – 2015, because the cumulative statistics gives deep insight. Cumulative view, presented in the Figure 4, of 180 000 “Yoga in Daily Life” courses participated clients.



**Figure 4 Cumulative view of 180 000 participated clients in courses “Yoga in Daily Life” in the period 2000-2014 in Czech Republic (n = 180000 participants)**

This fact demonstrates the high range of health promotion of Czech population, with 180 000 participating clients. It can be assumed that each participating client is given a positive effect on their social environment, especially on family members.

The Czech Association “Yoga in Daily Life” also responds to societal challenge to the availability of physical health activities in Czech Republic in way, that women in maternity, unemployed, pensioners with disability, students, seniors, have significant discounts in courses fees. It is intention of all centres “Yoga in Daily Life” in the Czech Republic to ensure the availability of courses, especially for seniors and socially weak persons.

Very important result and finding of the research study is the reality, that

vast majority of “Yoga in Daily Life” instructors perform coaching activities on high professional level as volunteers, without financial reward. This genuineness is very valuable for society and development of social benefits. The certified instructor of “Yoga in Daily Life” can become a person who completes and pass examinations after several years of personal yoga practice and after passing the relevant study program for instructors. In specific areas such as medicine and rehabilitation, university teaching in various fields, are instructors of the “Yoga in Daily Life” absolvents of university studies, necessary for performance in such specific milieu.

Prices of courses in 2015 were in range of 50-70 CZK/1 lesson; for

students and mothers in maternity with a discount of 25-30%; for seniors with discount of 50%. There are centres as in Pilsen, where for seniors over 65 courses were free.

During the survey it was analysed that a part of the proceeds from the course fees are devoted to humanitarian and charitable purposes. The exact location, time and program topics of the courses in Czech Republic can be found on [www.joga.cz](http://www.joga.cz). It was analysed that the Czech Association "Yoga in Daily Life" is the biggest yoga association in Czech Republic according the number of participants and courses. In the Czech Republic operates nationwide and intentionally in public health promotion.

Finally, it is necessary to mention that the courses of "Yoga in Daily Life" in the Czech Republic are also conducted as frequent cultural centres in towns and villages and enrich the cultural development in the locality.

### **Analyse of research potential development in yoga**

The Czech Association "Yoga in Daily Life" regularly organizes special national and international conferences attended by physicians and scientists from various disciplines to support human health. Professional and lay public is met with research results relating to use of yoga in public health promotion, health care, rehabilitation, sports, education, etc. Numbers of instructors from the Czech Association Yoga in Daily Life are reputable scientists developing significant scientific research in yoga, based on

national and international projects with high quality of the published outcomes.

The results of provided investigations declare health benefits of yoga in research of Czech and Slovak experts from the Association of Yoga in Daily Life. On the research development of yoga effects in human health have had significant influence visits of foreign experts, especially of Indian yoga teachers in before Czechoslovakia and after in the Czech Republic. As already stated, in 1975 the founder of "Yoga in Daily Life-System" Paramhans Swami Maheshwarananda first visited Czechoslovakia, and regularly returns to give lectures and yoga classes till nowadays, initiated the creation of several thousand centres of Yoga in Daily Life worldwide.

It was great inspiration for number Czech and Slovak experts to document positive psychosomatic and psychosocial benefits of yoga on human health. Their work already present classic base, on which is possible to build. It was especially research work of MD. Věra Doležalová in Psychiatry and the research work of Assoc. Prof. MD. Jarmila Motajová, PhD. in Preventive medicine. The named authors concluded that yoga exercises decrease anxiety, depression, psychosomatic problems and consequences of excessive stress and present positive alternatives to addictive substances (nicotine, alcohol consumption by minors, including young athletes).

In Czech Republic and Slovak Republic current research on influence of yoga on human health is developed of several experts – instructors of the "Yoga in Daily Life-System", who in

addition to yoga coaching develop significant scientific research in their field in national and international projects with high quality of published outcomes. In the Czech Republic there are: Assoc. Prof. MD. Martin Repko, PhD in area of Orthopaedic and Rehabilitation; MD. Vít Čaika, PhD in Health prevention and diabetes treatment; MD. Alena Filková in Gynecology; prof. PaedDr. Milada Krejčí, PhD. in Sport humanistic, wellness and health education; PhDr. Zuzana Kornatovská, PhD. in Health education and in Adapted physical activities for handicapped, Mgr. Peter Růžička in psychology, and others. They cooperate closely with experts – instructors of the “Yoga in Daily Life-System” in Slovak Republic, as for example with PhDr. Anna Galovičová in Psychology; with MD. Roman Bednár in Rehabilitation; Assoc. Prof. Viera Diešková, PhD in Psychology and psychopathology; Mgr. Jana Dudínska in Psychology; MD. Martin Frola in Internal medicine; and with Mgr. Milan Šišmiš in History and ethics.

According the bibliometric analysis of research in yoga during 2007-2014 of the authors Bussing, Michalsen, Khalsa, et al. (2012) we can conclude following main categories:

### **Yoga and Mental Health**

*Depression:* Authors document relevant publications about the effect of yoga on depression, especially describe the positive effect yoga breathing for depression.

*Fatigue:* Positive benefits of yoga interventions to reduce fatigue were proved in analysed studies in healthy persons as well as in patients with cancer, multiple sclerosis, diabetes,

chronic pancreatitis, asthma, and fibromyalgia.

*Anxiety and anxiety disorder:* Clinical studies have demonstrated the beneficial effects of yoga breathing and meditation therapy for anxiety reducing and management.

*Stress:* There have also been repeatedly proven beneficial effects of yoga intervention. It was shown that yoga reduces stress on these aspects - fear, anxiety, sleep disorders, and sadness. Authors describe successful yoga interventions of various lengths of time, from one week to six months.

### **Yoga and physical fitness**

*Physical fitness:* In analysed studies about effect of yoga on physical fitness have been shown significant positive changes in the level of fitness parameters of gait, balance, flexibility, body mass, increase muscle strength and weight loss. Improving fitness and improvement in physical function has had a positive effect on functional ability and autonomy in adults. Self-esteem and self-confidence increased during yoga classes and regular attendance led to improved social skills and social engagement.

*Activation of the sympathetic / parasympathetic:* It was analysed 42 studies on the effects of yoga in activation of sympathetic / parasympathetic and cardio vagal function. Most studies have indicated that yoga practice promotes a decrease of sympathetic activation, increase of cardio vagal function, and leads to a shift in the balance of the autonomic nervous sympathetic to parasympathetic dominance.

*Cardiovascular endurance:* Authors interpret research studies indicated improvement in general significance of cardiovascular endurance in young adults who received a variety of professional yoga training (months to years). Results included monitoring VO2max, work performance, anaerobic threshold and monitoring blood lactate.

### **Yoga and cardiopulmonary condition**

*Blood pressure and hypertension:* Authors document analysis of 37 studies investigating benefits of yoga techniques on blood pressure and hypertension in terms of systolic and/or diastolic blood pressure reduction.

*Pulmonary function:* Authors on the base of analysis of randomized trials have evaluated positive effects of yoga techniques on lung function both in healthy volunteers as well as in patients with chronic bronchitis and asthma. Studies show improvement in various parameters of lung function from the practice of breath control techniques, in specific positions, and using relaxation techniques. As a very valuable were, in documented analyses, reviewed breathing regulatory procedures for people with asthma.

### **Yoga and metabolic / endocrine condition**

*Glucose regulation:* Positive effects of yoga interventions focusing on deep states of relaxation were demonstrated in 25 analysed studies.

*Symptoms of menopause:* There are presented various beneficial intervention programs to eliminate unpleasant symptoms of menopause.

### **Yoga and musculoskeletal condition**

*Musculoskeletal function and pain:* Evidence of positive effects of yoga on musculoskeletal functions retreat chronic pain-related disability. They were analysed significantly better effects in favour of yoga application in comparison with standard care, with therapeutic exercise treatment touching, and without intervention.

Reviewed studies included the application of yoga to treat back pain, rheumatoid arthritis, headaches and migraines - all of these studies have reported positive effects of yoga intervention. Concerning chronic back pain, studies show that yoga was more effective than the standard procedures including usual care or conventional therapeutic exercises.

### **Yoga and specific diseases**

*Cancer:* Analysed published studies show that the files of participants in the yoga intervention showed significantly greater improvement in mental health in comparison to the files of the participants attending the supportive therapy, particularly in factors of reduce anxiety, depression and stress. Highly positive results were discussed in relation to applications of yoga, relaxation techniques, yoga self-regulatory strategies, leading to self-acceptance and self-efficacy.

*Epilepsy:* Analysis of ten randomized trials found that yoga brings potential positive effects in the treatment of epilepsy.

## CONCLUSIONS

The Czech Association Yoga in Daily Life is the biggest yoga association in Czech Republic according to the number of participants and courses. As the non-profit humanitarian organization promotes significantly in its activities fully support the actual version of the "National Strategy Health 2020", and focuses its participation in health support in the Czech Republic, especially in the solving of problematic documented in the Action Plans of the Czech Government from 2015.

Activities of the Czech Association Yoga in Daily Life high correspond with next priorities of the Czech National strategy in Health support to 2020:

### **"Promoting of physical activity"**

It relates to the governmental Action Plan No 1, to the prevention and treatment of diseases such as overweight and obesity, type 2 diabetes mellitus, cardiovascular disease, osteoporosis, some cancers, psychological disease etc., both in children and in adults. Current evidence of physical activity of population shows, that majority of children (70%) in Czech Republic does not fulfil international recommendation - at least 60 minutes of physical activity daily. In the adult population, still is classified as active 46.4% of adults, but in this group, however, physical activity decreases. Most often it is thanks the phenomenon called "Sedentary Behaviour" - watching TV, playing computer games, surfing Internet. In intervention programs at schools it was found, that there are

many children who parents are taken to and from school by car, at school use to have an excuse for PE, breaks are spending passively with smartphone and in free time are playing computer games. Unique, in context of child population health in Czech Republic, is the publication of Paramhans Swami Maheshwarananda "Yoga in Daily Life for Children and Youth" which was published in Prague, in 2015. It is a response to current social needs to promote motoric development in children and youth. In adult population the majority carries so-called "Sedentary Jobs" when energy expenditure during the day is also minimal.

### **"Proper nutrition and eating habits"**

It is related to the governmental Action Plan No 2; to the fact again that Czech Republic belongs among the European countries with high adult prevalence of obesity, the highest incidence of malignant neoplasms, and almost twice mortality of cardiovascular diseases comparing EU countries with the lowest mortality. According to the WHO Global Strategy for the prevention of chronic non-infectious diseases it is necessary to change energy redundancy of diet into balance between intake and expenditure of energy, to increase consumption of vegetables, fruits, whole grains, legumes, fish, seeds and nuts; reduce salt intake, animal fat, eliminate trans fatty acids intake, to reduce sugar intake.

### **"Mental Health"**

It is related to the urgent governmental Action Plan No 3, that



Czech Republic belongs to a minority of EU countries, which have not a government program of mental health care. Concrete activities contained strategy of the Stress prevention and mental health.

Health support according the Czech Document "National Strategy Health 2020" is defined as a process of individuals facilitating to increase control over the determinants of their health, and thereby to improve their health. The document "National Strategy Health 2020" considers the individual health state as a result of mutual relations of physical, mental, social and spiritual health, of relations between individuals and communities, individuals and world - in social and natural context.

The Czech Association "Yoga in Daily Life" cooperates with the international organization "International Sri Deep Madhavananda Ashram Fellowship" in Vienna. Similar associations such as the Czech Association Yoga in Daily Life exist in Croatia, Austria, Germany, Switzerland, Hungary, Poland, Slovak Republic, Slovenia, Serbia, Spain, and Great Britain; outside Europe in Australia, New Zealand, Canada, USA, India, etc., with member associations in Special Consultative Status with the Economic and Social Council of the United Nations (ECOSOC). Therefore Czech Association "Yoga in Daily life" can develop professional international cooperation, which has a great importance for quality improving of yoga in Czech Republic. The Association guarantees originality, quality and complexity of the traditional system of yoga in the holistic concept

of health support. Paramhans Swami Maheshwarananda significant charitable, humanitarian and religious activities as well as the ongoing support of environmental protection, tolerance and peace in the world, won the recognition of important personalities from social, medical, religious and political in various parts of the world. In the practice of the health support in the Czech Republic the Czech Association Yoga in Daily Life show tolerance, appreciation and respect to the National strategy of the Health support in the Czech Republic.

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## **CONTACTS**

Ing. David Hornof, PhD.  
Association Yoga in Daily Life  
Prague, Czech Republic

E-mail: [david.hornof@seznam.cz](mailto:david.hornof@seznam.cz)

Prof. PaedDr. Milada Krejčí, PhD.  
College of PE and Sport PALESTRA  
Prague, Czech Republic

E-mail: [krejci@palestra.cz](mailto:krejci@palestra.cz)