



Clinical Environmental Medicine:
definition, awareness, diagnostic
of illnesses associated to the environment

Brussels, 19th May 2015

P. Ohnsorge



1st Paris Appel Congress, 19th of May, 2015
Royal Academy of Medicine, Belgium

CLINICAL ENVIRONMENTAL MEDICINE
NEW SCIENCE AND PRACTICE IN COMPLEX
MULTISYSTEM ILLNESSES (CMI)



“Environment & Health”
(Public Health)

versus

“Clinical Environmental Medicine”

neither similar
nor
controversial

Two sides of a medal

- Environment & Health
- Asking questions:
 - Burdening substances or processes from the environment doing harm to people
 - General risk assessment for the population
 - General strategies
 - Avoidance
 - Prevention (tertiary)
- **Clinical Environmental Medicine**
- Asking questions:
 - What kind of symptoms individuals develop from violations by the environment?
 - How to care for those individuals with environmentally associated illnesses
 - Individual strategies
 - Avoidance
 - Prevention (primary / secondary)

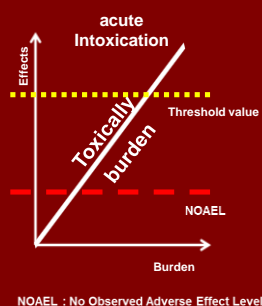
Environment & Health

- Toxicology
- Hygiene
- Occupational Medicine
- Public Health
- Epidemiology
- Only theoretical no clinical faculties
- React in own structure based on toxicological values
- No acquired theoretical and practice knowledge concerning Clinical Environmental Medicine
- Not offering diagnose and treatment for illnesses associated to the environment

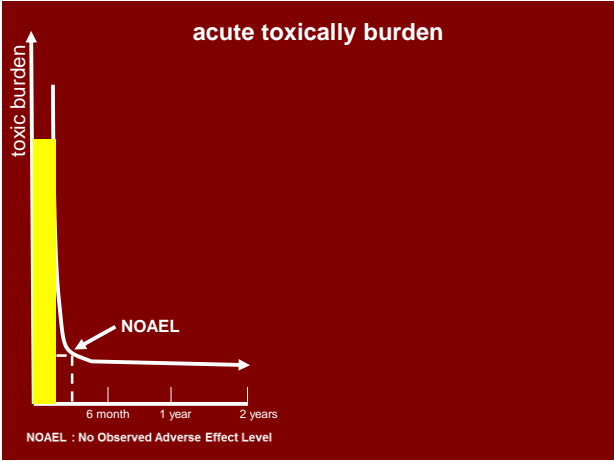
But you should know

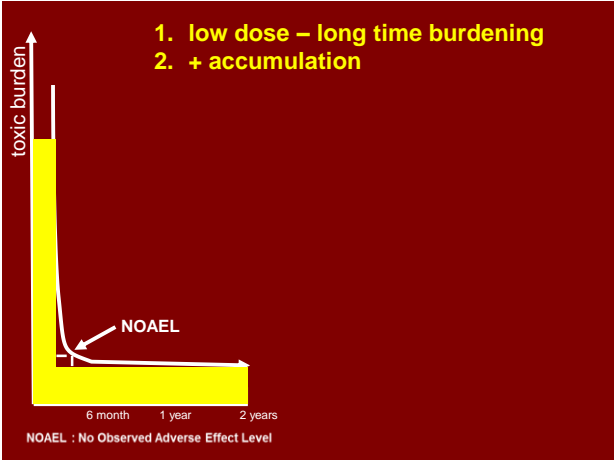
end of the pipe strategy

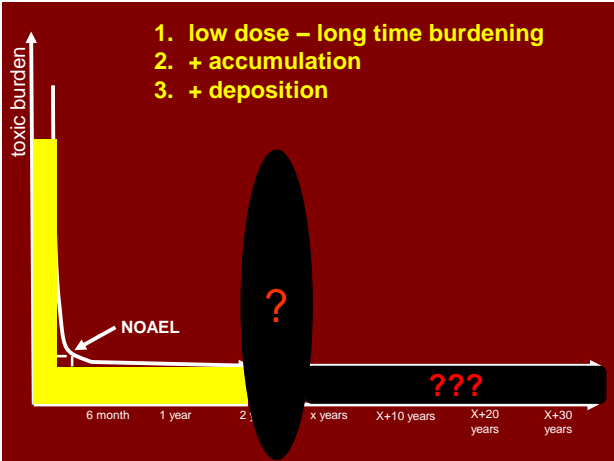
Toxicology has a linear causal approach



- They have no tools to identify environmentally associated illnesses correctly
- They disregard
 - Neuro-Endocrine Immune-System (NEIS)
 - susceptibility
 - vulnerability







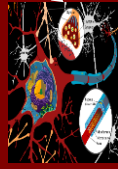
Deposition of not detoxified burden



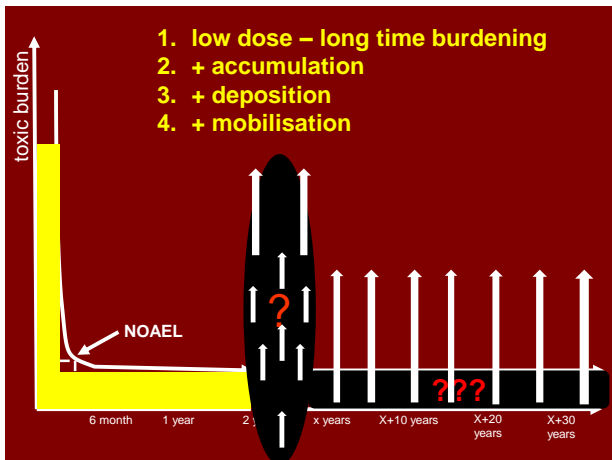
fatty tissue
wikipedia.org/wiki/Fat_tissue

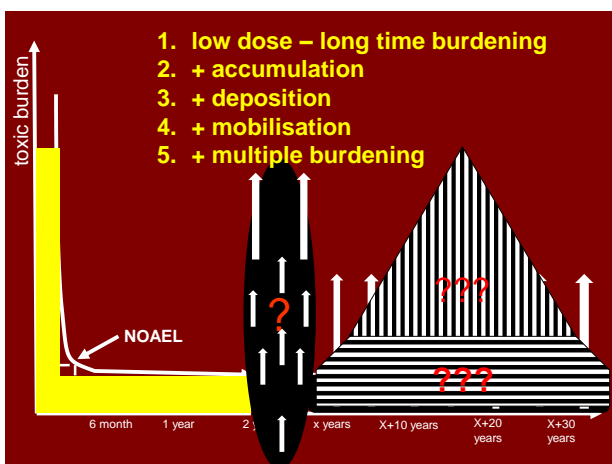


bone tissue
wikipedia.org/wiki/Knochen#mediaviewer:File:Human_skeleton_front_de.svg



nerve tissue
wikipedia.org/wiki/Nervengewebe





Clinical Environmental Medicine approach

- leaves the
 - toxicological Paradigm of "dose-effect relationship"
 - linear causal approach in Research
 - way of Risk Assessment exclusively by Epidemiology
 - by this secondary and tertiary Prevention
- but has to follow complex systems,
 - complex in
 - Awareness
 - Diagnose
 - Treatment
 - Prevention

Paradigm of Clinical Environmental Medicine

- Not only the dose defines the burdening effect
- but the sum of:
 - burden
 - + dose
 - + multi toxicity
 - + time of burdening
 - + vulnerability
 - + susceptibility
 - + actual functionality of detoxification

There is only little notice about the individual suffering from violations by the environment

The tragedy is we deal in front of an epidemiologically confirmed increasing prevalence of illnesses linked to the environment

In our population we have a well known, epidemiological high graduated prevalence of environmental illnesses

15 - 30%

of the population suffer from environmentally linked illnesses*, **, ***

4% - 9%

of the population suffer from escalating environmentally linked illnesses like **

like:

MCS Multiple Chemical Sensitivity
CFS Chronic Fatigue Syndrome
FM Fibromyalgia
PTSD Post Traumatic Stress Disorder

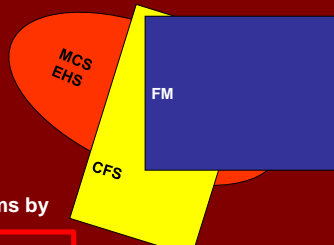
Multisystem Illnesses

* Eis, D. (2002) Multizentrische MCS – Studie, Robert Koch Institut, Berlin.

** Sorg, B. A. (1999) Multiple chemical sensitivity: potential role for neural sensitization. *Crit. Rev. Neurobiol.* 13, 283–316

*** Carless, S. M. Steinemann, A. C. (2003) A review of a two-phase population study of Multiple Chemical Sensitivities. *Environmental Health Perspectives*, Vol. 111, No. 12, September 2003

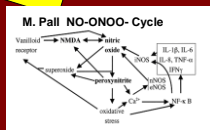
Multi System Illnesses



Same illness?

more than 80% overlapping symptoms by

always
Multiple Chemical Sensitivity (MCS)
Chronic Fatigue Syndrome (CFS)
Fibromyalgia (FM)



EU summit on Chronic Diseases Brussels April, 2014

Concerning permanent environmental burden:

“There is a remarkable scientific evidence on an ecological relationship to chronic widespread diseases”

- Hypertension
- Arteriosclerosis
- Diabetes type II
- Rheumatism
- COPD
- Cancer
- Psycho-neurological diseases
 - Depression
 - Dementia
 - Alzheimer’s disease
 - Parkinson’s disease
 - ADHS / ADS

EU summit on Chronic Diseases Brussels April, 2014

“Since we cannot adequately diagnose or treat
these diseases
their costs to society have become staggering.”

Primary prevention is an absolute must!

Clinical Environmental Medicine → 4 different kind of stressors

➤ physically

- Electro – Magnetic Fields (EMF)
- Noise
- Radiation
- Heat – Coldness
- Excessive sport



➤ chemically – toxically

- Disinfectants
- Preservatives
 - Food
 - Cloth
 - Products (Antifouling)
- Pesticides / Fungicides
- Mycotoxins

➤ biologically

- Bacteria
 - Borrelia
- Viruses
- Parasites
- Molds

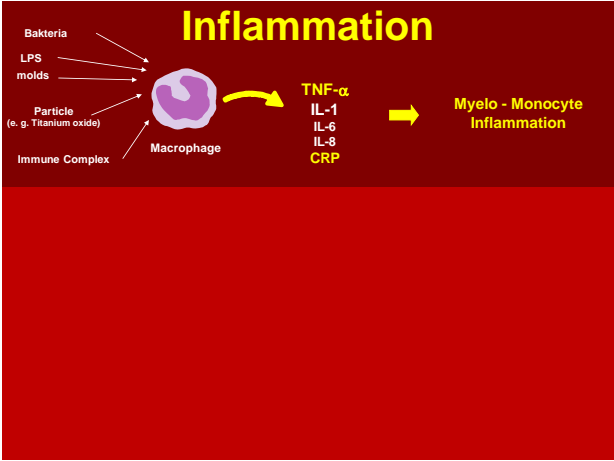
➤ psycho-socially

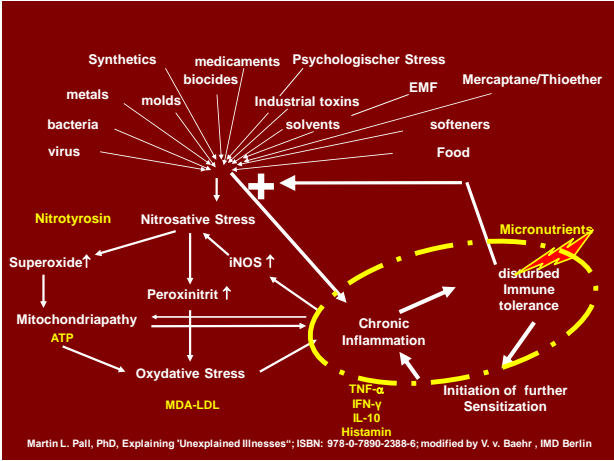
- Partner,
- Parents - Children,
- Kindergarten, school,
- University
- Working place
- Recreation time /daily rhythm

Environmentally health impact by stressors

Influencing

- chronic inflammation
- nitrosative stress / oxidative stress
- Neuroendocrine Immune System (NEIS)
- Mitochondria function
- Depletion of micronutrients





Why do have environmentally linked illnesses nearly no awareness from the scientific main stream?

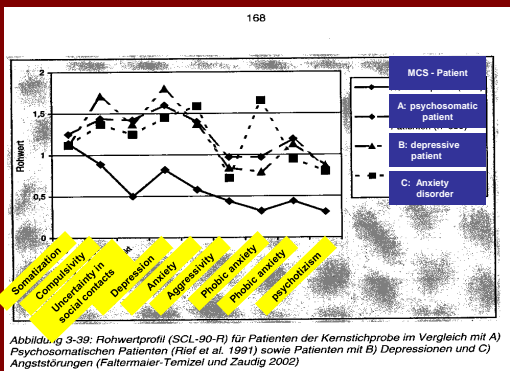
1. Environmentally linked illnesses are complex, not able to be explained by the linear causal way
2. Missing basic medical knowledge, having no specific clinical practical environmental medical training
3. Therefore fixing on psychiatric or psychosomatic diagnoses too fast and too early

RKI-MCS-Study 2002 Berlin scientifically proofs :

- MCS complaints have to be seen similar to severe heart diseases
- MCS is not a psychosomatic illness !



At first the good message:
Your are not hypochondriac



Multizentrische MCS-Studie
Robert Koch-Institut, Berlin November 2002

Why do have environmentally linked illnesses nearly no awareness from the scientific main stream?

1. Environmentally linked illnesses are complex
2. Missing basic medical knowledge having no specific clinical practical environmental medical training
3. Therefore fixing on psychiatric or psychosomatic diagnoses too fast and too early
4. Environmental Medicine is no specific target of sponsored and by that "influenced research"
5. Missing willingness by researching scientists to cooperate with physicians daily working in clinical practical environmental medicine

**Current Risk Assessment
is unsatisfactory !
Due to**

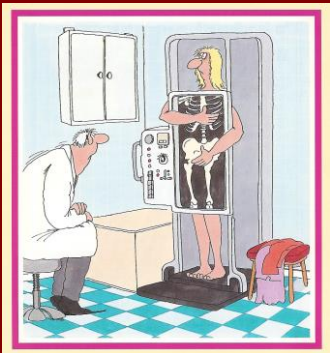
- insisting on the “dose – effect relationship“,
- missing assessment of accumulating long time – low dose effects,
- not being aware of multiple load with additive and multiplying effects,
- not being aware of epigenetical and genetical effects
- disregarding
 - Neuro-Endocrine-Immune-System (NEIS)
 - individual susceptibility and vulnerability

**End of the pipe strategy
→ long life burdening**

Examples out of the last 30 years:

- Asbestos
- Tobacco smoke
- Wood preservatives, PCP, Lindan
- DDT, PCB, HCB
- Formaldehyde
- Dental amalgam
- Softeners in medical products or children’s toys

Diagnostic



Clinical Environmental Medicine

step-by-step diagnostic approach

Clinical Environmental Medicine
→ 4 different kind of stressors

- Physicality
 - Noise
 - Light
 - Temperature
 - Humidity
 - Pressure
 - Acceleration
- Chemicality
 - Chemicals
 - Drugs
 - Alcohol
 - Herbicides
 - Pesticides
 - Antibiotics
 - Anticancer drugs
 - Antiviral drugs
 - Antifungal drugs
 - Antiparasitic drugs
 - Anticoagulants
 - Antidiabetics
 - Antihypertensives
 - Antipsychotics
 - Antidepressants
 - Antiepileptics
 - Antithrombotics
 - Antituberculars
 - Antiviral drugs
 - Antifungal drugs
 - Antiparasitic drugs
 - Anticoagulants
 - Antidiabetics
 - Antihypertensives
 - Antipsychotics
 - Antidepressants
 - Antiepileptics
 - Antithrombotics
 - Antituberculars
- Biologicality
 - Pathogens
 - Parasites
 - Viruses
 - Bacteria
 - Fungi
 - Protozoa
 - Helminths
 - Insects
 - Molluscs
 - Amphibians
 - Reptiles
 - Mammals
 - Birds
 - Marine invertebrates
 - Marine vertebrates
 - Terrestrial invertebrates
 - Terrestrial vertebrates
- Psychologicality
 - Stress
 - Anxiety
 - Depression
 - Insomnia
 - Obsessive-compulsive disorder
 - Post-traumatic stress disorder
 - Major depressive disorder
 - Bipolar disorder
 - Schizophrenia
 - Personality disorders
 - Eating disorders
 - Substance use disorders
 - Self-harm
 - Suicidal thoughts
 - Suicide

Trigger detection
Ecotoxicology
Human Biomonitoring
Ambient Monitoring

Paradigm of
Clinical Environmental
Medicine

- Not only the dose defines the burdening effect
- but the sum of:
 - burden
 - dose
 - multi toxicity
 - time of burdening
 - vulnerability
 - susceptibility
 - actual functionality of detoxification

Awareness, Anamneses
Trigger / Stressor

1

2

Ecotoxicology

Trigger detection

- Humanbiomonitoring of burden
 - Direct proof , if possible
 - e. c. lipophilic toxins
 - e. c. heavy metals
 - Indirect proof by metabolism
 - e, c. solvents
 - e. c. Pyrethroides
 - e. c. heavy metals
- Ambient-Monitoring

Clinical Environmental Medicine

step-by-step diagnostic approach

Clinical Environmental Medicine
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Trigger detection
Ecotoxicology
Human Biomonitoring
Ambient Monitoring

Effect Monitoring
Immunology
Endocrinology
Metabolism
Mitochondria

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Awareness, Anamneses
Trigger / Stressor

1

2

3

11

Effect monitoring

- NEIS
(Neuroendocrine Immune System)
- Neurotransmitter
- Axis: Pituitary –Thyroid - Suprarenal capsule
- Immunology (Allergy / Intolerance)

Immunological Diagnostic

Allergy

- In vivo:
 - Prick-,
 - Intracutaneous-Test,
 - Lymphocyte Transformation Test (LTT)
 - Provocations Test
- In vitro:
 - IgE, specific Antibody,
 - Leukotriene-Release-Test,
 - Basophile Degranulation Test (BDT)

Immunological Diagnostic

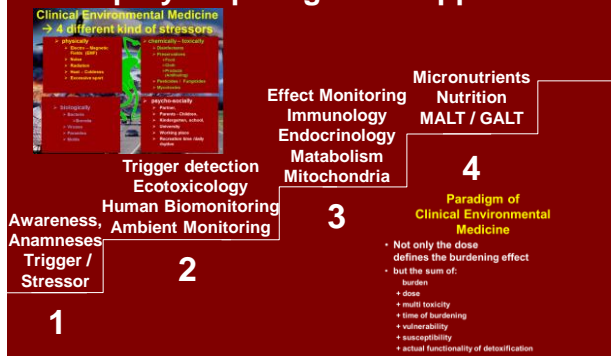
Immunology

- Autoantibody
- Lymphocyte-Transformation-Test (LTT)
- Effectors - cytokine
- Cytokine
- Circulating immune complex
- Lymphocyte-Subpopulations

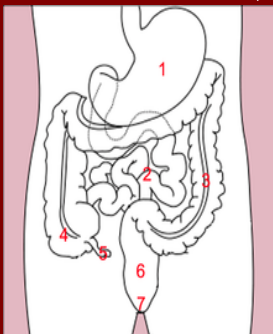
Functionality of Metabolism

- oxidative und nitrosative stress
- mitochondrial dysfunction
- Other Inflammation
- Induction of Autoimmune Processes

Clinical Environmental Medicine step-by-step diagnostic approach



Gut, GALT



e.g.

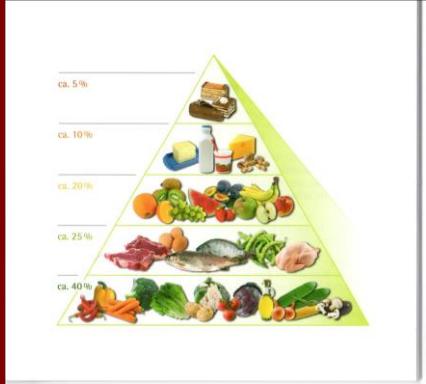
- Coeliac disease
- Lactose- Intolerance
- Fructose- Malabsorption
- Food – Allergy
- Food-Intolerance

Gut dysbiosis

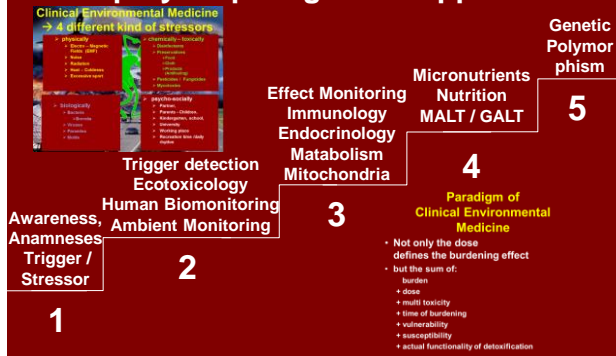






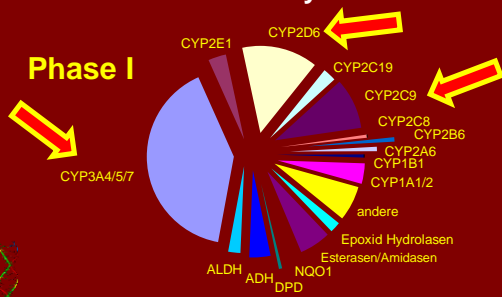


Clinical Environmental Medicine step-by-step diagnostic approach

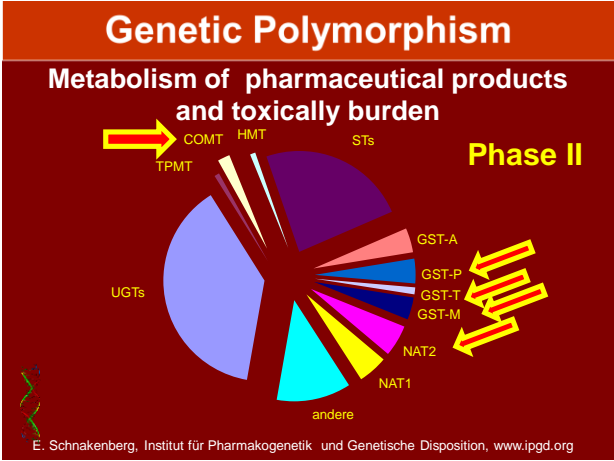


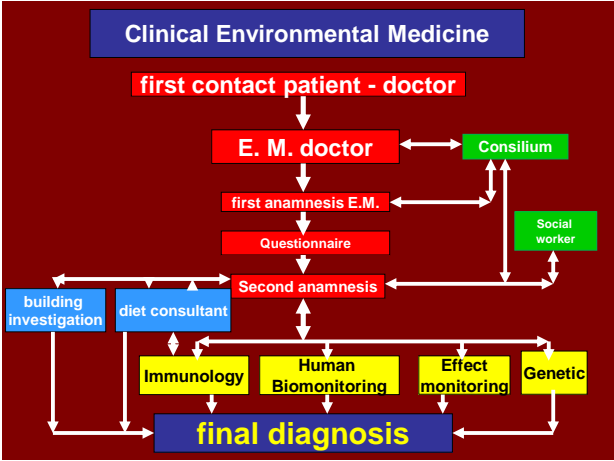
Genetic Polymorphism

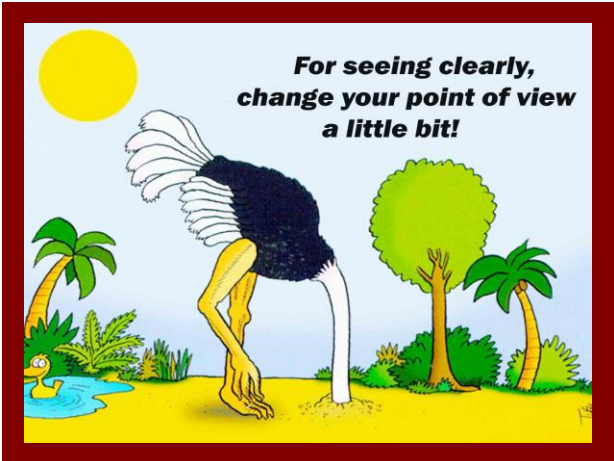
Metabolism of pharmaceutical products and toxically burden

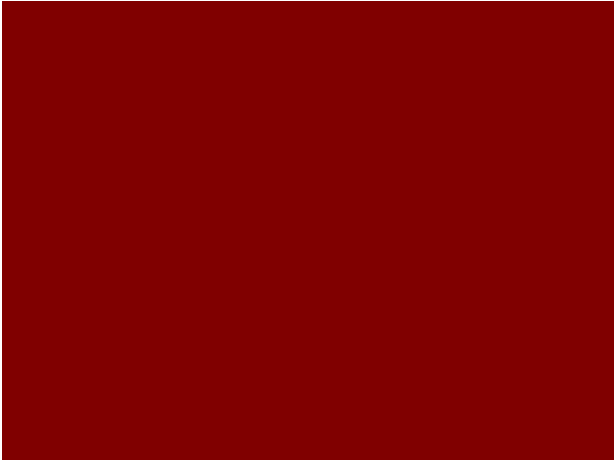


E. Schnakenberg, Institut für Pharmakogenetik und Genetische Disposition, www.ipgd.org











**Clinical Environmental Medicine
Therapy**



Clinical Environmental Medicine Therapy

- Elimination / Minimization of stressors
- Stop of inflammation by supplementing micronutrients
 - enzymes,
 - minerals
 - Vitamins
- Optimizing dysfunction of neurotransmitter
- Mitochondrial treatment
- Detoxification
 - of metals by Chelat-Therapy
 - of lipophilic toxins by physical therapy
- Optimizing diet
- Treatment of gut dysfunction

Clinical Environmental Medicine 3 steps in therapy

1. Awareness and avoidance / minimization of stressor

2. Treatment of

and Optimizing of

Symptoms

Metabolism Function

- a. Chronic Inflammation
- b. Pain (FM)
- c. Exhaustion (CFS)
- d. Chemical Hypersensitivity (MCS)
- e. Sensitisation / Intolerance

- | | |
|-----------------------------------|-----------------------------|
| a. Nutrition / MALT Gut Dysbiosis | d. Oxidative stress |
| b. Micronutrients | e. Nitrosative stress |
| c. Inflammation / Focus | f. Mitochondria Dysfunction |

3. Individual Detoxification

Complex therapy

3. Individual Detoxification of

metals

lipophilic toxins

- | | |
|-----------------------------------|----------------------|
| ➤ dentistry | ➤ wood preservatives |
| ➤ alloplastic material by surgery | ➤ solvents |
| ➤ Incorporated | ➤ flame retardants |
| ➤ Ingestiv | ➤ softeners |
| ➤ Inhalative | |
| ➤ traumatically | |

Evaluation of an approach to
treat
toxically loaded persons:

A controlled therapeutically
study

by
Dr. med. Peter Ohnsorge¹⁾
Prof. Dr. phil. Dipl.-Psych. Michael Hüppe²⁾

In order of the German Ministry of Health and Social Affairs
Reference Code: 122-1720/48

First MCS therapy study being :
prospective
randomized
blinded
controlled

Environmental Medicine
ambulant physical therapy
for MCS patients

Monday	Tuesday	Wednesday	Thursday	Friday
active Hyperthermia		active Hyperthermia		active Hyperthermia
	passive		passive	

- 4 weeks therapy,
- in an "Environmental Unit"
- every day, 5-6 hours duration
- relaxation rest of the day and weekends

Hüppe M., Müller J., Schulze J., Wernze H., Ohnsorge P., (2009). Treatment of patients burdened with lipophilic toxicants: A randomized controlled trial. *Activitas Nervosa Superior Rediviva*, 51, 3-4, 133-141.

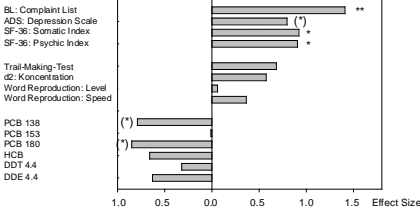
Intervention protocol

weekly schedule with:

- 3 active days - Monday, Wednesday, Friday
 - exhaustive physical exercise,
 - hyperthermia (sauna or "hyperthermia bank"),
 - massage, lymph drainage,
 - relaxation therapy and
 - micronutrients, vitamin and mineral supplementation.
- 2 passive days - Tuesday and Thursday
 - intensive psychic and somatic relaxation exercises like progressive muscle relaxation according to Jacobson,
 - breathing therapy,
 - liver and loam compresses

Hüppe M., Müller J., Schulze J., Wernze H., Ohnsorge P., (2009). Treatment of patients burdened with lipophilic toxicants: A randomized controlled trial. *Activitas Nervosa Superior Rediviva*, 51, 3-4, 133-141.

Experimental Group vs. Waiting Group



Hüppe M., Müller J., Schulze J., Wernze H., Ohnsorge P., (2009). Treatment of patients burdened with lipophilic toxicants: A randomized controlled trial. *Activitas Nervosa Superior Rediviva*, 51, 3-4, 133-141.

**Using the
complex therapeutic regime**

**patients usually recover
slowly but consequently**

S.; Michael, 5 years, male

• **SYMPTOMS:**

- Frequent infections of the respiratory tract, chronic ear infections leading to several operations of the upper airways and ears.
- Psychological development disturbance leading to inability of enrolment in elementary school.

S.; Michael, 5 years, male

• **risk factor:**

- Indoor pollution in kindergarten and at home.
- Wood preservatives:
 - Pentachlorophenol, Lindane, Formaldehyde

S.; Michael, 5 years, male

• Investigation:

– Blood samples:

Pentachlorophenol	25 000 ng/l	(75 000)
Lindane	100 ng/l	(120)

S.; Michael, 5 years, male

• Ambient Investigation:

- in the kindergarten: corresponding high level in the wood of the wall inside the rooms:

Pentachlorophenol	>3000 mg/kg	(5)
Lindane	> 280 mg/kg	(1)

– Additional at home:

- corresponding contamination by the same toxins and
- chemical burden on a high level by formaldehyde > 0,4 ppm (0,1)

S.; Michael, 5 years, male

- Kindergarten strictly forbidden
- intensive restoration of home immediately
- school enrolment after 4 month possible
- further development rather normal
- studying and self-employment as an architect
- **Mother developed MCS needing constantly medical care**

S.; Michael, 5 years, male

Lesson learned:

**95 Percentile is
only a statistical value**

**No marker for illness,
as Toxicology wants us to believe**

**Burdening by
multiple stressors**

**Leading into
multisystem illnesses**

**A. B. ♀ 28 J.
Diagnose Multiple Sklerose**

- ❖ a young lady, age 28, just passed final examination at university for communication design
- ❖ moved with her boyfriend into two rooms of a new apartment sharing community
- ❖ apartment renovated directly before
 - ❖ clean and comfortable
 - ❖ life was ok, friend, job, home
- ❖ two month later paresthesia started in both arms interpreted as vertebral column problems

A. B. ♀ 28 J.
Diagnose Multiple Sklerose

- ❖ raising paresthesia in both legs
- ❖ fatigue
- ❖ dizziness
- ❖ neurology → diagnose MS, verified by
 - ❖ magnetic resonance tomography
 - ❖ cerebrospinal fluid puncture

A. B. ♀ 28 J.
Diagnose Multiple Sklerose

- Immediately typical treatment
- → sudden hearing loss
- So she came to me hearing a complex anamnesis
 - started Clinical Environmental Medicine investigation
 - followed by complex therapy
- That moment she already suffered from
 - Dysmotorik of the hands
 - Severe drowsiness
 - Disturbance of concentration



Guideline Multiple Sclerosis
Encephalomyelitis disseminata

- MS is the most frequent neurological illness occurring in young adults, which leads to permanent invalidity
- The clear differential diagnosing differentiation towards similar clinical pictures like Neuromyelitis optica, Collagenosis, Borreliosis, Sarcoidosis, cerebrovascular and metabolic diseases attains ongoing relevance

Guideline Multiple Sclerosis Encephalomyelitis disseminata

The newest diagnose criteria explicit stress,

- that the diagnose MS should defined only,
if the demonstrated neurological symptoms

**Could not be explained better
by something else than MS**

(Polman et al. 2005, Polman et al. 2011).

A. B. ♀ 28 J. Diagnose Multiple Sklerose

Clinical Environmental Medicine Anamneses :

- ❖ former burden by wood preservatives in
childhood home and kindergarten
- ❖ long time burden by heavy metals mercury from
dental amalgam included
- ❖ in spite of a well known allergy Type IV towards
Nickel → Ten years before supplied with nickel
containing dental bracets

A. B. ♀ 28 J. Diagnose Multiple Sklerose

Clinical Environmental Medicine Anamneses :

- ❖ during studying job in a market garden
- ❖ → permanent contact wit biozides
- ❖ → eczema spreading from the hands to arm beds
to the whole body forcing to quit the job
- ❖ long time contact with glue and plastic materials
in the courses of studies followed by eczema at
hands and surround the eyes
- ❖ toxic nano-particles long time contacts at working
place by toner from laser printer and scanner

Clinical Environmental Medicine Anamneses :

- **leaving old living rooms she found extensive mould in bedroom**
 - **at the wall behind the cupboards**
 - **under the bed**
 - **bottom side of the mattresses**

- **Still acute borreliosis**
- **Severe burden by heavy metals**
 - **Lead**
 - **Copper**
 - **Nickel**
 - **Mercury**
 - **Palladium**
 - **Tin**

[illegible]

Inside new livingrooms:

- **Pyrethroids**
- **Lindane**
- **Dichlofluanid**

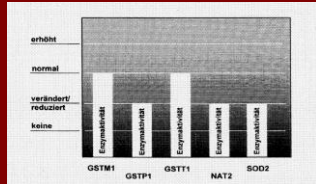
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Beschreibung des Prüfgegenstandes:	Holzspäne																									
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Probenahme Ort der Probenahme: Dachstuhl Probenahme/in: Auftragsgeber Probenahmedatum: 06.07.2012																										
Prüfung Probeingang: 10.07.2012 Prüfdatum: 23.07.2012 Prüfnummer: 220710-26 zu untersuchen auf: Pyrethrin und Holzschutzmittel Untersuchungsmethode: GC/MS-MS Probenvorbereitung: Extraktion mit Aceton/n-Hexan Abweichungen: keine Abweichungen gegenüber der Prüfspezifikation																										
Ergebnisse <table border="1"> <thead> <tr> <th>Stoff</th> <th>BG [mg/kg]</th> <th>gefundene Konzentration [mg/kg]</th> </tr> </thead> <tbody> <tr> <td>Pentachlorophenol (PCP)</td> <td>0,2</td> <td>Spuren nachweisbar</td> </tr> <tr> <td>Lindan</td> <td>0,1</td> <td>140 <</td> </tr> <tr> <td>DDT</td> <td>0,3</td> <td><</td> </tr> <tr> <td>Deltamethrin</td> <td>0,3</td> <td>11 <</td> </tr> <tr> <td>Permethrin</td> <td>0,3</td> <td>11 <</td> </tr> <tr> <td>o,p'-DDT (o,p'-Dibenzodioxin)</td> <td>0,1</td> <td><</td> </tr> <tr> <td>Deltamethrin</td> <td>0,5</td> <td>nicht nachweisbar</td> </tr> </tbody> </table> <p>= kleine Bestimmungsgrenze, BG = Bestimmungsgrenze, n.a. = nicht angegeben, n.b. = nicht bestimmt</p>			Stoff	BG [mg/kg]	gefundene Konzentration [mg/kg]	Pentachlorophenol (PCP)	0,2	Spuren nachweisbar	Lindan	0,1	140 <	DDT	0,3	<	Deltamethrin	0,3	11 <	Permethrin	0,3	11 <	o,p'-DDT (o,p'-Dibenzodioxin)	0,1	<	Deltamethrin	0,5	nicht nachweisbar
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A. B. ♀ 28 J.
Diagnose Multiple Sklerose

laboratory

- Vitamin D- und B2- as well as B12-Depletion
 - → functional disorders in detoxification metabolism

- **Genetic:**
Polymorphism of
detoxification enzymes
Urgently needed for
detoxification metabolism:
 - no speediness
 - not comprehensive



A. B. ♀ 28 J.
Diagnose Multiple Sklerose

➤ **Conclusion:**

- → not completely detoxified pollutants
are deposited into an interim depot
 - fatty tissue
 - nerve tissue

The circle closes !

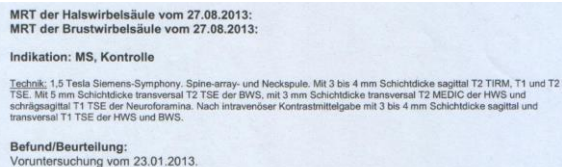


**Guideline Multiple Sclerosis
Encephalomyelitis disseminata**

Diagnose

- Classic diagnose basis on anamneses (hints of already
happened neurological events in the past),
- as well as clinical and paraclinical proof
of temporal and regional dissemination
- **excluding other causation**

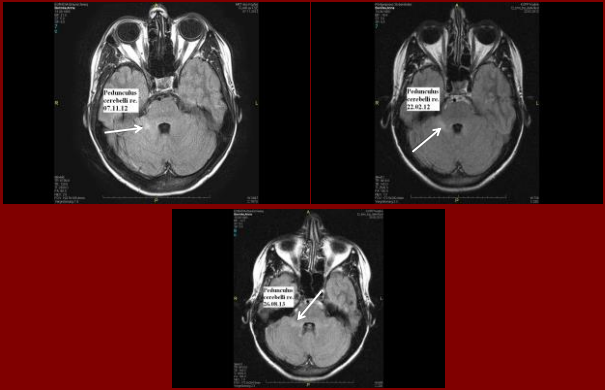
- **Infusions with micronutrients for stabilizing oxidative und nitrosative stress**
- **Therapy of borreliosis**
- **Optimizing metabolism**
- **Physical detoxification - strategies**
 - **Lipophilic Toxins**
 - **heavy metals**



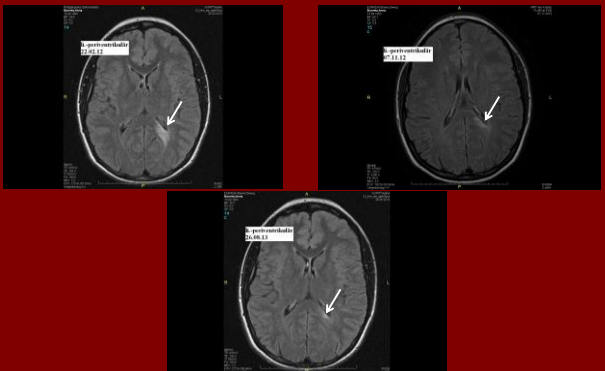
In Comparison to the last MRT

1. Improving
2. Regredience of former Pathology
3. No pathological Contrast Medium Enhancemer

A. B. ♀ MRT Bilder
pedunculus cerebelli re.



A. B. ♀ MRT Bilder
li. paraventriculär



A. B. ♀ 28 J.
Diagnose Multiple Sklerose

Therapy results

Totally disappeared:

- ascending paresthesia of the legs
- neuro-muscular disorders of the hands
- hearing disorders
- fatigue
- drowsiness
- dizziness
- concentration disfunction

Additional Case

Attention trap ! Very often ignored!

- an apparently reactive psychosomatic illness
- mostly is not triggered alone by psycho-social stressors

Attention trap ! Very often ignored!

If in the following case doctors based their diagnose and therapy strategy exclusively on psychosomatic aspects:

- toxic and biological stressors had continued health burdening on and on
- healing processes had been impossible,
- worsening of health had been certain.

Attention trap !

Partner of the young lady

- ❖ → immediately with the confrontation of the life perspective changing MS-diagnose of his girlfriend he fell into a severe deep depression
- ❖ → unemployment
- ❖ Paresthesia of periphery
- ❖ Concentration dysfunction
- ❖ sleeping disturbances
- ❖ had age
- ❖ constantly severe drowsiness

Attention trap !

Partner of the young lady

- Neurologist diagnosed on the base of the case history without any other investigation a reactive depression
- → Neuroleptics
- → **no therapeutically benefit at all**

Attention trap !

Clinical Environmental Medicine Anamnesis

- Mould and toxic burden in both home (past and present)
- Burden by heavy metals out of occupational areas
 - Nickel
 - lead
 - Arsenic
 - mercury
- toxic acute burden
 - Pyrethroides
 - Lindane
 - Dichlofluanid

Attention trap !

Result after 5 month detoxifying therapy

- Depression gone very quickly
- No had age any more
- Concentration cam back totally
- No paresthesia any more
- Normal sleep
- Slowly fading down dizziness and drowsiness
- back to work
- After 1 year no complains any more !

Without the awareness and knowledge of environmentally associated illnesses and the multiple trigger, these two people had in our on “mainstream science” orientated and evidence based medicine

**NO
Chance !**