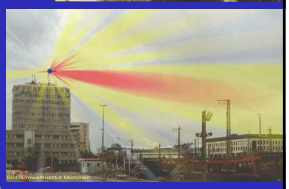
Dr. med. Joachim Mutter
Integrative- and Environmental Medicine
Lohnerhofstrasse 2
D-78467 Konstanz/Germany
www.detoxklinik.de
jm@tagesklinik-konstanz.de

Toxicity of dental-metals, mercury and interaction with HF-EMF: Root of many diseases including MCS, EHS, CFS?



Interaction of mobile phones with superficial passive metallic implants.

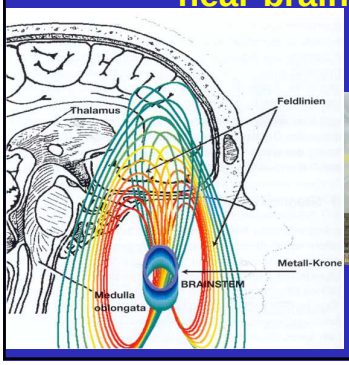
Virtanen et al. 2006: Department of Applied Physics, University of Kuopio, Finland.

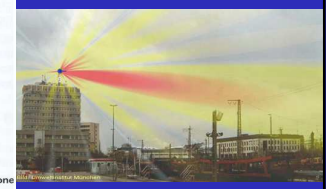
„...The local peak SAR values increased even by a factor of 400-700 due to a pin or a ring. These highest values were reached in a limited volume close to the implant surface in almost all the studied cases..“.

Radiofrequency dosimetry in subjects implanted with metallic straight wires: a numerical study. Mattei et al. 2008

„...The results of the model show that the presence of a metallic wire yields to a significant increase in the local specific energy absorption rate (SAR). The present standards and/or guidelines on safe exposures of humans to EMF does not cover persons with implanted devices ...“

Dental Metals as EMF-enhancer near brain tissues





Source: Dr. J. Lechner

„Sensation of Balance Dysregulation Caused/Aggravated by a Collection of Electromagnetic Waves in a Dental Implant“

Fujii, Y. 2014, Open Journal of Antennas and Propagation, 2, 29-35. doi: 10.4236/ojapr.2014.23004.

„...A 48year woman was suffering from dizziness, unsteadyness, and a sense of fatigue for several years...“
„...In Conclusion, removal of her implant resulted in a marked improvement in her sensitivity to electromagnetic waves...“

Case: 40 year-women: Extreme EHS, autoimmunity, brain atrophy

Causes of EHS

Genuis & Lipp 2012 Sci Total Environ 414:103-112

- EMF
- Factors:

1. Toxins, like heavy metals, metallic implants
2. Genetic (low detox-enzymes, like GST, NAT, SOD)
3. Deficiency of micronutritients, unhealthy nutritien

Magnetosom hypothesis

Kirschvink et al. 1992. Magnetite biomineralisation in the human brain. Proc Natl Acad Sci 89: 7683-7

„...The biological effects of electromagnetic waves are due to the existence of millions of magnetosomes...“

„...These magnetosomes, under the effect of electromagnetic fields, would cause deleterious biological responses...“

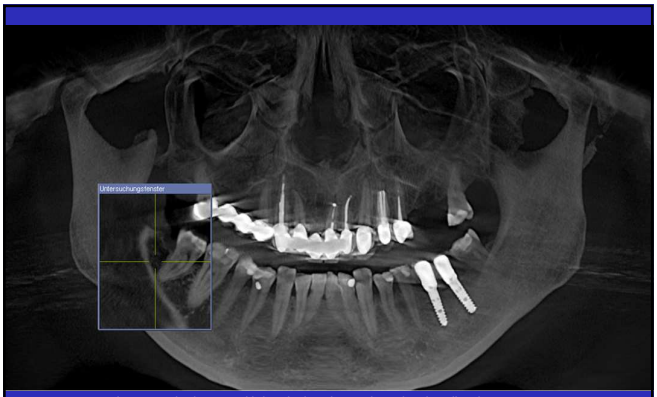
→ Some metals in the brain my enhance the EMF

What we regularly see in severe ill patients (Cancer, ALS, Alzheimer´s, Parkinson´s, MS, Depression, EHS, MCS, CFS, etc. despite amalgam has been removed years ago in some cases...

Mercury amalgam under crowns

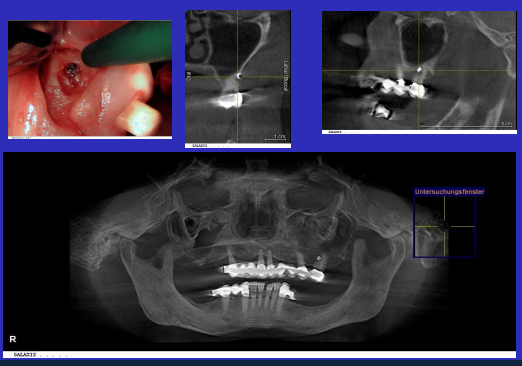
www.tagesklinik-konstanz.de

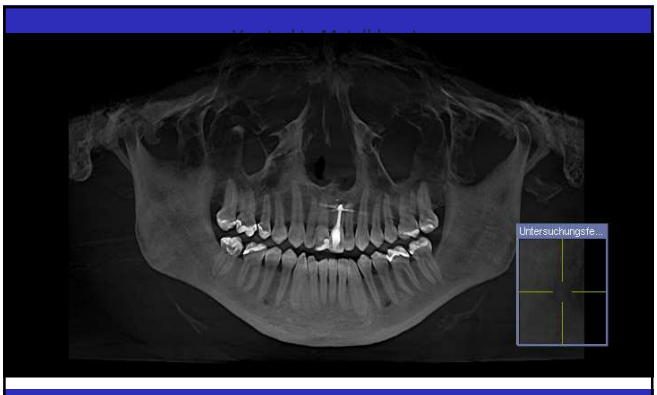
Mercury amalgam tatoos



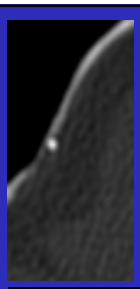
Metastatic cancer (G3), EHS with headache, depression, sleeping disturbances

Mercury in soft tissue and jaw bone



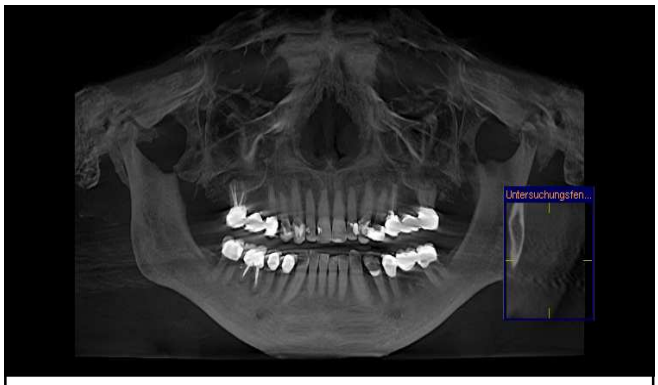


EHS, Headache, permanently sinusitis

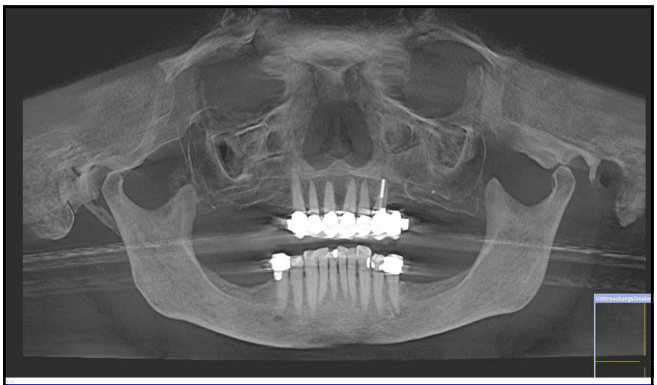


Severe MS, EHS

A-L: chronic progrediente MS



BS: Parkinson, MCS



AS: EHS (Blepharospastic, sleepings disorder, diabetes, hypertension, pain of the whole body

B, H. Fatigue, EHS, depression

Hidden mercury amalgam in soft tissue

www.dr-scholz.de

Jaw bone with mercury amalgam

Amalgam: > 50% elemental mercury

Mercury , permanently released by amalgam

- Most toxic non-radioactive element, - 10-fold more toxic than lead (Pb)
  (Thier et al. 2003, Stoiber et al. 2004)
- Synergistic toxicity: Letal Dosis (LD) $0{,}1 \times LD1_{(Hg)} + LD1_{(Pb)} = LD100$
  (Schubert et al. 1978)
- Half- life in brain: 1-18(-30) years
  (Sugita 1978, Opitz et al. 1996, Hargreaves et al. 1988)

Main sources of mercury for humans (WHO, 1991)

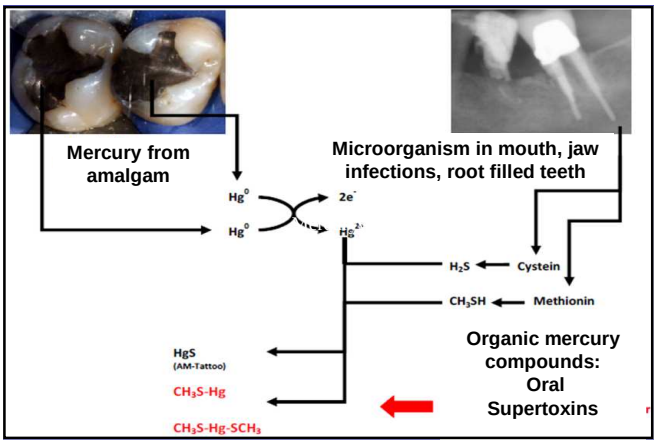
Source	Nettoabsorbtion per dayg (Netto = absorbtion- excretion
Dental amalgam	3,0-17,0
Fish	2,34
Other food	0,25
water	0,0035
air	0,001

People with Dental Amalgam:

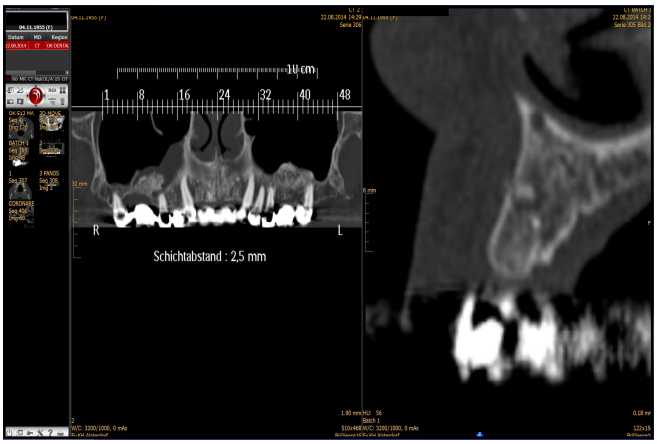
- 2- 12- times more Hg in body tissues
- 3- times more Methyl- Hg in saliva
- 2- 5× more Hg in blood+urine+feces

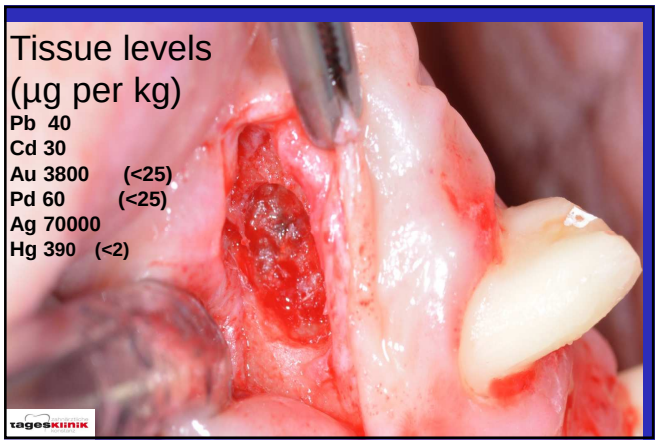
- ➡ release Hg into environment since >170 years

(Kingmann 1998, Drasch 1992,1994, 1997, Egglestone 1987, Guzzi 2002, 2006, Pizzichini 2003, WHO 1991, Bjorkman et al. 2007, Link et al. 2007, Leistevuo 2001, Nylander 1986, Nylander et al. 1987, Lanocha et al. 2013)

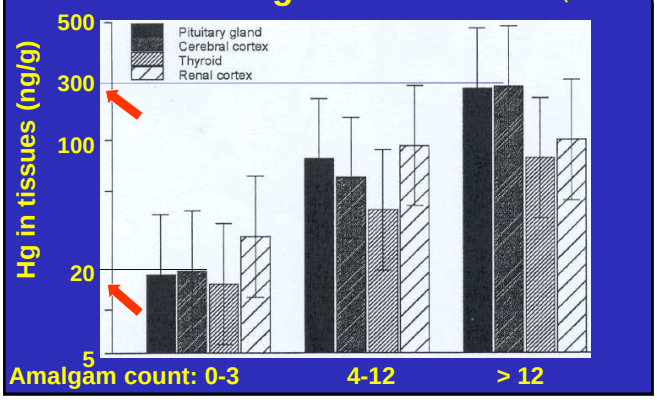


Parkinson´s disease, MCS





>10 fold more Hg in brain tissues (Guzzi 2006)



Hg in brains of amalgam bearers:

- 300 ng/g, when >12 amalgam fillings (Guzzi et al. 2006)
- 20- 200 ng/g lead to neuro-degeneration in-vitro and in-vivo (Leong et al. 2001, Pendergrass & Haley 1996)
- Brain Hg↑↑→ Risk for suicide↑↑ (Guzzi et al. 2006)

Mercury in cord blood

- Normal Hg: 0,2- 5 ng/ml (Stoz et al. 1995)
- Risk for neurodevelopmental disorders 3,5-fold increased, when Hg in cord blood > 0,8 ng/ml (Jedrychowski et al. 2005, Ng et al. 2014)
- Maternal amalgam increases Hg in cord blood and infants´ tissues significantly Ask et al. 2002, Drasch et al. 1994, Unuvar et al. 2007, Lindow et al. 2003, Holmes et al. 2003, Lutz et al. 1996, Vather et al 2000)

Mercury levels of MCS patients

Pigatto et al. 2013. Allergological an toxicological aspects in a multiple chemical sensitivity cohort. Oxid Med Cell Longev 2013: 356235

„...Conclusions: Our data show an increased prevalence of metalic allergy and elevation of mercury levels in bioindicators among patients with MCS.“

Increased Hg- susceptibility: SNP´s

- Apo E4 (Stewart et al. 2002, Godfrey et al. 2003, Ng et al. 2014, Wojizek et
- Hypomethylation (Waly et al. 2004)
- Coproporphyrinoxidase (CPOX4) (Echeverria 2006, Woods 2005, 2012, Heyer 2006)
- Glutathion-synthesis (Custodio 2004, 2005)
- Brain derived neurotropic factor (BDNF) (Echeverria 2005, Heyer 2004)
- MTHFR-677-Mutation (Boris 2004)
- COMT (Woods et al 2014)

Hg from Amalgam: Risk for

- Autism, ADS, ADHS (Holmes et al 2003, Geier et al 2009, Wortberg 2007
- Miscariage, Infertility (Gerhard et al. 1992-1998, Podzimek et al. 2003, 2006, Rowland et al. 1994)
- Autoimmunity Bartova et al 2003, Hultmann 1994, 1998, Berlin 2003, Pollard 2001, Stejskal et al. 1996, 1999, Sterzl 1999, Via 2003, Marcusson 1999, Prochazkowa et al. 2004, Vendlikova et al 2006, Sterzl et al. 2006
- Oxidative stress, genotoxicity Pizzichini et al. 2000-2003, Akiyama et al. 2001, Olivieri et al. 2001, 2002
- Antibiotic resistant bacteria (Ready et al. 2007, Summers et al. 1993)
- Multiple Sklerosis (OR 3,9) (Bates 2006, Aminzadeh& Etminan 2007, Prochazkowa et al. 2004, Attar et al. 2011)

Hg from Amalgam: Risk for

- Neurobehavourial Changes: Homme et al. 2013, Ritchie et al. 2002, 2004, Echeveria et al. 1998, Bittner et al. 1995, Yoshida 2004, Siblerud 1989-1994, Urban 2003, Aydin 2003, Wood et al. 2005, 2006, 2014.
- Alzheimer´s disease Song& Choi 2013, Ehmann 1988, Wenstrup 1990, Pendergrass 1996, Duhr, 1993, Olivieri 2000, 2002, Hock 2000, Ely 1999, Haley 2002, 2005, Bernard 2000, 2002, Holmes 2003, Geier 2003a,b, 2004a-c, Mutter 2004, Mutter 2005a-d, 2006, 2010; Seidler 1996
- Nephrotoxicity Al-Saleh et al. 2012, Boyd et al., 1991, Mortada et al., 2002)
- Parkinson´s disease, ALS Roos&Dencker 2012, Pamphlet& Kum 2013, Seidler et al. 1996, Rhede & Pleva 1994, Pamphlett et al. 1996-1998, Adams 1983, Schwarz et al. 1996
- Fatigue, depression, headache, Sleeping problems, impaired memory, G.I.T. disorders (Lindh et al. 2002, Kern et al 2014, Zwicker et al. 2014)