Dynamic Neuromuscular Stabilization (DNS) according to Kolar

Basic course "A"

Contact Hours: **18**

Course date:
July 17 - 19, 2027

Location:
6851 Oak Hall Lane STE102
Columbia Maryland 21045
USA

Instructor:
Magdalena Lepsikova, MPT

Organizer:
Francis Jung
francisj@columbiaptinmotion.com
https://www.columbiaptinmotion.com/dns-maryland
Tel.: 443-979-7123
240-786-8048

www.rehabps.com

Tentative Course Program

(the actual program will be sent to you by the local organizer)

Day 1 Saturday – July 17, 2027

9.00 – 10.30	Neurophysiological principles of movement control, development of postural-locomotor functions, factors influencing changes in postural-locomotor patterns, introduction to basic muscle activation in open and closed kinetic chains, and the principle of functional joint centration.
10.30 – 10.45	Break.
10.45 – 12.30	Principles of sagittal spinal stabilization from a DNS perspective, the role of the diaphragm in breathing and postural function, types of postural disorders.
12.30 – 13.30	Lunch.
13.30 – 15.00	Ontogenesis, child development during the first 18 months of life, kinesiological and biomechanical relationships.
15.00 – 15.15	Break.
15.15 – 17.30	DNS testing, video presentations.

Day 2 Sunday – July 18, 2027

9.00 – 10.30	DNS tests – undifferentiated positions: examination principles, key points (diaphragm test, intra-abdominal pressure control in supine, sitting, arm elevation test, head flexion test), practical workshop I.
10.30 – 10.45	Break.
10.45 – 12.30	DNS tests – undifferentiated positions: examination principles, key points (trunk extension test, rocking in quadruped arch, 6-month prone position, bear position, squat), practical workshop II.
12.30 – 13.30	Lunch.
13.30– 15.00	Therapy – assisted therapy in lower undifferentiated positions: 3-month model in supine and prone, 6-month model in supine, low kneeling.
15.00 – 15.15	Break.
15.15 – 17.30	Therapy in higher undifferentiated positions: 6-month prone model, bear position. Group exercise in developmental positions.

Day 3 Monday – July 19, 2027

8.30 – 10.30	Testing and therapy in higher undifferentiated positions: quadruped, bear, squat, sitting.
10.30 – 10.45	Coffee break.
10.45 – 12.30	Workshop: Test – Therapy – Retest.
12.45 – 13.00	Summary of therapy principles, basic patient education for self-therapy, practice of self - treatment positions. Discussion, Q&A

More information about the course:
https://www.rehabps.cz/rehab/course.php?c_id=3884

Course Goals and Description

Course Objectives

1. **Introduction to Dynamic Neuromuscular Stabilization**
    - Understand the basic principles of rehabilitation concept based on developmental kinesiology with focus on motor development.
2. **Sensorimotor control levels**
    - Learn the three levels of sensorimotor control and their importance in functional assessment and treatment.
3. **Developmental milestones**
    - Identify key postural and locomotor milestones during the first year of life (e.g., 3 months, 4.5 months, 6 months, 8–10 months, walking).
    - Relate these milestones to normal and abnormal motor development.
    - Recognize the clinical relevance of ontogenetic patterns in both healthy development and locomotor pathology and correlate it with motor behavior of adults.
4. **Stabilization principles**
    - Define the concept of ideal sagittal stabilization and the role of the intraabdominal pressure (IAP) regulation.
    - Explain the function of the diaphragm in both respiration and stabilization, and its interaction with the abdominal wall and pelvic floor.
5. **Assessment of stabilization and breathing**
    - Evaluate postural alignment and quality of breathing patterns.
    - Recognize common stereotypes of faulty stabilization (e.g., “open scissors syndrome,” hourglass syndrome, forward- or backward-drawn posture).
    - Perform basic DNS functional tests for assessing stabilization and respiration.
6. **Corrective exercises**
    - Learn to integrate corrective exercises based on DNS principles and developmental positions (supine, prone, quadruped, sitting, bear, squat).
    - Practice exercise progression: undifferentiated static positions, transitions between developmental positions, and gradual increase of challenge (unstable surfaces, resistance, dual tasking).
7. **Clinical application**
    - Apply DNS concepts to correction of poor respiratory patterns and their relationship to locomotor dysfunction.
    - Introduce principles of integrating DNS into daily clinical practice and patient education.
8. **Preparation for further DNS training**
    - Consolidate fundamental knowledge and skills to prepare for Course B.

Course Goals

1. **Understand the basic principles of DNS and developmental kinesiology**
    - Participants will gain a clear framework of how the central nervous system (CNS) controls stabilization and movement, how postural function develops during the first year of life, and why these patterns are key to clinical practice.
2. **Master proper activation of sagittal stabilization and breathing patterns**
    - Learn to perceive and practically apply the synergy of the diaphragm, abdominal wall, pelvic floor, and paravertebral muscles as the foundation of healthy support and movement.

3. **Acquire the ability to perform and interpret basic DNS tests**
    - Participants will learn how to assess the quality of support, joint centration, intra-abdominal pressure, and movement without compensations, and distinguish between optimal and non-optimal stabilization strategies.
4. **Learn to use developmental positions as a therapeutic tool**
    - Understand why certain positions (3-month supine and prone, sitting, etc.) form the basis of therapy, and how to apply them to oneself and to patients to achieve better stabilization and coordination.
5. **Experience DNS exercises firsthand**
    - Feel the difference between proper and improper stabilization, develop body awareness necessary for precise patient guidance, and understand the principle: “first feel, then teach.”

Optional Examination

- Participants who would like to participate in the educational track towards becoming a certified practitioner can take this exam for an additional fee of 50 Euros.
- The DNS A test is completely automatic and on line. As soon as you register, you will receive a unique link to start the test. The test is designed to sharpen your understanding and reinforce the concepts of DNS to make you a better trainer, therapist or physician. The test is comprised of 50 multiple choice questions, including 10 picture questions. You can spend as much time as you want to take the test.
- To pass the test you must answer 35 out of the 50 questions correctly. You will get a maximum of three attempts to pass the test. As soon as you submit your test, you will receive your results immediately both on the screen and they will be sent to you via email.

At the end of the course, a Certificate of Attendance will be awarded by local instructor.

REHABILITATION
PRAGUE SCHOOL

Certificate of Attendance

BE IT KNOWN THAT

Peter Brown

HAS ATTENDED THE FOLLOWING COURSE WORK

DYNAMIC NEUROMUSCULAR STABILIZATION ACCORDING TO KOLÁŘ A DEVELOPMENTAL KINESIOLOGY APPROACH

COURSE LEVEL: **A**
LOCATION: **Columbia**
DATES: **July 17 - 19, 2027**
CONTACT HOURS: **18**

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Magdalena Lepsikova, MPT

DYNAMIC NEUROMUSCULAR STABILIZATION
DNS
Motor Control for Life

Rehabilitation Prague School
12PS2 / CATT B 18140

www.rehabps.com

Upon successful completion and passing of the DNS Test A, a Certificate of Achievement from Prague School of Rehabilitation will be awarded (electronic version by email).

REHABILITATION
PRAGUE SCHOOL

Certificate of Achievement

BE IT KNOWN THAT

Peter Brown

HAS SUCCESSFULLY COMPLETED THE COURSE WORK
AND EXAMINATION REQUIREMENTS FOR THE FOLLOWING:

DYNAMIC NEUROMUSCULAR STABILIZATION
ACCORDING TO KOLÁŘ
A DEVELOPMENTAL KINESIOLOGY APPROACH

COURSE LEVEL: **A**
LOCATION: **Columbia**
DATES: **July 17 - 19, 2027**
EXAMINATION: **August 20, 2027**

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Alena Kobesova MD, PhD

DYNAMIC
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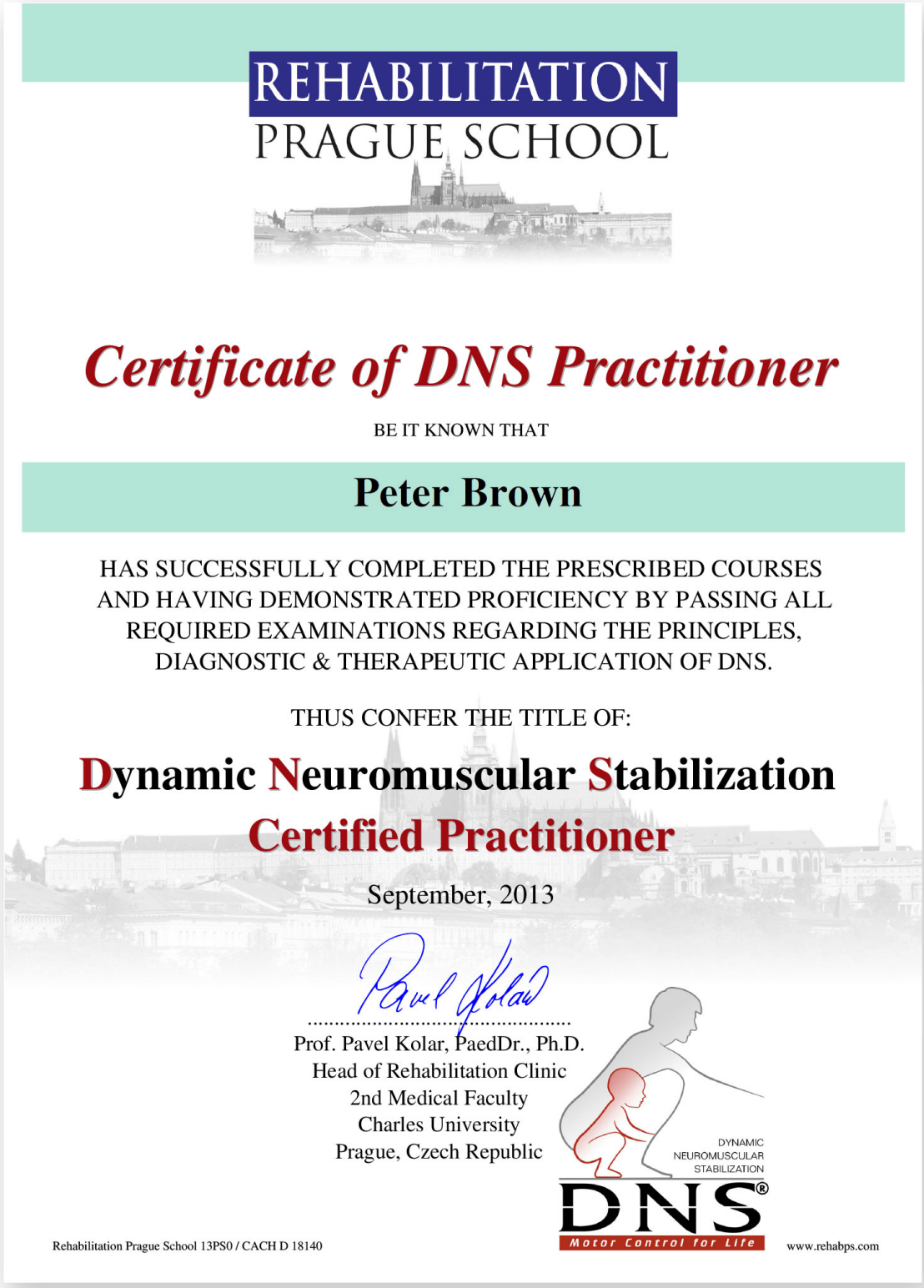
STABILIZATION
DNS®
Motor Control for Life

Rehabilitation Prague School
14PS0 / CACH Pediatric 3 18140

www.rehabps.com

Upon successful completion and passing of the courses A-D and tests, a Certificate of DNS Practioner from Prague School of Rehabilitation can be awarded. You will be recognized as a Certified Practitioner in the Dynamic Neuromuscular Stabilization approach. After obtaining the final diploma, you can be listed among **DNS Certified Practitioners** on the website of the Prague School for a fee of 20 EUR for an unlimited period. You are required to take at least one DNS course every 3 years to retain your certification status.


REHABILITATION
PRAGUE SCHOOL

Certificate of DNS Practitioner

BE IT KNOWN THAT

Peter Brown

HAS SUCCESSFULLY COMPLETED THE PRESCRIBED COURSES AND HAVING DEMONSTRATED PROFICIENCY BY PASSING ALL REQUIRED EXAMINATIONS REGARDING THE PRINCIPLES, DIAGNOSTIC & THERAPEUTIC APPLICATION OF DNS.

THUS CONFER THE TITLE OF:

Dynamic Neuromuscular Stabilization

Certified Practitioner

September, 2013

Prof. Pavel Kolar, PaedDr., Ph.D.
Head of Rehabilitation Clinic
2nd Medical Faculty
Charles University
Prague, Czech Republic

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Course Instructor



Magdalena Lepsikova, MPT

Magdalena Lepsikova graduated from Charles University Prague, Dept. of Physical Therapy and specializes in rehabilitation of locomotor system dysfunction of adults and children. Since 2001, she has been physiotherapist at the Physical Therapy Department, Motol University Hospital, Prague. Since 2005, she has worked at 2nd Faculty of Medicine, Charles University, Prague as a lecturer. She regularly instructs both medical and physiotherapy students at the hospital. In 2007, she won the prize “The teacher of the year” at 2nd Faculty of Medicine.

Ms. Lepsikova is a certified Vojta therapist and has trained and worked with Professors Lewit and Kolar at the rehabilitation department for 17 years, treating both adults and children. In the treatment of children, her main focus is the treatment of idiopathic scoliosis.

She has also completed courses of Neurodynamics according to Butler, Bobath concept for adults and Fascia manipulation according to Stecco –level I and II. She is a certified instructor of Dynamic Neuromuscular Stabilisation (DNS).

Fluent in English, Ms. Lepsikova has served as an instructor of several courses for Professor Lewit and Kolar for international groups of clinicians who come to study in Prague, in addition to lecturing on their methods in many European countries, the U.S., Canada, Malaysia, Japan, South Korea and Taiwan. In addition to the DNS approach, she is a certified instructor in Manual Medicine according to Prague school of prof. Lewit.

She resides in Prague with her husband and two daughters.

Publications in English:

Papers:

- Lewit, K., Lepšíková, M. Foot dysfunction in EMG findings. (abstrakt) The Journal of Orthopaedic Medicine, 2006, vol. 28, no. 2. s. 97.
- Lewit, K., Lepšíková, M. Chodidlo – významná část stabilizačního systému. Rehabilitace a fyzikální lékařství, 2008, vol. 15, no. 3, s. 99-104. ISSN: 1211-2658.
- Smékal, D., Velebová, K., Hanáková, D., Lepšíková, M. The effectiveness of specific physiotherapy in the treatment of temporomandibular disorders. Acta Universitatis Palackianae Olomucensis Gymnica, 2008, vol. 38, no. 2, s. 45-54. ISSN: 1213-8312.
- Lewit, K., Kobesová, A., Lepšíková, M. Das tiefe stabilisierende System der Wirbelsäule Seine Bedeutung für funktionelles Denken. Manuelle Medizin, 2010, vol. 48, no. 6, s. 440-446. ISSN: 0025-2514 (Print) 1433-0466 (Online).
- Kobesová, A., Kolář, P, Mlčková, J., Švehlík, M., Morris, CE., Frank, C., Lepšíková, M., Kozák,J.Effect of functional stabilization training on balance and motor patterns in a patient with Charcot-Marie-Tooth disease. Neuro Endocrinol Lett. 2012, vol. 33, no. 1, s.3-10. ISSN: 0172-780X (Print)0172-780X (Linking) IF 1.621

- Lewit, K., Lepšíková, M. The role of the feet as an important part of the stabilization system. Int Musculoskelet Med., 2012, 34(2), 55-61. ISSN: 1753-6146
- Lepšíková, M., Čech, Z., Kolář, P.: Změny somatognozie v klinickém obraze chronických bolestivých poruch pohybového aparátu. Medicína po promoci, 2013, vol. 14 (2), s.42-7. ISSN: 1213-8312
- Lewit, K., Čihák, R., Lepšíková, M. Insufficiency of finger flexors and extensors and its importance for hand function: A clinical and electromyographic investigation. International Musculoskeletal Medicine, 2015, 37(4), 178-183. ISSN: 1753-6146. DOI 10.1179/1753614615Z.178 000000000116.

Book Chapters:

- Kolář, P. et al.: Clinical Rehabilitation. 1st. edition. Alena Kobesová, Praha 2013. 765pp. ISBN 978-80- 905438-0-5. Chapters:
- Lepšíková, M., Smékal, D.: Examination of Muscle Strength. In: Kolář et al.: Clinical Rehabilitation. Alena Kobesová. Praha 2013.
- Kolář, P., Lepšíková, M.: Examination of Motor Function from the Prospective of Cortical Plasticity. In: Kolář et al.: Clinical Rehabilitation. Alena Kobesová. Praha 2013.
- Lepšíková, M., Kolář, P.:Kinesiology of the Hip Joint. In: Kolář et al.: Clinical Rehabilitation. Alena Kobesová. Praha 2013.
- Lepšíková, M., Kolář, P.:.Active Assistive Exercise. In: Kolář et al.: Clinical Rehabilitation. Alena Kobesová. Praha 2013.
- Lepšíková, M., Kolář, P.: Exercises Aimed at the Restoration of Sensation (Somatesthesia). In: Kolář et al.: Clinical Rehabilitation. Alena Kobesová. Praha 2013.
- Lepšíková, M.: Feldenkrais Method. In: Kolář et al.: Clinical Rehabilitation. Alena Kobesová. Praha 2013.
- Bitnar, P., Lepšíková, M.: Dysfunction in neuromuscular transmission and muscle diseases. In: Kolář et al.: Clinical Rehabilitation. Alena Kobesová. Praha 2013.
- Lepšíková, M., Kolář, P., Dyrhonová, O.: Hip Joint. In: Kolář et al.: Clinical Rehabilitation. Alena Kobesová. Praha 2013

Author of the DNS concept



Professor Pavel Kolar, P.T., Paed. Dr., Ph.D.

Professor Kolar is a physiotherapist by training. His instructors, Professor Karel Lewit and the late Professors Vaclav Vojta and Vladimir Janda, profoundly influenced him in his evolution of DNS. He is the Director of the Rehabilitation Department, University Hospital Motol, School of Medicine, Charles University, Prague, Czech Republic. He also acts as an adviser to the Director of the Hospital and serves as vice-dean of bachelor and master study at Second Medical Faculty, Charles University, Prague.

As Director of the Rehabilitation Department, Professor Kolar oversees the following:
1. The Rehabilitation Unit for adult patients, both outpatients and in-patients.
2. The Rehabilitation Unit for children: outpatient and inpatient.
3. The Pain Management Unit: outpatient and inpatient.
4. The Spinal Unit.
5. The School of Physiotherapy.
6. Department of Sports Medicine.

Professor Kolar is renowned for his work in rehabilitation, in addition to his utilization of DNS methods to celebrities in the world of sports, politics and entertainment. He has been appointed team clinician for the Czech Olympic teams, Soccer team, Davis Cup tennis teams and national ice hockey teams. He gained wide recognition for his treatment of former Czech President Vaclav Havel, which included traveling and serving as the President's personal clinician when he went abroad. Because of the profound influence of DNS to rehabilitation in the Czech Republic, Professor Kolar was awarded the prestigious "Presidential Award for Professional Excellence" by Czech President Vaclav Klaus in 2007. This award is typically reserved for those in their later years after many decades of significant contributions to society, while Professor Kolar's contribution of DNS earned him the coveted award while still in his early 40's!!

Professor Kolar is currently directing an extensive research project in his department concerning developmental kinesiology and its application in early diagnosis of central nervous system disorder in newborns and infants. He and his trained therapists utilize DNS techniques in the treatment of newborns and infants with cerebral palsy. Professor Kolar is also currently involved in a second research project, studying "stabilization and respiratory function of the diaphragm" and its relation to conservative treatment of back pain syndromes.

In 2009 Pavel Kolar successfully completed his Ph.D. His thesis was: "Dynamic MRI and spirometric analysis of diaphragmatic activity". From 2009 to 2012 Prof. Kolar accepted an appointment as Adjunct Senior Lecturer in the Faculty of Health Sciences, Murdoch University, Australia.

Professor Kolar has taught DNS in numerous countries all over the world.

Professor Kolar resides in Prague with his wife and three children.