



**Swedish Forum for Integrative
Medicine
May 2007
Academic perspectives on
integrative medicine**
Mats Hammar
Faculty of Health Sciences,
Linköping



LINKÖPING UNIVERSITET
Juni 2003 1



**Linköping University
Four faculties
Faculty of Health Science =
= the medical faculty**



LINKÖPING UNIVERSITET
Juni 2003 2

3 campi



Campus Valla
17.000 students



Campus Norrköping
5.500 students



Campus US (University hospital)
2.500 students



LINKÖPINGS UNIVERSITET
Juni 2003 3

Faculty of Health Sciences

Started 1986:
Complete medical education
Nursing
Occupational therapy
Physiotherapy
Speech and language pathology
Medical Biology
Master programs

New pedagogic principles



LINKÖPINGS UNIVERSITET
Juni 2003 4

Clinical research

- Should affect general health
- Prevent, cure or palliate disease
- Ideally based on a solid theoretical ground
- Should critically study methods used by patients – introduced by us or others
- How do ideas for e.g. new therapies appear?



Linköping University
LINKÖPING UNIVERSITET
Juni 2003 5

Clinical research

- Theoretical / basic science knowledge suggests a potentially new therapy
- Already existing therapy that should be developed due to shortcomings
- Therapy exists in another cultural context where it has been proven successful



Linköping University
LINKÖPING UNIVERSITET
Juni 2003 6

Clinical research

- All therapies should be critically evaluated – with modern tools
- Remember how nature and traditional methods have helped us! Digitalis, antibiotics (e.g. penicillin)
- We have to admit; we do not always know or understand how things work! For example: The mechanisms behind placebo?



Juni 2003 7

Clinical research

- If we neglect traditional methods we will not make full use of nature, tradition and previous experience/knowledge
- Universities should critically develop, study and evaluate new methods – including new alternatives



Juni 2003 8

Clinical research

- Everything may not be studied with randomized, double-blind cross-over methods
- We should use best possible/available methods
- Control groups always possible
- We must develop new methods to measure benefit for the patient – including "hidden" end-points



juni 2003 9

Acupuncture and other alternative therapies in the treatment of hot flashes

A short example

M Hammar,

Div of Obstetrics & Gynecology

Faculty of Health Sciences



Hot flushes

- Common in peri- and postmenopausal women (about 75%)

- Usually persist for some years;
 - For > 10 years in 10-15%

Alternative therapiesare needed!

- Vasomotor symptoms make women seek medical advice
- Estrogen/progestagen (HT) is the drug of choice
- Some women have **side-effects or contraindications**
 - (like breast cancer or thromboembolic disease).

- Some women **do not want to** use HRT.

- Are there alternatives?
- **What about the mechanisms?**

Hot flushes in women



- What is the cause?
- **Changes in hypothalamic β -endorphin activity due to falling estrogens?**
 - **Opioids affect (and stabilise) thermoregulation**
 - **Estrogens and testosterone stimulate hypothalamic β -endorphin activity – and thereby inhibit hot flushes?**

Hot flushes - alternative therapies

If flushes are caused by low β -endorphin activity - how can that be increased again?

- Estrogens - decrease flushes by 90%
- “Estrogen-like” substances – phytoestrogens (herbs and dietary phytoestrogens) may decrease flushes
- Placebo - increases opioids, decreases flushes by 10 - 50%
- What about Exercise and Acupuncture?

Hot flushes and exercise



Exercise increases central β -endorphin activity by means of central input from ergoreceptors.

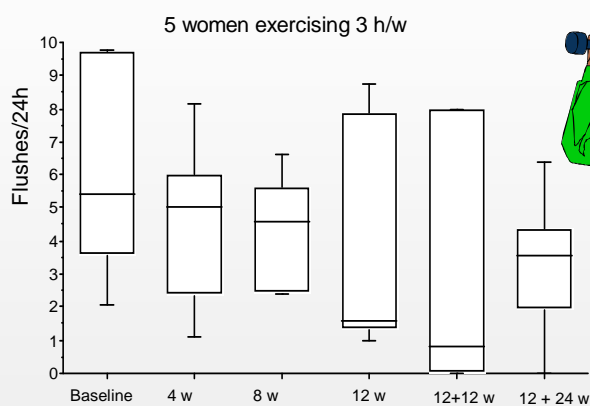
Exercise might make thermoregulation more stable??

We have performed 2 cross sectional studies showing lower prevalence of climacteric symptoms in active than sedentary women -

- and one intervention study

Hot flushes and exercise

(Lindh-Åstrand, Hammar et al 2005)



What about acupuncture?

- ✧ Increases central β -activity by means of central input from ergoreceptors
- ✧ Activates the oxytocinergic system
- ✧ Peripheral effects on neuropeptides (SP, VIP, CGRP etc)
- ✧ Increased central β -endorphin activity might make thermoregulation more stable??

What about acupuncture?

- ✧ We have shown decreasing flushes in healthy postmenopausal women
- ✧ We have shown decreasing flushes in postmenopausal women with breast cancer
- ✧ We have been unable to show difference between electrostimulated acupuncture and superficial needle insertion
- ✧ We have shown changes in the neuropeptide CGRP in parallel with decreasing flushes

