

INSIDE THIS ISSUE:

| | |
|---|----|
| MCS Recognition Around the World | 1 |
| World Awash in Environmental Armageddon | 6 |
| My Mother Made Me Fat: Chemical Exposure in Womb | 13 |
| Antibacterial Hand Soap Linked to Psychiatric Illness | 15 |
| Food Dyes Linked to Kids Behavioral Disorders | 16 |
| Q&A Fragrance Free Policy at Work | 17 |
| Need MCS Safe Housing | 19 |
| Patient Resources | 21 |
| Community News | 29 |
| Research Studies | 30 |

MCSA NEWS

VOLUME 5 ISSUE 11 NOVEMBER 2010

MCS Recognition



Around the World

Article

MCS Recognition Around the World

“MCS often becomes disabling because the triggering chemicals are pervasive in the everyday environment.”

A growing number of governments, organizations, and authorities are recognizing multiple chemical sensitivity (MCS) as an illness induced by toxic substances.

MCS is an acquired illness that begins with a chemical poisoning event, either from an acute exposure or long-term chronic exposure to a toxic substance. Once the initial poisoning occurs, the condition is triggered by low-level exposure to airborne agents and other toxic substances such as perfumes, fragranced products, cleansers, pesticides, mold, solvents, and new building materials.

The United States Environmental Protection Agency defines MCS as “a diagnostic label for people who suffer multi-system illnesses as a result of contact with, or proximity to, a variety of airborne agents and other substances.”

MCS often becomes disabling because the triggering chemicals are pervasive in the everyday environment. Various governments, organizations, and authorities have recognized the serious nature of MCS and put forth the following statements.

**American Lung Association
American Medical Association
U.S. Consumer Product Safety Commission
U.S. Environmental Protection Agency**

Indoor Air Pollution: An Introduction for Health Professionals (1994)

<http://www.epa.gov/iaq/pubs/hpguide.html#faq1>

“The current consensus is that in cases of claimed or suspected MCS, complaints should not be dismissed as psychogenic, and a thorough workup is essential. Primary care givers should determine that the individual does not have an underlying physiological problem and should consider the value of consultation with allergists and other specialists.” (page 20)



MCSA NEWS

U.S. Department of Housing and Urban Development (HUD)

MCS Disorder and Environmental Illness as Handicaps (1992)

<http://fairhousing.com/include/media/pdf/mcsd.pdf>

"The General Counsel has accepted the attached memorandums the Department's position on the issue of when Multiple Chemical Sensitivity Disorder (MCS) and Environmental Illness (EI) are "handicaps" within the meaning of subsection 802 (h) of the Fair Housing Act (the "Act"), 42 U.S. C. 3602(h), and the Department's implementing regulation, 24 C.F.R. 100.201 (1991). In sum, MCS and EI can be associated with physical impairments which substantially impair one or more of a person's major life activities. Thus, individuals disabled by MCS and EI can be handicapped within the meaning of the Act. However, while MCS or EI can be handicaps under the Act, ordinary allergies generally would not be."

U.S. Department of Education

Multiple Chemical Sensitivity Policy and Resources (2001)

<http://www.naturalworldhealing.com/mcs-usgovt-policy.htm>

"MCS Is Now Recognized as a Disability. Both the US Department of Housing and Urban Development (HUD) and the Social Security Administration (SSA) have recognized MCS as a disabling condition. People with MCS have won several Workers Compensation cases. A recent human rights lawsuit in Pennsylvania established the right of an affected person to safe living space in subsidized housing. Both the Maryland State Legislature and New Jersey State Department of Health have commissioned studies of MCS. The NJ study provides an excellent overview of medical and legal issues related to MCS."

Social Security

DI 24515.064 Evaluation Of Specific Issues — Environmental Illness (1996)

<https://secure.ssa.gov/apps10/poms.nsf/lnx/0424515064!opendocument>

"In claims alleging disability due to environmental illness, it is often difficult to identify abnormal signs and laboratory findings which can be associated with the alleged symptoms. Therefore, in evaluating claims based on environmental illness, all of the claimant's symptoms, signs, and laboratory findings must be considered to determine if there is a medically determinable impairment and the impact of any impairment on the claimant's ability to work. This evaluation should be made on an individual case-by-case basis to determine if the impairment prevents substantial gainful activity."

U.S. Department of Health and Human Services, Centers For Disease Control and Prevention

Indoor Environmental Quality Policy

<http://www.thecanaryreport.org/wp-content/uploads/2010/04/CDC-2009-Indoor-Environmental-Quality-internal-policy542.pdf>

"Fragrance is not appropriate for a professional work environment, and the use of some products with fragrance may be detrimental to the health of workers with chemical sensitivities, allergies, asthma, and chronic headaches/migraines." (page 9)

The United States Access Board

Board Policy to Promote Fragrance-Free Environments

<http://www.access-board.gov/about/policies/fragrance.htm>

“There is a growing number of people who suffer more severe reactions to these and many other types of products and chemicals. This condition is known as multiple chemical sensitivities (MCS) and involves people who have developed an acute sensitivity to various chemicals in the environment. People with MCS experience a range of debilitating physical reactions, some even life-threatening, to chemicals used in a variety of products, including fragrances and personal care products, deodorizers and cleaners, pesticides, wall and floor coverings, and building materials. It’s a complex issue with a variety of triggering agents and physical reactions. Different people are affected by different products in different ways. The common factor is that the reaction, whatever the type, is very strong and disabling. Information needs to be developed on exactly what brings about such an acute sensitivity to certain chemicals, how and why this happens, and what can be done about it.”

Canadian Government

Canadian Human Right Commission

http://www.chrc-ccdp.ca/legislation_policies/policy_environ_politique-eng.aspx

"Individuals with environmental sensitivities experience a variety of adverse reactions to environmental agents at concentrations well below those that might affect the “average person”. This medical condition is a disability and those living with environmental sensitivities are entitled to the protection of the Canadian Human Rights Act, which prohibits discrimination on the basis of disability."

The German Institute of Medicine

MCS, CFS, FMS: coding according to ICD-10-GM (2008)

<http://mcs-america.org/GermanInstituteofMedicineRecognitionofMCS.pdf>

MCS (Multiple Chemical Sensitivity) is classified under:

T78.4 ... Allergy, not otherwise specified;

Chapter 19 (injuries, poisoning and certain other consequences of toxic causes),

Section T66-T78 (Other and unspecified effects of external causes)

Austria Federal Ministry of Health

<http://www.mcs-america.org/AustriaMCSRecognition.pdf>

MCS (Multiple Chemical Sensitivity) is classified under:

T78.4 ... Allergy, not otherwise specified;

Chapter 19 (injuries, poisoning and certain other consequences of toxic causes),

Section T66-T78 (Other and unspecified effects of external causes)

Japanese Ministry of Health

ICD10 codes: T65.9 poisoning and other unspecified substances, toxic substances, unspecified

http://www.dis.h.u-tokyo.ac.jp/scripts/search/ICD10_searchw.asp?searchstring=T65.9

MCS (Multiple Chemical Sensitivity) is classified under:

T659 ... Toxic effect of unspecified substance

T659 QV58... chemical sensitivity

Government of South Australia

Disability Access Checklist Guide for Government Owned & Leased Premises (2006)

http://www.sacfs.asn.au/download/SA%20Gov%20Access%20Assement%20%20guide%20version%20SBF%20final%20DTEI%202007_30_11.pdf

For a continuously updated list of governments and authorities recognizing MCS, visit the following website:

Governments and Organizations Recognizing Chemical Sensitivity

http://mcs-america.org/index_files/MCSRRecognition.htm



Op-Ed

World Awash in Environmental Armageddon

By Dr. Tom Termotto, BCIM, DCAE

**Dr. Tom Termotto,
President of
Healthcare
Professionals for
Clean Environment,
believes that the
world is rushing
headlong into
environmental
Armageddon.
He describes how
everything in our
civilization is in the
state of constant
pollution and
breakdown, setting
the stage for a
perfect storm.**

Is there any doubt that planet Earth has been undergoing an environmental Armageddon for decades? We are not just referring to the spate of oil spills all over the world such as the BP Gulf Oil Spill, or the many other toxic deluges which go unreported unlike the Hungary Toxic Sludge Disaster, or the ongoing destruction of the world's rainforests like those being systematically wiped out in the Amazon Basin. We are also alluding to the "unseen" worldwide chemical apocalypse, the global proliferation of electro-pollution (EMR), the major uptick in man-made geopathic stress events on both the micro and macro levels, as well as the relentless contamination of living environments throughout the planet with radioactivity.

There are many other forms of ecological apocalypse taking place which, when viewed in the aggregate, are taking an immense toll on human, animal and plant life. Many of these ongoing assaults against the biosphere have unforeseen and collective ramifications which are extremely far-reaching and of great consequence to the viability of the planet. We ignore them at our peril, and will continue to suffer from a plague of alphabet soup diseases, multi-infection syndromes and infectious disease epidemics which have exploded on the healthcare landscape during the 21st century.

Just how far-reaching? How consequential? Are these environmental issues, which have been occurring for well over a century, so urgent that we need to address them now? Does the fate of humankind really lie in the balance? How about the future of the planet Herself – our Mother Earth?



May we speak plainly about the awesome challenges which humanity is now facing? Truly, the fate of the planet lies in the balance at this great juncture between the ages. The future of humanity is being determined every moment by the collective consciousness and actions of every resident of planet Earth. As a race, there can be no doubt that we have veered way off the straight and narrow, and have been going in a dangerous direction since the beginning of the industrial revolution. We now "sit in the stink" of all the misguided foundational paradigms, which were laid down throughout this age of commerce and industry.

If one were to just consider the deleterious effects of the **Hydrocarbon Fuel Paradigm** alone around the globe, they would quickly see the ravages of this single industry – Oil & Gas – which in and of itself has wreaked havoc wherever oil rigs, natural gas platforms or refineries are found. Waging war for oil and gas deposits, oil spills on land and undersea, awesome amounts of water and air pollution outside of spills, oil and gas pipeline explosions, exploitation of precious lands and water bodies for oil and gas, [sinking oil tankers](#), peoples oppressed because they live on or near oil and gas deposits, refinery accidents and explosions, etc.

But back to the original question: **Why is the world rushing headlong into environmental Armageddon?** How did we get here when the signs and messages at every milestone were so obvious about where the civilization was heading?

What follows is a partial list of major co-factors of environmental destruction which must be considered, if one is to formulate a global response to this predicament.

1. **Technospheric Breakdown** – the entire planet is blanketed by a multi-faceted technosphere, all of which is in the steady state of disintegration, much of which is unseen
2. **Worldwide Economic Depression** - Increasing unemployment/joblessness + general business contraction + real estate market collapse = declining tax bases, receipts and revenues for every nation, state and province, county and city; shrinking budgets provide less money to fix and repair, maintain and service, upgrade and modify, rehabilitate and remediate that which is necessary
3. **Universal Unenlightened Government Leadership** + Highly Corrupt, Arrogant and Ignorant Superpower Nations
4. **World Shadow Government** which uses *divide and conquer* strategy to control Earth's natural resources
5. **Equipment/Technology** which has not been proportionately upgraded to meet obvious requirements, ever-growing needs and newly emerging challenges & contingencies of the 21st century
6. **Inherently Unsustainable Platforms**, Technologies, process & procedure, etc. across the board of modern civilization, especially throughout industry
7. **Urbanization of the World** – proliferation of the megalopolis and all the inherent problems with such extraordinary population density
8. **Globalization of the Economy**; centralization of power everywhere (e.g. EU) and subsequent incapacitation of local authority to respond appropriately to dire needs
9. **Planetary Population** approaching 7 billion, and the material fulfillment of the real and perceived needs/wishes of so many
10. **Consumer Society** with so much artificial demand created by a global marketing machine (e.g. TV) which caters to a carefully cultivated materialistic mindset and lifestyle
11. **Rule by Corpocracy/Oligarchy/Plutocracy** which lacks any degree of social responsibility, respect for human life or stewardship for the planet
12. **Global Climate Change** due to human activity; Global Warming due to major changes in the behavior/activity of the sun, as well as other transformative shifts on earth (El Nino/La Nina) and throughout the solar system
13. **Accelerating Uptick in Seismic activity** and Volcanic events around the globe, as demonstrated by the major earthquakes and volcanic eruptions of 2010
14. **Capitalism is in its Death Throes**, which necessarily creates a worldwide climate of desperate exploitation of all the earth's resources because fiat currency is soon to be devalued, before becoming worthless
15. **Destructive Technologies/Agendas** and their unintended consequences and unforeseen collateral damage - HARRP, CERN (Large Hadron Collider), Chemtrails, GMOs, Nuclear Testing, Bio-engineered Pathogenic Microorganisms & Plagues

16. **Mother Earth's rapidly changing Vital Signs** – Decreasing Magnetics, Increasing Schumann's Resonance, Ocean Current Shifts (Gulf Stream, Loop Current), Increasing Greenhouse Gases, Ozone Layer Depletion, Shrinking Biodiversity, Polar Icecaps Melting, Increasing # of Icebergs, Sea Level Rise
17. **Civilization always contains the Seeds of its own Destruction** – Political, economic and social institutions and systems do reflect the predominant undergirding religious paradigms and philosophical blueprints. The more flawed and skewed these paradigms, the more imperfections appear throughout the structures of civilization.
18. **End of Kali Yuga = End of Mayan Calendar (Long Count) – "2012"** represents the inevitable transition between the ages including the Galactic Creation Cycle – a 13 year period distinguished by much more destruction than creation on the earth plane
19. **Outworking of War** as a means of (i) theft – the *strong* stealing natural resources and labor from the weak, (ii) genocide – depopulation and (iii) control of the masses – fear and chaos of war softens up a nation to accept a new control matrix (especially new forms of mind control programming re: Mother Earth)
20. **Communism & Capitalism** – the fric and frac of 100 years of godless society – Wherever true spirituality is lacking (both isms are godless – one overtly, one covertly) common sense and reason always flee; then self destruction is a foregone conclusion so that the "Phoenix" of a new order can rise from its ashes

Although this list goes on, we'll stop here, as the scope of this essay is limited to just one of these contributing co-factors, and perhaps the most profound and significant of them all.

Technospheric Breakdown – a major co-factor in societal collapse

Technospheric breakdown is something that occurs everywhere around the globe, 24/7, without interruption, and with tremendous repercussions. Let's start with anything this is manufactured in the factories of the modern world or built on the surface of the Earth. Simply put, everything is in the constant state of breaking down, degeneration, deterioration. Makes sense, you say, but just how does this translate.



What does this really mean when we say that every bridge is slowly breaking down, every road is in greater disrepair with each passing day, every reservoir is gradually degrading, every office building, every factory, every school, every home, etc. most of which adhered to very low building standards in the first place?

What does it mean when the infrastructure for every sewer system, municipal water division, electrical grid, airport, railway station, etc. is in a slow but sure process of degrading and breaking down. You might say, “Well we fix it.” No, not quite. You don’t just wake up one day and decide to fix the entire New York City subway system. And, yes, that entire system would be found wanting today if subjected to a rigorous safety assessment and integrity testing. Now multiply NYC times all the subway systems in the world in order to understand the enormity of this challenge.

Many will respond to this type of scrutiny by saying, “Well I ride the NYC subway every day for years, and never had a problem.” We don’t dispute that, but it does not speak for the future. Here’s the point.

There are many people today who simply will not fly anymore, unless they absolutely must. They do not trust the airline industry and all the cost cutting and lax regulation and shoddiness of practice throughout the industry. Not a good industry to have run by profiteers. These “non-flyers” intuitively know that the worldwide fleets of aero-planes and jumbo jets and turboprops and helicopters is an aging group of flying dinosaurs, especially given the extraordinary assaults of the ever-changing weather patterns around the world. Everything about the entire airline industry is in continuous technospheric breakdown. This is not an area where many people feel comfortable cutting any slack, because the very slim margin of error can easily translate to a major airline catastrophe, and often does.



If we look at this issue from an industrial viewpoint, we need to look no further than the recent Hungary toxic sludge disaster. This aging reservoir, whose massive size just about guaranteed a collapse of this nature, especially in the absence of any effective regulation or maintenance, is a perfect example of the many other failures and **accidents waiting to happen** around the world. This deluge of toxic, chemical sludge was the result of systemic failures across the board, where everything probably went wrong at the *perfect* time. How often do we hear about the **Perfect Storm** that has been brewing for many days, months or years.

Clearly, the incidence of these perfect storms has increased geometrically over the past many years, and not without much input (read misguided initiative) and inaction (read willful neglect) on the part of those most responsible. Whether this responsibility lies with a corporate overlord, government authority or other bureaucratic entity, it is virtually always the same story.

As a nation, India illustrates just how much can go wrong in a single day due to these various *perfect storms* coming out of *nowhere*. Whereas the Union Carbide disaster in Bhopal is a dramatic example, one need only scan the daily national headlines to read about the latest train wreck, ferry sinking, bridge collapse, bus-over-the-cliff, chemical plant explosion, or GMO crop contamination. It may come as a surprise to many that the status quo in India is where the rest of the world is heading as a result of the confluence of the many aforementioned co-factors of environmental degradation.

The larger the technological society, the more pervasive the breakdown

It is important to understand that everything in our civilization is in the state of constant **SLOW MOTION** breakdown. Therefore, the more technology there is to breakdown, the more computers, and sensors, and fax machines, and relays, and compressors, and digital cameras, and automobiles, and airplanes, and [super-carriers](#), and ocean liners, and [supertankers](#), and electrical power lines, and cell phones, and cell phone towers, and transformers, and power plants, and oil rigs, and natural gas platforms, and bulldozers, 18 wheelers, moving cranes, and railroad tracks, trains, & stations, etc. will be caught up in the relentless cycle of failure, mishap and disintegration.

That the greatest degree of this ongoing process of technospheric disintegration is always taking place under the radar is the biggest problem of all. Out of sight; out of mind. When very few even know about such an insidious and inexorable phenomenon, who or what organization is going to do anything about it? As for those who do understand – usually academics in institutions of higher learning who have very little influence with those in power to effectuate the necessary changes – they typically look at the many symptoms rather than the core issues which require radical and, what is often considered to be, socially unacceptable change.

Indeed, the Industrial Age brought upon us most of what is breaking down very quickly these days, and frequently with greater and greater consequences. Therefore, it can be stated with certainty that the deeper we move into this age, the more evidence we will see of a technological society caught up in an ever quickening downward spiral of technological degeneration and subsequent societal collapse.

Just as all the largest cities of the world (aka megalopolis) will eventually become black holes of micro-cosmic technospheric breakdown – because of either the impossibility and impracticality of maintaining so much infrastructure, some of which is virtually inaccessible – so too will much of the global technospheric superstructure become vulnerable to the same forces of time and flux.

Modern society tried mightily to overlay many different technological and engineering platforms, one on top of the other in every place around the world, over many decades, and was able to get away with it for a while. An exploding planetary population, however, got in the way. As did the many instances of incompatibility and *one shoe fit all* approach to many of these overlays. Just like you cannot force fit western-style capitalistic democracy onto nations emerging from a communist political economy, there are much smarter ways of integrating technology platforms in places that are far from a complex and sophisticated USA-type technological model.

Why is there virtually no response to, or even acknowledgement of, these pressing matters facing humanity?

The Powers That Be (TPTB) are fully aware of these many contributing factors to the ongoing global environmental Armageddon. By the way, environmental Armageddon here is defined as any environment – local or global, national or regional, which is under assault, siege or war of any type which contributes to its destruction. Disaster capitalism* – a TPTB creation if there ever was one – actually thrives in the current *climate*, and is an established policy which was formulated at the highest reaches of covert world governance in order to capitalize on the many inevitable manifestations of technospheric breakdown. Why not make money on it, as well as utilize it to exact greater command and control on the entire planetary prison system? They refer to it as the PPP – the Permanent Planetary Prison.

*Disaster capitalism, along with environmental terrorism and corporate sabotage, are routinely em-



ployed by the TPTB to bring about selective ecological apocalypse.

TPTB do have access (they own it all) to the best and most advanced technology on Earth, and therefore, they know full well exactly what is in front of the world community. Their interest is not in fixing roads or replacing antiquated electrical grids; that would cost too much of *their* money and give us too many jobs? They also have access to some very serious reverse-engineered technologies that allow them to spy on the far reaches of the universe. In so doing, they have an immediate understanding of what truly is coming down the pike relatively fast and furiously. Just a glimpse of the major changes occurring on and in all the other planets in our solar system (which they view daily from their many high-powered telescopes) is enough to put them on notice about the unstoppable planetary changes around

Because so much of technospheric breakdown is taking place in slow motion and is imperceptible by our senses, very few of us even know it's happening. Even those of us who are aware often fail to notice its effects on our life or grasp its pervasiveness in our own little worlds, much less the greater one. In this regard we, as a race, could be likened to the story of the frog who sits in the warm water (WARNING: cruel frog experiment) that is increased daily by one degree until he boils to and without complaint.

Truly, this **IS** the current predicament of the entire human race.

So, why the blog if this ineluctable devolution of the planetary landscape and technosphere cannot be altered or addressed in any meaningful way (How do you effectively address the environmental carnage and ecological mayhem known as Mumbai, Tokyo, Sao Paulo or NYC anyhow?!). Because knowledge and relevant information can be quite empowering. For those who wish to stay out of harms way, an awareness of what is going on around you, or what very likely could happen near you, can be very self-preserving, Yes?

The good folks living in Kolontar, Hungary living *downstream* from the toxic sludge reservoir, which was also used as a dumping site for all sorts of poisonous heavy metal wastes, probably would have assumed a different posture if they really knew what was in their backyard. Mind you, there are thousands of similar toxic reservoirs and chemical holding ponds around the world with even fewer safeguards and less oversight in place. Here's a comment left by a thoughtful reader of our previous blog on the Hungary catastrophe:

[James A. Jancik](#) says:

[October 10, 2010 at 2:47 pm](#)

"The thing that struck me most about this story was not that it ruptured, nor that they lied and said the sludge was not dangerous; but the acceptance of the idea to simply store HUGE, open air, toxic waste in the first place.

When looking at the pictures, I was amazed how BIG this project is. And the reservoir is near full. It is no doubt, seeping into the lower land levels and water tables and interacting with the air. But that someone thought it was a swell idea to simply store thousands of cubic meters (does anyone actually know how much?) of toxic, heavy metal sludge in an above ground, man-made lake is simply (beyond) amazing to me."

– James A. Jancik (*host of Feet to the Fire Radio*)

Although we have only scratched the surface of #1 – Technospheric Breakdown, we are compelled to continue the larger discussion by taking a closer look at #6 – Unsustainable Platforms, and more specifically at the most destructive and pervasive energy source and technology platform in existence – the *Hydrocarbon Fuel Paradigm*.

Tom Termotto, BCIM, DCAE

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Op-Ed

My Mother Made Me Fat Chemical Exposure in the Womb

- Alice Shabecoff

**“Overweight
people most
likely are
programmed to
become fat
before taking
their first sip of
milk.”**

If it hadn't been for the Big Macs that Joannie ate pretty much three times a week, she wouldn't have gotten fat. BUT if she hadn't been exposed while in her mother's womb to chemicals x, y and z, Joannie wouldn't have had the propensity to get fat. And if Joannie's mom had eaten more sensibly, both waistlines would be slimmer.

First Lady Michelle Obama has, admirably, put her weight (pun intended) behind a campaign against obesity. But, it's a mistake to limit the remedy to better food and more exercise. Overweight people most likely are programmed to become fat before taking their first sip of milk. The man-made chemicals we encounter every day are responsible for this reprogramming.

Two of three U.S. adults are now classified as overweight. Type II diabetes has increased in like measures over the same time periods, and so has heart disease. This is not a coincidence. These illnesses share common characteristics: they are triggered while in the womb by exposure to the same kinds of chemicals and the outcomes show up in adulthood. Scientists now call this pattern “the fetal origins of adult diseases.”

The most likely culprits are chemicals now grouped together under the rubric “endocrine disrupters.” It's been known for about two decades, though disputed by the manufacturers, that these chemicals alter the normal signaling pathways of hormones. They knock normal development off track. Bisphenol A (BPA) is currently the nation's most celebrated endocrine disruptor.

Pesticides are often endocrine disruptors. It's just been discovered that a family of pesticides known as organophosphates, among the most widely used in the world, is connected to the three adult illnesses of obesity, Type II diabetes, and heart disease. Organophosphates are concocted from petroleum with an addition of phosphoric acid.

When lab rats are exposed to these pesticides through the mother's diet, at a time in their development equivalent to a human baby's second trimester in the womb, their metabolism changes in two ways: their cholesterol and triglycerides rise. These abnormal and lasting changes are exactly the major factors that predict and lead, later in life, to obesity, diabetes and cardiovascular heart disease (specifically, atherosclerosis, a condition in which fatty material collects along the arteries and hardens artery walls).



“Exposure to pesticides caused harm to rodent brains, as well as metabolism.”

These changes in metabolism happen at low levels, within the levels we are uniformly exposed to, which the Environmental Protection Agency declares as “safe” but are evidently not. The changes are the strongest when the mother rats are fed a high-fat diet. Human babies may even be underweight at birth (and there’s an epidemic of underweight babies in the U.S.), but quickly become overweight.

Humans encounter these pesticides in food and water. Of course, children continue to be exposed once they are born and are, in fact, exposed more than adults because they eat and drink more in relation to their body weight and have a higher ratio of skin to body mass.

The other groups of people exposed most to organophosphates and other pesticides are the same groups with the highest rates of obesity – people who live in run-down inner-city neighborhoods, the poor, and farm workers. Again, this is not a coinci-

dence. Rather, it’s a connection, a trigger.

Dr. Ted Slotkin of Duke University, the researcher responsible for these discoveries, found another compelling clue. Exposure to pesticides caused harm to rodent brains, as well as metabolism. Once the exposed lab animal was born and started to eat at will, its consumption of a high-fat diet reduced the adverse symptoms in its brain. As Dr. Slotkin muses, “If you’ve got neurofunctional deficits, and they can be offset by continually eating Big Macs, then you will naturally (but unconsciously) select that kind of food because it will make you feel better.” Unfortunately, increased fat will further harm both animal and human metabolism.

What This Means for You

Particularly while trying to conceive, during pregnancy, while nursing, and feeding your children, it may be best to avoid pesticides and eat organic foods.

For information about endocrine disruptors, read the new booklet published by the nonprofit Learning and Developmental Disabilities Initiative:

www.healthandenvironment.org/working_groups/learning/rl/prevention

Alice Shabecoff is the co-author with her husband Philip of *Poisoned for Profit: How Toxins Are Making Our Children Chronically Ill*, a lively and ultimately upbeat discussion, with stories of families and communities across the nation, and including a guide for parents on how to protect their children from harm. See:

www.poisonedforprofit.net.



Scientific Study

Antibacterial Soap Linked to Crime and Psychiatric Illnesses

Washing your hands may not be all it's cracked up to be. In fact, it may be dangerous. If you use antibacterial soap products, you may be exposed to a toxic chemical that has been linked to psychiatric illness and increased crime.

The soap chemical is an ingredient in antibacterial hand soaps that are often found in fast food restaurants. It is thought to be a major cause of psychiatric illness and crime according to William Shaw, Ph.D., Director of The Great Plains Laboratory, Inc.

Shaw's latest discovery was published in the peer-reviewed *Journal of Orthomolecular Medicine*, Volume 25, Number 3, 2010 and is entitled "*The Unique Vulnerability of the Human Brain to Toxic Chemical Exposure and the Importance of Toxic Chemical Evaluation and Treatment in Orthomolecular Psychiatry*"

Shaw says that toxic metals encountered in low levels have also been found to lead to decreases in learning, and higher rates of crime, including murder.

The toxic antibacterial hand soap chemical in question is a chlorinated phenolic compound called parachlorometaxylenol (PCMX). PCMX has been linked too depression, central nervous system dysfunction, and neurotoxicity. Tricolsan and hexachlorophene are chemically very closely related to PCMX. Tricolsan is found in everything from soap to toothpaste.

Shaw says, "The human brain and the brains of whales and dolphins (cetaceans) are especially susceptible to a variety of toxic chemicals because of

natural selection that favors brain structures promoting advanced brain functions such as long-term memory and rapid learning. The high fat content of these brains also makes them espe-

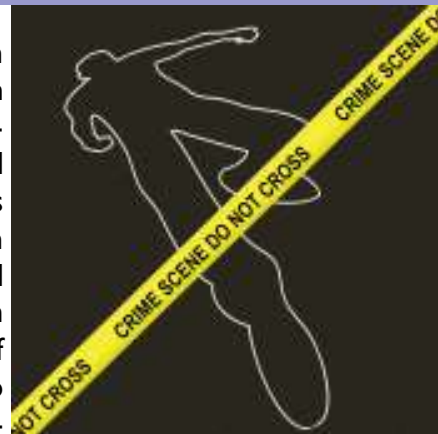
cially susceptible to long term storage of the same fat soluble toxic chemicals that accumulate in adipose tissue. The high rate of metabolism in these mammalian brains and high content of polyunsaturated fatty acids also makes them much more susceptible to free radical damage mediated by toxic chemicals, leading to increased damage to brain macromolecules like deoxyribonucleic acid, ribonucleic acid, proteins, cell organelles, and small molecules."

Because of this susceptibility, humans may experience neuropsychiatric disorders and engage in criminal behaviors when exposed to a variety of toxic chemicals.

Shaw believes that toxic chemicals are involved in many different psychiatric disorders and are likely a large part of criminal behavior.

Reference

William Shaw, PhD. *The Unique Vulnerability of the Human Brain to Toxic Chemical Exposure and the Importance of Toxic Chemical Evaluation and Treatment in Orthomolecular Psychiatry*. JOM. 2010. 25(3).



Research

Food Dye and Chemicals Linked to Behavioral Disorders in Children

As far back as the early 1980's, Dr. Doris Rapp, MD has been helping children to eliminate food dyes from their diet and recover from attention deficits, hyperactivity, misbehavior, and other effects of these chemicals. Dr. Rapp says behavioral problems are often caused by an unrecognized form of allergy from dust, molds, pollen, foods or chemicals.

Rapp says allergic children tend to have red earlobes or cheeks, dark eye circles, bags under their eyes, nose rubbing and/or wiggly legs just before sudden unexplained changes in their activity and behavior. It is easy to miss the signs of these allergies since the glaringly obvious symptom is only misbehavior, such as screaming and fussing.

Finding the cause can be tricky. Rapp suggests paying close attention to the changes that occur within the minutes of eating or inhaling of anything fragrant, biological, or chemical, such as dust, mold, fabric softener, pesticide, cleansers, food additives, and personal care products.

The best treatment is avoidance according to Rapp. For extreme reactions, she suggests going to an emergency room for oxygen at 6 liters per minute for a minimum of ten minutes.

Provocation/Neutralization is a relatively new practice which may also help some types of reactions.

Dr. Rapp says, "If a food is causing your child to act inappropriately, try 1-2 tsp of baking soda in some water. It can help in a few minutes."

Bernard Weiss, a professor in the Department of Environmental Medicine at the University of Rochester Medical Center, also began studying

potential links between artificial food dyes and neurobehavioral effects in children in the late 1970s and describes the effects of food dye, not as an allergy, but as a neurotoxicity.

Weiss says, "To me the evidence implicating food colors as a provocative chemical is clear. [But] you have to remember that these kids are exposed to thousands of chemicals in the environment. We know that some of them, such as lead, are very powerful members of the class of chemicals we call neurotoxicants; that is, they are toxic to the nervous system, to the brain. Endocrine disruptors such as those that are found in plastics also have the ability to change behaviors of this kind. Pesticides are also found in most children's bodies today, and they too have the ability to provoke these kinds of behaviors. Our children are really facing an assault of chemicals, many of which have the ability to change how the brain functions."

Simply eliminating a liquid vitamin with food dye could make a huge difference in a child. The easiest way to treat any of these disorders in both children and adults is to avoid toxic chemicals, fragrances, and foods which are not natural and organic.

References

Ahearn A. 2010. Neurobehavioral Effects of Artificial Food Dyes, with Bernard Weiss. *Environ Health Perspect* :- doi:10.1289/ehp.trp100110.

Rapp, Doris. Doris Rapp, MD. 2010. Retrieved on October 23, 2010 from: <http://www.dorisrappmd.com/>



Q&A

Fragrance Free Policies at Work

“Fragrance sensitivity is stunningly common.”

Q: My employer just started a fragrance free policy at work to accommodate several co-workers who don't like fragrance. I've never heard of such a thing! What's this all about?

A: Fragrance sensitivity is stunningly common. A 2009 study revealed that a considerable percentage of the American population experiences adverse health effects from fragranced products. Researchers Caress and Steinemann say, “Results aggregated from both surveys found that 30.5% of the general population reported scented products on others irritating, 19% reported adverse health effects from air fresheners, and 10.9% reported irritation by scented laundry products vented outside.”

It's not that your coworkers don't like perfume. People who experience adverse health effects often liked scents and used them prior to developing sensitivity to fragrances. Perfumes and other fragrances found in air fresheners, cleaning, and personal care products are irritants and often contain unregulated chemicals, some of which have been found to be on the United States Environmental Protection Agency hazardous waste list.

Your employer is not alone. Fragrance chemical sensitivity is a very real impairment and is recognized by many governments and organizations around the world. Here are just a few:

- American Lung Association
- American Medical Association

- U.S. Consumer Product Safety Commission
- U.S. Environmental Protection Agency
- U.S. Department of Housing and Urban Development (HUD)
- U.S. Department of Education
- Social Security
- U.S. Department of Health and Human Services, Centers For Disease Control and Prevention
- The German Institute of Medicine
- Japanese Ministry of Health
- Government of South Australia

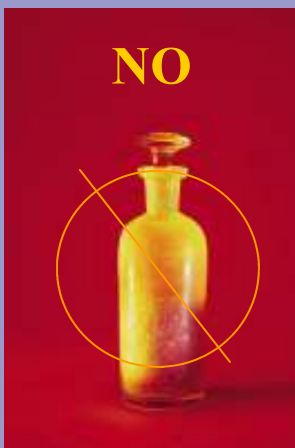
A full list of the links and actual documents for these organizations may be found at:

http://mcs-america.org/index_files/MCSRecognition.htm

A startling number of employers, including the U.S. Center's for Disease Control and Prevention, have recognized the serious nature and human toxicity of fragrance and have enacted fragrance free policies.

Here is a partial list:

- Multiple Chemical Sensitivity Accessibility for United Methodist Churches
- Broward Sheriff's Office Internal Affairs Division
- City of Detroit
- DHS Oregon Fragrance Guidelines
- Portland Police Call Center Fragrance Free Policy
- Portland Police Records Dept Fragrance Free Policy
- United States Access Board
- U. S. Census Bureau



- U.S. Centers for Disease Control and Prevention
- Boise Natural Health, Inc.
- Brant Community Healthcare System
- Brigham and Women's Hospital, Boston
- The Center for Occupational and Environmental Medicine
- Allan D. Lieberman, M.D.,
- Francis Holistic Medical Center
- David Thompson Health Region: Scent Free Workplace Policy
- Harrison Medical Center, 2520 Cherry Avenue, Bremerton, WA
- Hotel Dieu Hospital, Ontario, Canada.
- Mercy Medical Center
- The Nova Scotia Environmental Health Centre
- Women's College Hospital (Canada)
- Arthouse Preschool, LLC
- Athabasca University
- Cecil College
- Challenge Charter School, Glendale, Arizona
- Colby Village Elementary School, New Brunswick Board of Education, School District 8
- Minnesota HB 2148, "Fragrance-Free Schools Pilot Project,"
- Mount Saint Vincent University Scent Free Policy, Canada
- North Seattle Community College
- Portland State University
- School District 8 Saint John, New Brunswick , Canada
- University of Calgary, Canada
- University of Toronto, Canada
- Vernon Barford Junior High School, Alberta, Canada
- York University
- The Bay Area Country Dance Society
- Cosmic Laugh
- Public Service Alliance of Canada BC
- The National Organization for Lesbians of SizE
- The Seattle English Country Dances
- Scent Free Facilities, Organizations, and Events (2003-2005)

Links to the scent free policies for these employers can be found here:

http://mcs-america.org/index_files/FragranceFreePlaces.htm.

Look on the bright side. Your employer's new policy is to the benefit of everyone's health.

References

Caress S.M., Steinemann A.C. 2009. Prevalence of fragrance sensitivity in the American population. *Journal of Environmental Health* 71(7): 46-50.

Steinemann AC. Fragranced consumer products and undisclosed ingredients. *Environ Impact Asses Rev* (2008), doi:10.1016/j.eiar.2008.05.002.

Q&A

Need MCS Safe Housing

Q: I have chemical sensitivity and am desperately seeking safe and non-toxic housings so I can regain my health. Everywhere I go has pesticides, new paint, carpets, gas, and other problems. Are there any places designed for people like me?

A: Yes, there are some resources and housing developments designed for people with multiple chemical sensitivity.

MCS Housing Complexes

Barrhaven Non-Profit Housing Inc.
Environmental Sensitivity Units
Steepleview Crossing,
3001 Jockvale Road, Nepean, Ontario, K2J 4E4
(613) 823-6230 Fax: (613) 825-7724
<http://ehaontario.ca/barrhaven-housing.htm>
<http://www.bnphi.org/es.htm>

Ecology House, San Rafael, California (built in 1994)
375 Catalina Blvd
San Rafael, CA 94901
(415) 456-4453
<http://www.tikvah.com/cc/eh>
eh@ecologyhouse.net

Environmentally Friendly Housing Partnership
Pride and Joy Condos -- North
5685 South A1A Highway
Melbourne Beach, FL 32951
(321) 409-8233 - Phone
(321) 725 4883 -- FAX
<http://www.prideandjoycondos.com/>
damianorob@aol.com

Oregon Ecobuilding Cohousing Project
Formation Stage of Community dated July 2003

<http://www.healthybuildings.org/cohousing.htm>

Regina Caeli Environmental Condos
<http://www.safehousingdallas.com/>
Contact Earl Remmel at 469-556-5049.

Quail Haven - MCS Housing
Just North of Tucson, AZ
Call Diane Ensign for details:
May through January call: (406) 586-3658 (Montana).
January through May call: (520) 825-7276 (Tucson).
<http://madelinx.tripod.com/>

Seagoville Ecology Housing
15126 Beckett Road
Seagoville, Texas 75159
(972) 287-2059 Fax: (972) 287-7682
<http://www.ehcd.com/resources/ecologyhousing.html>

The Natural Place Environmental Residence and Hotel
1962 NE 5th St.
Deerfield Beach, FL 33441
954-428-5438
<http://www.thenaturalplace.com/default.htm>



Other Sites with MCS Housing Listings

Canada-wide Housing Connection
1-613-278-0463
<http://ehaontario.ca/interview.htm>

Green Homes for Sale
<http://greenhomesforsale.com/>

MCS Safe Homes (sale, wanted, and rental listings)
<http://mcssafehomes.com>

Planned and Proposed MCS Housing Projects

Allergy And Environmental Health Association Of Quebec (AEHAQ) Environmentally Adapted, Social Housing Project For People Suffering From Environmental Sensitivities
http://www.aseq-ehaq.ca/ma_wwd/wwd_hh_h.php

Escalante House
P.O. Box 652
Escalante UT 84726
Phone/Fax: (435) 826-4778
<http://www.snowcrest.net/lassen/einot03.html>
toripat@color-country.net



State of Arizona MCS Housing
Photo Credit: Steen Hviid

Resources

Patient Support & Resources

MCS America Forums

MCSA Public

<http://health.groups.yahoo.com/group/mcsa-public/>

Open to the general public open to discuss MCS, support, ideas, information, announcements, news and activism.

MCS America Members Activist/Support

<http://health.groups.yahoo.com/group/mcs-america-members-support>

This group also fulfills the function of discuss support, ideas, information, announcements, and/or share personal activism like the MCSA-Public group, only with a closed membership that requires a membership application. This group also has the added benefit of being a place where individuals and other organizations and activists can engage in collaborative efforts with MCS America and being recipient to all the news feeds (see MCSA Feeds below). Members of this group are considered associate members of MCS America. Members do not operate MCS America in any way, but rather collaborate with the organization and are privy to some internal operations, activities, and events.

MCSA Feeds

<http://health.groups.yahoo.com/group/mcsafeeds>

The purpose of this public access group is to receive daily distribution of news and research studies on multiple chemical sensitivity, chemical injury, environmental concerns, and other related environmental illnesses and disorders. Anyone can join without an application. Only the moderator posts to this group. This is not a discussion group. This group distributes about 15 articles on average each day.

MCS Salvage and Share

<http://health.groups.yahoo.com/group/MCSA-safer-salvage-and-share>

A public access group similar to Freecycle, except it's a free recycling program for safer reusable's geared towards individuals with MCS, CFS, FM, and other related disabilities correlated with the environment. The purpose of this program is to find, give, and recycle needed "safe" or "safer" items. All items are exchanged for free. Shipping cost are arranged between donor and recipient. Anyone can join without an application.

Multiple Chemical Sensitivities and Toxic Injury

<http://groups.google.com/group/mcs-ti>

This is a small non-Yahoo based group open to the general public to discuss MCS, support, ideas, information, announcements, news and activism.

MCS Hawaii

<http://health.groups.yahoo.com/group/mcs-hawaii>

Open to the general public residing in Hawaii to discuss support, ideas, information, announcements, and/or share personal activism. No application is required. This group is currently recipient to all the news feeds (see MCSA Feeds above). This list is operated in part by a state subsidiary volunteer who resides in the state.

MCS Nebraska

<http://health.groups.yahoo.com/group/MCS-Nebraska>

Open to the general public residing in Nebraska to discuss support, ideas, information, announcements, and/or share personal activism. No application is required. This list is operated in part by a state subsidiary volunteer who resides in the state. or subscribe at:

MCS Michigan

<http://health.groups.yahoo.com/group/mcs-michigan>

Open to the general public residing in Michigan to discuss support, ideas, information, announcements, and/or share personal activism. No application is required. This list is operated in part by a state subsidiary volunteer who resides in the state.

Support Forums Outside the MCS America Network

4Mom

<http://groups.yahoo.com/group/4MOM/>

According to Mt. Sinai Medical School, there are many illness' caused by toxic substances such as pesticides. They are studying the role other toxins play on the new childhood diseases triggered by environmental factors. They call this the new epidemic. Mothers of Many is for all parents with children who are ill and are affected by toxic chemicals such as Attention Deficit Disorder, Asthma, Cancer, Autism, Tourettes Syndrome, Multiple Chemicals Sensitivities (MCS), Parkinson's, and any other condition affected.

Bay Area MCS

<http://health.groups.yahoo.com/group/bayareamcslist/>

Classified ads and notices for people with MCS (Multiple Chemical Sensitivity) in the San Francisco Bay Area.

CFS CFIDS ME

http://health.groups.yahoo.com/group/CFS_CFIDS_ME/

This Group is to promote friendly discussion about places where people have gone and feel more or less recovered from CFS/ME/CFIDS.

Chemical Disability Australasian NETWORK

<http://groups.yahoo.com/group/CDANET/>

A Discussion/Chat/Mutual help list run by and for the chemically disabled.

CMCS-EI Christian MCS, CFS, FM, and EI Group

<http://health.groups.yahoo.com/group/CMCS-EI/>

We are a Christian group who have invisible illnesses.

Creative Canaries Community

<http://health.groups.yahoo.com/group/CreativeCanariesCommunity>

This group is an online meeting place for creative artists with Chemical Sensitivities.

Detox

<http://health.groups.yahoo.com/group/mcs-america-members-support>

"Detox" is a group to serve chemically injured, environmentally ill, multiple chemical sensitivity, and related illness such as chronic fatigue, candidiasis, hypoglycemia, lupus, and others.

Disinissues

<http://groups.yahoo.com/group/Disinissues/>

The purpose of Disinissues is to share experience and advice about the processes of obtaining and maintaining Social Security Disability Insurance (SSDI), Supplemental Security Income (SSI), and long-term disability insurance. The group is targeted mainly towards those with invisible disabilities, such as CFIDS and other conditions not on Social Security's Listing of Impairments.

EMF Refugee

<http://health.groups.yahoo.com/group/emfrefugee/>

This ML has been created with the intent of bringing refugees together in countries around the world to form their own EMF-free communities in natural environments where they can heal and create healing environments for the Earth and others.

Environmental Illness 001

http://health.groups.yahoo.com/group/environmental_illness001/

This group is dedicated to curing / resolving all issues related to Environmental Illness, including but not limited to: Multiple Chemical Sensitivity (MCS), Multiple Food Allergy, Leaky Gut Syndrome, Candida, Epstein Barr Virus, Chronic Fatigue, Fibromyalgia, Heavy Metal Poisoning, Porphyria, endocrine system dysregulation, etc.

eSens - Electrical Sensitivity

<http://health.groups.yahoo.com/group/eSens/>

Do you feel ill when you're near computers, cell phones, fluorescent lights, or wireless internet? If so, you may have "electrical sensitivity".

Gaslist-L (Glutaraldehyde, Aldehyde, and Solvent Sensitivity)

<http://www.ncchem.com/snftaas/gaslist.htm>

This list has been established to serve persons interested in Glutaraldehyde, Aldehyde, and Solvent Sensitivity, especially darkroom personnel, radiographers, and diagnostic medical sonographers. The purpose of the list is to promote internet-wide exchange of research and information.

Green Canary

<http://groups.yahoo.com/group/GreenCanary>

This list is dedicated to a life free from toxic chemicals, and the health problems that they can cause.

Immune

<http://immuneweb.org/lists/immune.html>

This is the list for support and information about multiple chemical sensitivities, chronic fatigue syndrome, fibromyalgia, lupus, multiple sclerosis, porphyria, allergies, asthma, and other immune-related ailments.

Immune Parenting

<http://groups.yahoo.com/group/immune-parenting/>

This list is for both men and women who have Multiple Chemical Sensitivity, Chronic Fatigue Syndrome, Fibromyalgia, autoimmune disorders, or other immune system medical issues--or their partners--who are parents, pregnant, trying to conceive, or who are thinking about parenthood.

Live Chat at the Health and Environment Resource Center

<http://www.herc.org/chat>

This chat room is not associated with any group. It is unmoderated and no password is required. Chat Times: Saturday - 7 pm ET, 6 pm CT, 5 pm Mtn, 4 pm Pac; Monday - 9 pm ET, 8 pm CT, 7 pm Mtn, 6 pm Pac; Wednesday - 8 pm ET, 7 pm CT, 6 pm Mtn, 5 pm Pac.

MCS Canada

<http://health.groups.yahoo.com/group/MCS-Canada/>

This group was formed to assist patients and concerned parties from all nationalities learn to cope with environmental injury, including disorders such as MCS, ME, CFS, FM, Lyme, Lupus, GWS, PPS, as well as related and associated illnesses.

MCS Canadian Sources

<http://groups.yahoo.com/group/MCS-CanadianSources>

MCS Canadian Sources is a support, information and resource exchange for those living and coping with Multiple Chemical Sensitivity (MCS), Environmental Illness (EI), or Chemical Injury (CI).

MCS Photography

<http://health.groups.yahoo.com/group/MCSphotography/>

MCS Photography is for those with multiple chemical sensitivity who capture and share the world and their life through photography.

MCS Recycle

<http://groups.yahoo.com/group/MCSRecycle/>

The objective of this group is to be able to share with each other items that are chemical free and have been used in a non-toxic environment. This group is planet-wide.

MCS Safe Shelter USA

<http://health.groups.yahoo.com/group/mcssafeshelterusa/>

Short-term and long-term housing for people with MCS (Multiple Chemical Sensitivity). Check our database for listings by state. Find rentals, hotels, and housing to purchase.

MCS Singles

<http://groups.yahoo.com/group/mcs-singles>

Addresses the unique challenges of living alone without help as a single with MCS. Examines solutions, provides a place for general discussion, and is a resource for peer support.

MCS Survivors

<http://communityzero.com/mcsurvivors>

For those who experience environmental illness or multiple chemical sensitivities (MCS), here is a place to gather, exchange ideas, links to helpful websites, even have live chats. Enjoy!

MCS Toxic Injuries

<http://health.groups.yahoo.com/group/MCS-Toxic-Injuries/>

MCS-Toxic-Injuries is a self-moderated, secular, apolitical newsgroup for toxically-injured environmentally sensitive people to support one another and exchange coping methods, treatments and experiences.

MCS Village

<http://health.groups.yahoo.com/group/MCSVillage/>

The purpose of this group is to discuss the feasibility of building a village(s) or community in which MCS/EI patients can live safely, and to provide a forum to discuss the legal, medical, geographic, architectural, social and funding issues.

MCS Writers Group

<http://health.groups.yahoo.com/group/mcswritersgroup/>

A place for writers who have chemical sensitivities (or chemical injury) to share their stories and articles, work on and develop public writing skills, exchange editing skills and perspective, and develop ideas in order to bring awareness and education to the published world about what it is like to live with MCS/ES/CI/EI.

Midwest Oasis MCS E-mail Support

<http://health.groups.yahoo.com/group/MO-MCS/>

Midwest Oasis MCS E-mail Support is the e-mail arm of the Midwest Oasis MCS Support Group. Although people from all geographical areas are welcome to join, a partial focus of this list will be discussion of regional issues affecting MCS (Multiple Chemical Sensitivity) in Missouri and other Midwestern states.

Multiple Chemical Sensitivity (Chemical Sensitivity, Porphyrin & CO)

<http://health.groups.yahoo.com/group/MultipleChemicalSensitivity/>

Discussion group where people afflicted with Chemical Sensitivity, Chronic Carbon Monoxide Poisoning &/or Disorders of Porphyrin Metabolism can talk about their illness, inquire with others on avoidance, methods of cleaning & products one can use for necessary hygiene.

Old Dominion MCS-FMS_CFIDS Support Group · A Virginia Fibro MCS CFIDS Group

http://health.groups.yahoo.com/group/OldDominionMCS-FMS_CFIDSsupportgroup/

Too many people in Va. have Fibromyalgia, Myofascial Pain Syndrome, CFIDS, Gulf War Syndrome (GWS), ES, and Multiple Chemical Sensitivity. The group owner wanted to create an informative, supportive group for Virginians, and others.

Planet Thrive

<http://www.planetthrive.com/>

A dynamic online community for those activity seeking answers and support for a variety of health concerns. A place where people around the world help each other get well and stay well.

Sick Buildings

<http://health.groups.yahoo.com/group/sickbuildings/>

Toxic molds are running rampant in our homes, offices and schools. Exposure to mycotoxins has been linked to the death of infants, as well as immune-compromised adults. Despite increasing reports of mold-induced illness and health problems associated with mold exposure, our public health agencies offer little, if any support or funding for research into this growing problem.

Sprayno

<http://groups.yahoo.com/group/sprayno/>

This is a list to exchange information regarding environmental issues in the northern suburbs and NY metro area focusing especially on encouraging activism in this area and educating the public about toxic effects of pesticide/herbicide usage.

Tenth Paradigm Society

<http://health.groups.yahoo.com/group/TenthParadigmSociety/>

The Tenth Paradigm Society mailing list is for the dissemination and discussion of information concerning the NO/ONOO- cycle mechanism, a new paradigm of human disease, proposed by Martin L. Pall, Ph.D. Dr. Pall adopted the term "Multisystem Illness" to describe

those diseases that fall under the tenth paradigm. They include: Chronic Fatigue Syndrome (CFS/CFIDS/M.E.), Multiple Chemical Sensitivity (MCS), Fibromyalgia (FM/FMS), Post-Traumatic Stress Disorder (PTSD), and Gulf War Syndrome (GWS).

The Sanctuary

<http://www.mcs-international.org/phpBB3/>

MCS-International.Org's Holistic Support Forums For sufferers of Multiple Chemical Sensitivity and all other forms of Chemical Injury and Environmental Illness.

Toxics Discussion

<http://groups.yahoo.com/group/ToxicsDiscussion/>

If you're keen on a toxics-safe future for the planet, then this is the discussion group for you. Toxics are defined here as naturally occurring or man-made chemicals (elements/compounds/mixtures) that have a toxic effect.

WSMCSN (Washington State MCS Network)

<http://groups.yahoo.com/group/WSMCSN>

WSMCSN is a decentralized network of groups and individuals in Washington State who share information about the issues of Multiple Chemical Sensitivity.

Additional Forum Listing Webpage

<http://www.mcs-america.org/forums>

Physician & Dentist Referral Lists

Physician Referral List by State

<http://mcs-america.org/doctorlist.pdf>

Some of the physicians on this list specialize in MCS, others in FM and CFS. It is recommended that patients and doctors consult with one another prior to beginning any treatment to ensure understanding of the patient's needs and compatibility of patient and physician.

Dentist Referral List by State

<http://mcs-america.org/dentistlist.pdf>

Some of the dentists on this list are specifically familiar with MCS, others are not. It is recommended that patients and dentists consult with one another prior to beginning any treatment to ensure understanding of the patient's needs and compatibility of patient and dentist.

Air Quality Reports

Air Now Air Quality Reports

<http://www.airnow.gov/>

EPA State and Regional Indoor Environments Contact Information

<http://www.epa.gov/iaq/wherelive.html>

The National Association of Clean Air Agencies 4 Cleaner Air

<http://www.4cleanair.org/>

American Lung Association: State of the Air

<http://lungaction.org/reports/stateoftheair2007.htm>

Current Local & National Allergy Levels

<http://pollen.com/Pollen.com.asp>

Scorecard: Pollution Index by Area

<http://www.scorecard.org/>

Toxmap Hazardous Waste Site Locations

<http://toxmap.nlm.nih.gov/toxmap/main/index.jsp>

USA Smoke/Fire Pollution Map

<http://www.firedetect.noaa.gov/viewer.htm>

Antenna Search (USA)

http://mcs-america.org/index_files/www.AntennaSearch.com

EPA Safe Drinking Water Information by State

<http://www.epa.gov/safewater/dwinfo/>

EPA Radon Zone Map

<http://www.epa.gov/radon/zonemap.html>

Brochures

Air Fresheners & Plug-Ins

<http://mcs-america.org/airfresh.pdf>

Chemical in Air Fresheners Reduces Lung Function

<http://mcs-america.org/lung.pdf>

Consequences of Childhood Chemical Injury Poster By Margaret S. O’Nan

<http://mcs-america.org/onan.pdf>

Electrosensitivity Brochure by Kato Yasuko

<http://mcs-america.org/KatoYasukoElectrosensitivityBrochure.doc>

Fabric Softener

<http://mcs-america.org/fabricsoftener.pdf>

Fragrances

<http://mcs-america.org/fragrances.pdf>

Grandma’s Cupboard: General Cleaning Solutions

<http://www.mcs-america.org/general.pdf>

Grandma’s Cupboard: Kitchen Cleaning

<http://www.mcs-america.org/kitchen.pdf>

Grandma’s Cupboard: Personal Care

<http://www.mcs-america.org/personal.pdf>

Grandma’s Cupboard: Laundry

<http://www.mcs-america.org/laundry.pdf>

Household Mold brochure from Quebec government

<http://publications.msss.gouv.qc.ca/acrobat/fl/documentation/2002/02-214-01A.pdf>

ILRU: Understanding & Accommodating People with MCS in Everyday Living

<http://mcs-america.org/ilru.pdf>

Indoor Air Chemistry

<http://mcs-america.org/indoorair.pdf>

Interior Design and MCS

<http://mcs-america.org/interior.pdf>

Jill Mellum: Breathe Easier, Hold the Fragrances Brochure

<http://mcs-america.org/fragrancefacts.pdf>

MCS Homebuyer’s Questionnaire

<http://mcs-america.org/Homebuyer'sQuestionnaire.pdf>

MCS Task Force of New Mexico Brochure

<http://mcs-america.org/newmexico.pdf>

MCS Public Accommodations

<http://www.nettally.com/prusty/PUBLIC%20ACCOMMODATIONS.pdf>

MCS Statistics

<http://www.mcs-america.org/MCSStatistics.pdf>

No Scents Makes Sense Brochure

<http://www.nb.lung.ca/pdf/NoScentsMakeSense.pdf>

Theory on the Cause of MCS: Peroxynitrite and Nitric Oxide

<http://www.mcs-america.org/cause.pdf>

Understanding Multiple Chemical Sensitivity

<http://www.mcs-america.org/understanding.pdf>

Use of Baking Soda as a Fungicide

<http://mcs-america.org/fungicide.pdf>

Vaccine Poster - Are We Poisoning Our Children?

<http://www.generationrescue.org/pdf/080212.pdf>

Visiting a Person with MCS

<http://mcs-america.org/visiting.pdf>

What you should know before visiting a person who has NRLA and/or MCS

<http://mcs-america.org/VisitingNRLA-MCS.pdf>

Signs

Acute Toxic Effects of Fragrances Business Card

<http://mcs-america.org/acutetoxiceffectsoffragrancescard.pdf>

Chemical Awareness Ribbon

<http://mcs-america.org/ribbon.gif>

Electrosensitivity Sign - Please Turn Off Your Cell Phone

<http://mcs-america.org/KatoYasukoElectrosensitivitySignTurnOffYourCellPhone.pdf>

Facemask on Tweety

<http://mcs-america.org/tweety.jpg>

Fragrance Free Sign: Brooks University

http://www.brocku.ca/oehs/graphics/Fragrance_Free_Sign.pdf

No Scents Makes Sense Sign

<http://mcs-america.org/scentsign.pdf>

No Latex Sign by Jane Sagmoe

<http://mcs-america.org/nolatemask.JPG>

You Could Be Next Sign

<http://mcs-america.org/nextsign.pdf>

Want to Put Your Friends and Family in Jail?

<http://mcs-america.org/jail.pdf>

Wood Smoke Trespass Flyer 8 1/2 x 11

<http://mcs-america.org/woodsmokeflyer.pdf>

Activist Materials

Fragrances on Mail and/or Catalogs

<http://mcs-america.org/FragrancedMailCatalogBillsLetterforActivists.doc>

Air Freshener Use

<http://www.mcs-america.org/customairfreshenerletter.doc>

Use of Fragrance, Cologne, and Perfume

<http://mcs-america.org/UseofFragranceLetterforActivists.doc>

Fabric Softener Emissions

<http://www.mcs-america.org/LetterAboutFabricSoftener.doc>

Letter to State Representatives to Ban Woodsmoke

<http://mcs-america.org/woodsmoke.doc>

Letter to Doctors and Medical Boards Supporting MCS as a biological Illness (fully cited and scientifically supported)

Website: <http://mcs-america.org/MCSPositionStatement.htm>

PDF: <http://mcs-america.org/MCSPositionStatement.pdf>

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Request for Accommodations Under the Americans with Disabilities Act

<http://www.mcs-america.org/RequestforAccommodation.doc>

Public Service Announcements

Public Service Announcement #1

Air fresheners have been pulled off thousands of shelves nation-wide!

<http://www.mcs-america.org/AirFreshenerPSA1.pdf>

Public Service Announcement #2

When you use fragranced products, did you know you are wearing toxic chemicals!?

<http://www.mcs-america.org/WhenYouUseFragrancedProductsPSA2.pdf>

Public Service Announcement #3

Secondhand Fragrances are Like Secondhand Smoke!

<http://www.mcs-america.org/SecondHandFragrancesPSA3.pdf>

Public Service Announcement #4

Scented laundry detergents and fabric softeners pollute indoor and outdoor air!

<http://www.mcs-america.org/ScentedLaundryDetergentsPSA4.pdf>

Public Service Announcement #4 (SPANISH)

Scented laundry detergents and fabric softeners pollute indoor and outdoor air!

<http://mcs-america.org/mcsamerica/ScentedLaundryDetergentsPSA4Spanish.pdf>

Public Service Announcement #5

Wood Smoke... The Other Secondhand Smoke!

<http://www.mcs-america.org/WoodSmokePSA5BurningIssues.pdf>

Public Service Announcement #6

Fragrances undermine public health!

<http://www.mcs-america.org/FragrancesPSA6.pdf>

Public Service Announcement #7

Fragranced Laundry Products Pollute Our Air

<http://mcs-america.org/PSA7FragrancedLaundry.pdf>

Clothing & Novelties for Activism

MCS America Store for the Environment

<http://www.mcs-america.org/MCSstore.htm>

Zona's T-Shirts and Stuff Zone

<http://members.shaw.ca/zonazone/shop/tshirts.html>

Virtual & Work-at-Home Jobs

Agent, Staffing at Home
<http://www.staffingathome.com/>

Agent, West at Home
<http://www.westathome.com/>

Agent, Working Solutions
<http://www.workingsol.com/home.htm>

Bolger, PayPerPost.com
http://payperpost.com/blogger_signup.html

Call Center Representative, Accolade Support
<http://www.accoladesupport.com/>

Call Center Representative, Overflow USA
<http://www.overflowusa.com/>

Call Center Representative, Overflow USA
<http://www.overflowusa.com/>

Caller Employee, Customer Loyalty Concepts
<http://www.customloyal.com/Employment.aspx>

Chef Instructor, Chefs Line
<http://www.chefsline.com/>

Customer Care, VIP Desk
<http://www.vipdesk.com/info/default.asp>

Customer Service, Alpine Access
<http://www.alpineaccess.com/external/index.html>

Editor, EditFast.com
<http://www.editfast.com/>

Expert, JustAnswer Corp
<http://www.justanswer.com/>

Freelancer, Team Double-Click
<http://www.teamdoubleclick.com/freelance.html>

Guide, About .com
<http://beaguide.about.com/>

Guide, ChaCha
<http://www.chacha.com/>

Home Agent, Convergys
<http://www.convergysworkathome.com/>

Independent Call Center Agent, LiveOps
<http://tinyurl.com/5xfv7n>

Telemarketing, Intrep Sales Partners
<http://www.intrep.com/>

Online Juror, eJury.com
<http://www.ejury.com/>

Online Juror, OnlineVerdict.com
<http://onlineverdict.com/>

Online Juror, Trial Practice Inc.
<http://trialpractice.com/>

Third Party Verifier, BSG Payments LLC
<http://tinyurl.com/4vcldx>

Virtual Assistant, Virtual Office Temps
<http://virtualassistantjobs.com/>

Virtual Services, Arise Virtual Solutions
<http://www.arise.com/Content/default.asp>

Writer, Associated Content
<http://www.associatedcontent.com/>

Writer, CyberEdit Inc.
<http://www.cyberedit.com/>

Writer, MyEssays.com
<http://www.myessays.com/sell.php>

National Telecommuting Institute, Inc.
<http://www.nticentral.org/>



Environmentally Safer Housing

Allergy And Environmental Health Association Of Quebec (AEHAQ) Environmentally Adapted, Social Housing Project For People Suffering From Environmental Sensitivities
http://www.aeha-quebec.ca/bb_housingproject.htm

Barrhaven Non-Profit Housing Inc. Environmental Sensitivity Units

Steepleview Crossing,
 3001 Jockvale Road, Nepean, Ontario, K2J 4E4
 (613) 823-6230 Fax: (613) 825-7724
<http://ehaontario.ca/barrhaven-housing.htm>
<http://www.bnphi.org/es.htm>

Canada-wide Housing Connection

1-613-278-0463
<http://ehaontario.ca/interview.htm>

Ecology House, San Rafael, California (built in 1994)

375 Catalina Blvd
 San Rafael, CA 94901
 (415) 456-4453
<http://www.tikvah.com/cc/eh>
eh@ecologyhouse.net

Escalante House

P.O. Box 652
 Escalante UT 84726
 Phone/Fax: (435) 826-4778
toripat@color-country.net

Environmentally Friendly Housing Partnership

Pride and Joy Condos -- North
 5685 South AIA Highway
 Melbourne Beach, FL 32951
 (321) 409-8233 - Phone
 (321) 725 4883 -- FAX
<http://www.prideandjoycondos.com/>
damianorob@aol.com

Green Homes for Sale

<http://greenhomesforsale.com/>

Safe Haven Community Housing

P.O. Box 25281
 Portland, Oregon 97298
judiths@teleport.com
<http://www.geocities.com/safehavencommunity/#ntact>

The Pandora Initiative (Canada)

<http://tier10.com/>

Quail Haven - MCS Housing

Just North of Tucson, AZ
 Call Diane Ensign for details:
 May through January call: (406) 586-3658 (Montana).
 January through May call: (520) 825-7276 (Tucson).
<http://madelinx.tripod.com/>

Seagoville Ecology Housing

15126 Beckett Road
 Seagoville, Texas 75159
 (972) 287-2059 Fax: (972) 287-7682
<http://www.ehcd.com/resources/ecologyhousing.html>

The Natural Place Environmental Residence and Hotel

1962 NE 5th St.
 Deerfield Beach, FL 33441
 954-428-5438
<http://www.thenaturalplace.com/default.htm>

Safer Building & Regulations

Alliance for Healthy Homes

<http://www.afhh.org/>

American Lung Association: Resources & Referrals for and from the Master Home Environmentalist program.

<http://tinyurl.com/5vvk9e>

Architectural House Plans Healthy Homes Construction Guidelines

Information: <http://tinyurl.com/6dteuz>
 Booklet: <http://www.architecturalhouseplans.com/products/>

Assessment of the Indoor Air Quality of a Suite for an Environmentally Hypersensitive Occupant

<http://mcs-america.org/IAQforanEIOccupant.pdf>

Considerations For Safer Construction And Renovation By Preston Sturgis

<http://www.environmentalhealth.ca/w9394safer.html>

Dr. Grace Ziem's Environmental Control Plan for MCS Patients

<http://www.mcsrr.org/resources/articles/S3.html>

The Eco Building Guild

<http://www.ecobuilding.org/>

The Effect of Housing on Individuals with Multiple Chemical Sensitivities

<http://tinyurl.com/6gor7u>

Building for Health Materials Center

<http://www.buildingforhealth.com/>

Ecohaus

<http://www.ecohaus.com>



Heal Your Home Center

<http://tinyurl.com/6dteuz>

The Healthy Housing Coalition: Basic Needs for Rental Housing for Chemically Sensitive Persons

<http://www.herc.org/hhc/Basicrentalneeds.html>

Healthy Housing Practical Tips

<http://tinyurl.com/5bfgzd>

IEQ Indoor Environmental Quality

http://ieq.nibs.org/ieq_project.pdf

International Institute for Building Biology and Ecology

<http://www.buildingbiology.net/>

LEED® Canada Green Building Rating System

<http://www.cagbc.org/leed/systems/index.htm>

The Medical Perspective on Environmental Sensitivities: Building codes, regulations and guidelines

<http://tinyurl.com/6zmqh>

Moving House - Things To Look For If You Suffer From MCS

<http://www.drmyhill.co.uk/article.cfm?id=147>

Multiple Chemical Sensitivity (MCS): The Controversy and Relation to Interior Design

<http://www.idec.org/publication/IIArticleMCS.pdf>

Optimum Environments for Optimum Health & Creativity: Designing and Building a Healthy Home or Office, William J. Rea, M.D.

http://www.ehcd.com/books/home_building_designing.html

Recommended Architectural Features for Multi-Family Housing to Better Accommodate Chemical and Electrical Sensitivities, Susan Molloy, M.A.

<http://www.ctaz.com/~bhima/recommcshous.htm>

Research House for the Environmentally Hypersensitive

<http://tinyurl.com/5prv3>

Safer Construction Tips for the Environmentally Sensitive

<http://tinyurl.com/5tgx7l>

Understanding & Accommodating People with Multiple Chemical Sensitivity in Independent Living, Chapter 4, The Housing Challenge in MCS

<http://www.ilru.org/html/publications/bookshelf/MCS.html#chapter4>

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U.S. Department of Housing and Urban Development National Healthy Homes Conference

<http://www.hud.gov/offices/lead/2008NHHC.cfm>

U.S. Department of Housing and Urban Development Healthy Housing Reference Manual

<http://tinyurl.com/5apna5>

Builders and Building Material Suppliers

Green Building Store

<http://www.greenbuildingstore.co.uk/naturalpaints.php>

Healthy Buildings, Inc (Air Quality Testing)

http://www.healthybuilding.com/html/about_us.html

Heating and Cooling Options for the Environmentally Sensitive

<http://eiwellspring.org/HeatingAndCooling.htm>

Resources for the Chemically Injured: Building Materials

<http://www.lassentech.com/eibuld.html>

Tad Taylor's Healthy Homes, LLC

<http://www.healthy-homes.com/>

Other Housing Resources

Extreme Home Makeover

<http://abc.go.com/primetime/xtremehome/index?pn=apply>

Ontario Human Rights Code: Policy and Guidelines on Disability and the Duty to Accommodate Non-Evident Disabilities

<http://tinyurl.com/6ejep8>

Residential Rehabilitation Assistance Program for Persons with Disabilities (Canada).

http://www.cmhc-schl.gc.ca/en/co/prfinas/prfinas_003.cfm

News

Community News

Subscribe to News & Media Articles

To receive free daily news and research feeds about MCS & the environment as they happen, send an e-mail to:

mcsafeeds-subscribe@yahoogroups.com

Restless Legs Syndrome, Fibromyalgia Linked in Study

<http://www.businessweek.com/lifestyle/content/healthday/644236.html>

Suicide Risk 10-Fold Higher in Women With Fibromyalgia

<http://www.medscape.com/viewarticle/730633>

SVE Parents Vote to Remove Wi-Fi

<http://www.themeafordindependent.ca/home/in-the-schools/967-sve-parents-vote-to-remove-wi-fi>

Vestas using potentially harmful chemicals

Records show Windsor plant has been cited for violations

<http://www.coloradoan.com/article/20101017/NEWS01/10170341>

Vapor intrusion's silent threat

http://www.northjersey.com/news/state/105124189_Vapor_intrusion_s_silent_threat.html?page=all

Medical experts differ on meaning of test results

<http://www.galvestondailynews.com/story/184038>

Scientists Identify Molecular Blueprint for Lyme Disease

<http://www.businessweek.com/lifestyle/content/healthday/644237.html>

Traffic pollution tied to increased emphysema risk

<http://wtaq.com/news/articles/2010/oct/14/traffic-pollution-tied-to-increased-emphysema-risk/>

Synthetic chemicals pose growing threat to global water supply

<http://www.dw-world.de/dw/article/0,,6107753,00.html>



Featured Research Studies

Hydrocortisone responsiveness in Gulf War veterans with PTSD: Effects on ACTH, declarative memory hippocampal [(18)F]FDG uptake on PET.

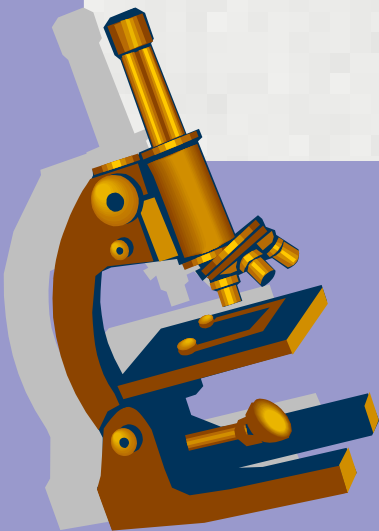
Yehuda R, Golier JA, Bierer LM, Mikhno A, Pratchett LC, Burton CL, Makotkine I, Devanand DP, Pradhaban G, Harvey PD, Mann JJ. *Psychiatry Res.* 2010 Oct 7. [Epub ahead of print]

The PTSD Program at the James J. Peters Veterans Affairs Medical Center, Bronx, NY, United States; The Traumatic Stress Studies Division, Department of Psychiatry, Mount Sinai School of Medicine, New York, NY, United States.

Abstract

Neuroendocrine, cognitive and hippocampal alterations have been described in Gulf War (GW) veterans, but their inter-relationships and significance for posttraumatic stress disorder (PTSD) have not been described. Hydrocortisone (Hcort) was administered to GW veterans with (PTSD+ n=12) and without (PTSD- n=8) chronic PTSD in a randomized, placebo-controlled, double-blind challenge. Changes in plasma ACTH, memory, and hippocampal [(18)F]FDG uptake on positron emission tomography were assessed. The low-dose dexamethasone suppression test was also administered. The PTSD+ group showed greater cortisol and ACTH suppression, reflecting greater peripheral glucocorticoid receptor (GR) responsiveness, and did not show an Hcort-induced decrement in delayed recall or retention. The groups had comparable relative regional hippocampal [(18)F]FDG uptake at baseline, but only the PTSD- group had an Hcort-associated decrease in hippocampal [(18)F]FDG uptake. Asymmetry in hippocampal hemispheric volumes differed between PTSD+ and PTSD- groups. This asymmetry was associated with cortisol, ACTH, retention and functional hippocampal asymmetry before, but not after, Hcort administration. Differences in brain metabolic responses between GW veterans with and without PTSD may reflect differences in peripheral and central GR responsiveness.

PMID: 20934312 [PubMed - as supplied by publisher]



Idiopathic environmental intolerances (IEI): from molecular epidemiology to molecular medicine.

De Luca C, Scordo G, Cesareo E, Raskovic D, Genovesi G, Korkina L.
Indian J Exp Biol. 2010 Jul;48(7):625-35.

Laboratory of Tissue Engineering & Cutaneous Pathophysiology, Istituto Dermopatico dell'Immacolata, Rome, Italy.

Abstract

Inherited or acquired impairment of xenobiotics metabolism is a postulated mechanism underlying environment-associated pathologies such as multiple chemical sensitivity, fibromyalgia, chronic fatigue syndrome, dental amalgam disease, and others, also collectively named idiopathic environmental intolerances (IEI). In view of the poor current knowledge of their etiology and pathogenesis, and the absence of recognised genetic and metabolic markers of the diseases.

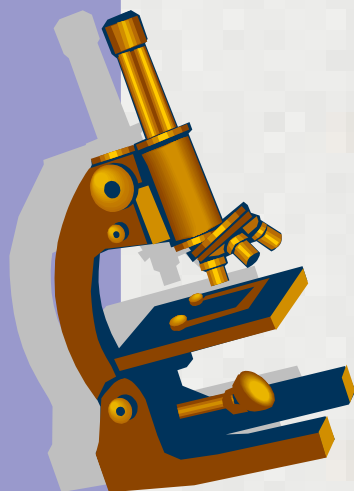
They are often considered "medically unexplained syndromes",. These disabling conditions share the features of polysymptomatic multi-organ syndromes, considered by part of the medical community to be aberrant responses triggered by exposure to low-dose organic and inorganic chemicals and metals, in concentrations far below average reference levels admitted for environmental toxicants.

A genetic predisposition to altered biotransformation of environmental chemicals, drugs, and metals, and of endogenous low-molecular weight metabolites, caused by polymorphisms of genes coding for xenobiotic metabolizing enzymes, their receptors and transcription factors appears to be involved in the susceptibility to these environment-associated pathologies, along with epigenetic factors.

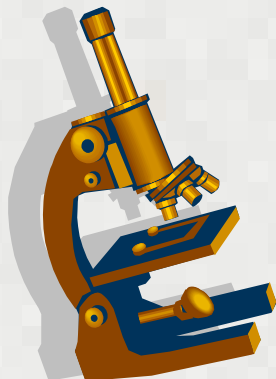
Free radical/antioxidant homeostasis may also be heavily implicated, indirectly by affecting the regulation of xenobiotic metabolizing enzymes, and directly by causing increased levels of oxidative products, implicated in the chronic damage of cells and tissues, which is in part correlated with clinical symptoms.

More systematic studies of molecular epidemiology, toxico- and pharmacogenomics, elucidating the mechanisms of regulation, expression, induction, and activity of antioxidant/detoxifying enzymes, and the possible role of inflammatory mediators, promise a better understanding of this pathologically increased sensitivity to low-level chemical stimuli, and a solid basis for effective individualized antioxidant- and/or chelator-based treatments.

PMID: 20929047 [PubMed - in process]



Extremely Low-Frequency Magnetic Field Decreased Calcium, Zinc and Magnesium Levels in Costa of Rat.



Ulku R, Akdag MZ, Erdogan S, Akkus Z, Dasdag S. Biol Trace Elem Res. 2010 Sep 25. [Epub ahead of print]

Department of Chest Surgery, Medical School of Dicle University, Diyarbakir, Turkey.

Abstract

Electromagnetic field (EMF) can affect cells due to biochemical change followed by a change in level of ions trafficking through membrane. We aimed to investigate possible changes in some elements in costa of rats exposed to long-term extremely low-frequency magnetic field (ELF-MF). Rats were exposed to 100 and 500 μ T ELF-MF, which are the safety standards of public and occupational exposure for 2 h/day during 10 months. At the end of the exposure period, the samples of costa were taken from the rats exposed to ELF-MF and sham. The levels of elements were measured by using atomic absorption spectrophotometry (AAS) and ultraviolet (UV) spectrophotometry. Ca levels decreased in the ELF-500 exposure group in comparison to sham group ($p < 0.05$). Statistically significant decrease was found in Mg levels in the ELF-500 exposure group in comparison to sham and ELF-100 exposure groups ($p < 0.05$). Zn levels were found to be lower in the ELF-500 exposure group than those in the sham and ELF-100 exposure groups ($p < 0.05$). No significant differences were determined between groups in terms of the levels of P, Cu and Fe. In conclusion, it can be maintained that long-term ELF-MF exposure can affect the chemical structure and metabolism of bone by changing the levels of some important elements such as Ca, Zn and Mg in rats.

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