

## **IMT and Psychosomatic Medicine**

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### **The use of Integrated Mental Training for Research and Clinical Applications in the Psychosomatic Area**

Pavel Bundzen, Ph.D. D.M.S. Research Institute of Physical Culture, St Petersburg, Russia  
And Lars-Eric Uneståhl, Ph.D. Örebro University, Sweden

### **SEMINAR – EFFECTS OF LONGTERM SELF-HYPNOTIC TRAINING (IMT)**

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### **WORKSHOP – APPLIED INTEGRATED MENTAL TRAINING**

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### **LIFESKILLS TRAINING IN SWEDISH SCHOOLS**

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Various Effects of Systematic Self-Hypnosis Training,  
especially on Psychophysiology and Neuroimmunology

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for Research and Clinical Applications in the Psychosomatic Area**  
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IMT was developed during the seventies in close cooperation with the Swedish National and Olympic Teams. The Techniques was based on research about "Mind-Body relations" in relation to Hypnosis and other "Alternative States of Consciousness".

The use of IMT in Schools, in Organisations and for Personal Growth became popular in the 80:s. During the last decade the emphasize has gradually turned more and more to Health and Clinical areas. 24 of the IMT-programs was 1991 translated to Russian, where IMT has been used in Sport, Education and in Health. Much of the research in the Psychosomatic area has been made as a Swedish-Russian co-joint research project.

Examples of investigations in Sweden and Russia:

1. Investigations of the Alternative State of Consciousness (in IMT called "the mental room") shows a change of brain activity quantitative as well as qualitative. EEG shows the biggest differences on the theta level (4-7 c/s) with a significant increase in the "mental room" The qualitative change could be described as a leveling out of the activity with the same activity in each of the four quarters of the brain. (change of operative system).
2. Systematic IMT-training changes the hormonal level. Examples are decrease of cortisol levels and increase of beta-endorphin levels.
3. Three different studies have all showed an improvement of the immune defense (measured with T4/T8 cells) after Mental Training. The decrease of the immune defence in connection with hard training and overtraining could be prevented by Mental Training. The last study showed that the improved immune defence could be related to one part of IMT – the Life Quality Training.
4. Biological aging (measured with the DHEAS-hormone) stopped in connection with 6 month IMT-training. The experimental group instead became "7 years younger".
5. 300 cancer patients were divided into two similar groups through matching. The experimental group combined the hospital treatment with IMT. There was a significant lower mortality rate in the experimental group.
6. 70 tinnitus patients was training with 15 minutes a day for 4 months (Sahlgrenska hospital). Very few got rid of the sound and noise but almost everyone could learn to lower or remove the disturbance.
7. Studies made at the hospital in Helsingborg show that even if the chronic pain was still there the IMT-patients had learned to dissociate and detach from the pain and concentrate on the important things in Life.
8. A number of studies about sleep (Motala), overweight (Lund), asthma (Åre) etc. show that regular IMT-training gives positive effects independent of the medical area. However, IMT is mostly not an alternative but a complementary medicine
9. Using IMT-tapes during general anesthesia (orthopedic surgery at Örebro hospital) have shown positive effects during operation and less postoperative complications.
10. A jet-lag study with the Swedish National Swimming Team in connection with the preparation for the Sydney Olympics showed better effects on sleep and performance of IMT compared with Melatonin, Placebo and Control.

## **SEMINAR – EFFECTS OF LONGTERM SELF-HYPNOTIC TRAINING (IMT)**

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The seminar will give an overview of the effects of a longterm and systematical self-hypnotic training (Integrated Mental Training) on areas like Performance (in Sport, School, Stage and Work), Neurophysiology (EEG, Omega Potential), Biochemistry (cortizol, DHEAS etc.) and Immunology (T helpers/T suppressors). The seminar will also show some new and sophisticated methods of measuring human energy

The various investigations, which are covered in this seminar, are based on the Swedish model of Mental Training, from which more than 30 of the training programs have been translated to Russian. The programs have been used and evaluated in Schools, Sport and Health.

The base of IMT-training is the "inner mental room"(IMR), which is an operational definition of an alternative state of consciousness (Self-Hypnosis).

Measurements of the difference between IMR and the "dominant state of consciousness" (waking) have shown that IMR is characterized by:

1. An increase in theta activity
2. A decrease of alpha activity in frequency 10-13 and an increase of frequency 7-9
3. A disappearing of hemispheric assymetry and a synchronisation of total hemispheric activity

Regular use of daily IMT-training for a few months has shown the following effects:

1. Decrease in cortizol levels
2. Increase in beta-endorphine levels
3. Increase of the general immunomodulating capacity
4. Prevention of the reduced immunologi, normally related to overtraining
5. Reversal of the age-related decrease of the DHEAS hormone
6. Increase of self-regulating capacities and homeostatic processes

Among other changes can be mentioned an improvement of the psycho-emotional status, measured by POMS, the Wellness scale, etc.

Many of the investigations have been concerned with the creation of ideal or optimal zones of functioning in regard to sport, school, work or rehabilitation from illness or injury.

Field investigations with the "Omega potential" has pointed to an optimal sport performance zone of 15 to 25 MV, where the difference between topathletes and lower level athletes seem to be in the left hemisphere.

A similar assymetry between the left and right side of the body has also been shown to disappear with IMT-training

## **IMT – INTEGRATED MENTAL TRAINING**

A systematic and long-term training of Self-Hypnosis and its application

## **IMT – INTEGRATED MENTAL TRAINING**

### **A systematic and long-term training of Self-Hypnosis and its application**

IMT was developed during **the 70:s** by Prof. Lars-Eric Uneståhl in close cooperation with the Swedish National and Olympic Teams. The Training System was based on principles from Uneståhl's research about Hypnosis and Body-Mind relations at Uppsala Universities during **the 60:s** (Report no 1- )

The use of IMT in Schools, in Organisations and for Personal Growth became popular in **the 80:s**. (Report ), while the emphasize in the ninetens gradually turned more and more to Health and Clinical areas. (Report **1990** started a co-joint Swedish-Russian research project (Lars-Eric Uneståhl, Ph.D and Pavel Bundzen Ph.D., M.D.). 24 of the IMT-programs were translated to Russian, where IMT has been applied to Sport, Performing Arts, Education, Health and Clinical areas (Report

#### **Some of the findings:**

11. EEG-studies of the Self-Hypnotic state, used in the Basic Mental Training ( called "the mental room") showed a quantitative as well as qualitative change of brain activity. The biggest change could be seen in the theta level (4-7 c/s).The qualitative change could be described as a leveling out of the activity with the same low activity in each of the four quarters of the brain. The cortex begin to work as a holistic unit which change the informational pathways.
12. Systematic IMT-training effected the endocrinal system and the production av a variety of hormones, for instance decrease of cortizol levels and increase of beta-endorphin levels.
13. A number of studies showed an improvement of the immunological system (measured with T4/T8 cells) during and after Mental Training. The decrease of the immune defence in connection with hard training and overtraining could also be prevented by Mental Training. The last study also showed that the improved immune defence mainly came through one pasrt of IMT – the Life Quality Training.
14. 300 cancer patients were divided into two similar groups through matching. The experimental group combined the hospital treatment with IMT. There was a significant lower mortality rate in the experimental group.

Most research since year 2000 has been made by Uneståhl and his mental training students.

Here are some examples:

15. 70 tinnitus patients had 15 minutes of IMT-training every day for 4 months (Sahlgrenska hospital). Very few got rid of the sound and noise but almost everyone could learn to lower or remove the disturbance.
16. Studies mada et the hospital in Helsingborg show that even if the chronic pain was still there the IMT-patients had learned to dissociate and detach from the pain and concentrate on the important things in Life.
17. A number of studies about sleep (Motala), overweight (Lund), asthma (Åre) etc. show that regular IMT-training gives positive effects independent of the medical area. However, IMT is mostly not an alternative but a complementary medicine
18. Using IMT-tapes during general anesthesia (ortopedic surgery at Örebro hospital) have shown positive effects during operation and less postoperative complications.
19. A jet-lag study with the Swedish National Swimming Team in connection with the preparation for the Sydney Olympics showed better effects on sleep and performance of IMT compared with Melatonin, Placebo and Control.
20. Biological aging (measured with the DHEAS-hormone) stopped in connection with 6 month IMT-training. The experimental group instead became "7 years younger"

XVII<sup>th</sup> International Congress of Hypnosis

## **WORKSHOP – APPLIED INTEGRATED MENTAL TRAINING**

Lars-Eric Uneståhl, Ph.D Örebro University, Sweden

### **Integrated Mental Training (IMT)**

A systematic, longterm and scientifically evaluated self-hypnotic training of mental processes with the goal of developing individuals, teams and organisations.

### **Life Goal Areas**

IMT works with 3L (lifelong learning) and continuous growth, activated by the creation of an "attractive future", which is integrated in the "inner mental room" (self-hypnosis). The growth model and the training model is focused on the "Mission" area (work-relations) and Health areas.

### **Peak Performance and Wellness**

Analysis of Peak Performance are made in Sport, on Stage and in Work areas. Health development is based on the WHO definition of "optimal physical, psychological and social wellbeing".

### **Ideal States**

One part of the "better Life concept" is "the Ideal States" which are identified for areas like Learning, Decision making, Creativity, Performance, Relations, Healing etc.

### **Alternative Systems of Control**

The Dominant System of Control (DSC or "voluntary effort") is complemented or replaced with effective and more effortless control systems like images, triggers etc.

### **Basic Mental Training**

The reduction of basic tension levels saves energy and opens up for the ideal muscle state, characterized by optimal tension in synergistic muscles and relaxation of the antagonistic muscles ("relaxense")

The second part of BMT focus on the learning of the "inner Mental room" (operational definition of Self-Hypnosis) and various techniques to be used in this room.

### **Self-Image training**

Ego-strengthening techniques improves the self-image (esteem, confidence, inner talk, a.s.o.) and serves as a base for personal growth

### **Goal-Programming**

Visions and overall goals are translated to situation related images, which then are programmed in the mental room. "Memories of the future" are created, which then give energy and inspiration to the "daily work" but also serves as the steering mechanism of the daily automaticity.

### **Mental toughness training**

Reduction or removal of "fear of future" is combined with the change of attitude from "problem avoidance" to a positive activation by challenges and difficult tasks.

### **Concentration training**

Focusing on relevant stimuli (triggers) is combined with dissociation from irrelevant stimuli.

### **Life Quality training**

Systematic training of "optimism", inner security and balance is combined with "humor training" (laughing, humorous attitude and inner joy).

### **The ABC of Teamtraining**

The personal training are complemented by programs for teams and organisations. The team programs contains programs for "common goalimages", "optimal cooperation" and "creative and flexible teams"

### **The "new Lifestyle"**

The Mental training programs have been complemented with a coaching philosophy, where solution based, and "future oriented" methods replace the old "problem oriented and clinical" Life model.

### **Application areas**

IMT is today used by 25% of the Swedish population. The four main application areas are:

1. Sport- and Stage performance
2. School and education (from first grade to University)
3. Business and Public Administration (used by most major international and national companies)
4. Health and Clinical Areas

# LIFESKILLS TRAINING IN SWEDISH SCHOOLS

**Lars-Eric Uneståhl, Ph.D**

The main purpose of Schools are to prepare the students for a good Life. However, traditional education has not been able to show any positive relations between success in School and Success in Life. The main reason for that seem to be the different demands, where school requires knowledge and Life competence (how we handle various Life situations) IMT (Integrated Mental Training) has been used in Swedish schools since the seventies with very good and interesting results.

**a. IMT is long-term in the sense that the training programs are used between 3 and 7 months, after which the cognitive, emotional and behavioral changes are so integrated that the effects are stable and often lifelong.**

**b. IMT is systematic, starting with the basics (Muscular relaxation and Self-Hypnosis) followed by specific interventions and applications and a more general personal development system with Self- and Goal-Image Training, Attitude- and Mental Toughness Training, Training of specific Mental Skills like Concentration, Creativity etc., and finishing with Emotional- and Life Quality Training.**

**Some areas of Training**

**1. Basic Mental Skills**

- a. Decreased basic tension levels
- b. Tension regulation skills
- c. Inner Mental Room

**2. The 7 C:s (childlike capacities)**

- a. Confidence
- b. Calmness
- c. Concentration
- d. Creativity
- e. Control
- f. Cheerfulness

**3. Emotional Training**

- a. Identifying and earning to know moods and feelings
- b. Express feelings in an understandable way
- c. Identifying and controlling the “best” emotions in every specific situation

**4. Social Skills Training**

- a. Communicational skills
- b. “Stage skills”
- c. Partnership
- d. Cooperational skills
- e. Teambuilding
- f. Using differences as strengths
- g. Leadership & Parenthood Skills

**5. Health Skills Training**

**6. Creative Skills Training**

**7. Performance & Wellness Skills**

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**Some areas of Training**

**8. Basic Mental Skills**

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- b. Tension regulation skills
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**9. The 7 C:s (childlike capacities)**

- a. Confidence
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- a. Identifying and earning to know moods and feelings
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- a. Communicational skills
- b. “Stage skills”
- c. Partnership
- d. Cooperational skills
- e. Teambuilding
- f. Using differences as strengths
- g. Leadership & Parentship Skills

**12. Health Skills Training**

**13. Creative Skills Training**

**14. Performance & Wellness Skills**

## **Various Effects of Systematic Self-Hypnosis Training, especially on Psychophysiology and Neuroimmunology**

Lars-Eric Uneståhl, Ph.D., Örebro University, Sweden

Based on research at Uppsala University about

1. Body – Mind relations
2. Alternative states of consciousness like sleep, dream, hypnosis etc.
3. Effects of systematic and long-term training of mental processes and of self-hypnosis

the term “Integrated Mental Training” (IMT) was created 1969.

IMT is a self-instructional, systematic, long-term and evaluated training in order to learn, integrate and develop mental skills and attitudes aiming at “Life Excellence” (Peak Performance, Wellbeing etc).

IMT is based on self-hypnosis, operationally defined as the “Inner Mental Room”(IMR) in combination with “alternative systems of control”, during which mental and body systems are controlled, changed and programmed.

One line of research has been to investigate the contents and the principles of IMT, for instance the “self-hypnotic state” itself.

The patterns of EEG neuro-mapping and the spectral analysis of EEG point to the fact that the mental training state (“Inner Mental Room”) is characterized by the following neuro-dynamic correlates

1. An intensification of theta-activity in antecentral sections of the brain and smoothing of alpha-activity in the frontal-occipital direction.
2. The subsequent analysis showed that the EEG frequency spectrum in retrocentral sections of the cortex represents a set of subdominant and harmonously bound frequencies in the range of delta, theta, alpha 1 and 2 and beta-rhythms. Thus, the polymodal frequency harmonization of cortical bioelectrical activity whose basis may be considered as so-called “golden ratio” or “section divine” (1,618) has been shown to be one of the specific neuro-dynamic correlates of the “IMT-state”.
3. Many of the investigations have been concerned with the creation of ideal or optimal zones of functioning in regard to sport, school, work or rehabilitation from illness or injury. Field investigations with the “Omega potential” has pointed to an optimal sport performance zone of 15 to 25 MV, where the difference between topathletes and lower level athletes seem to be in the left hemisphere.
4. The quantitative and the qualitative changes of brain activity during and after IMT-training seems to change the informational system in such a way that the body through decreased “reality testing” interprets internal images as “real”. The differences between a “physical event” and the image of such an event seem to diminish or disappear in the “Inner Mental Room”. This may be the main explanation for the significant impact which the IMT-training has on various psychosomatic problems.

Among the changes that happen during and after IMT-training will be mentioned:

1. A significant reduction of the level of cortisol and free fat acids in the blood plasma
2. Increase in beta-endorphine levels
3. Increase of the general immunomodulating capacity
4. Prevention of the reduced immunologi, normally related to overtraining
5. Reversal of the age-related decrease of the DHEAS hormone
6. Increase of self-regulating capacities and homeostatic processes
7. Among other changes can be mentioned an improvement of the psycho-emotional status, measured by POMS, the Wellness scale, etc.