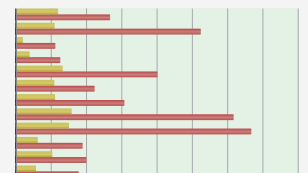
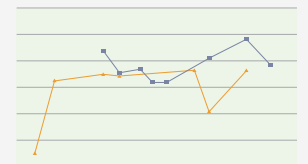
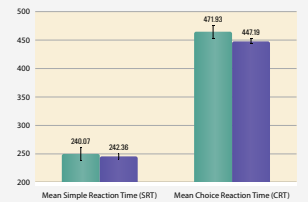
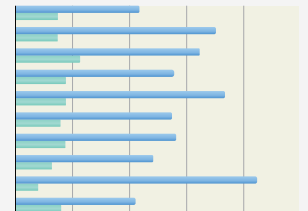
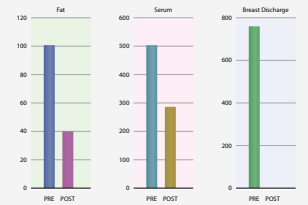
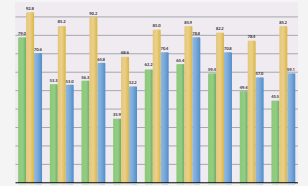


Catalog and Summaries of Scientific Research

The Sauna Detoxification Program developed by L. Ron Hubbard



Scientific Research on the Sauna Detoxification Program developed by L. Ron Hubbard

Spanning 1982 to 2013

- ◆ 13 published papers, 30 science conference presentations, 8 research reports, 7 articles.
- ◆ Covered in 10 professional science journals, 6 peer-reviewed.
- ◆ 54 research authors from 8 countries.
- ◆ 1,159 persons studied
- ◆ Toxic exposures including burning buildings, electronics fires, electronics manufacturing, pesticides, herbicides, illicit drug use, prescription drug use, toxins from police raids on meth labs, Agent Orange and Gulf War toxins, catastrophic event rescue and clean-up (the Chernobyl nuclear reactor explosion and the World Trade Center collapse) *plus* 3,500 patients from one clinical practice.

Results Measured

- ◆ 12 studies reported substantial reduction in severity of physical and mental symptoms.
- ◆ 5 studies measured quantitative reduction in toxic body burden (PCBs, PBBs, drugs of abuse, etc.)
- ◆ 4 studies reported clinical improvement in nerve response and coordination.
- ◆ Many studies reported quantitative improvement in health-related quality of life indicators.
- ◆ All of the studies reported that the program is safe and healthful or that there was an absence of serious complications or any hazard to health.

Description of the Sauna Detoxification Program

- Prior medical approval to participate in program required.
- Daily short period of aerobic exercise.
- Balanced vitamin and mineral regimen with small doses of cold-pressed polyunsaturated oils.
- Gradually increasing doses of crystalline, instant release niacin (B3) to stimulate increased fat metabolism.
- Repeated periods of sweating in low-heat, dry sauna with frequent breaks to cool off and rehydrate.
- Salt, potassium, cell salts, calcium/magnesium, as required.
- Monitored by on-site trained supervisor.
- Daily report written by participant describing changes.
- Daily supervision of program by clinical supervisor
- Process continued until no further evidence of reduction of the toxic body burden, with good clinical indicators.

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Review of literature on use of niacin.....	49

Reduction in Severity of Symptoms

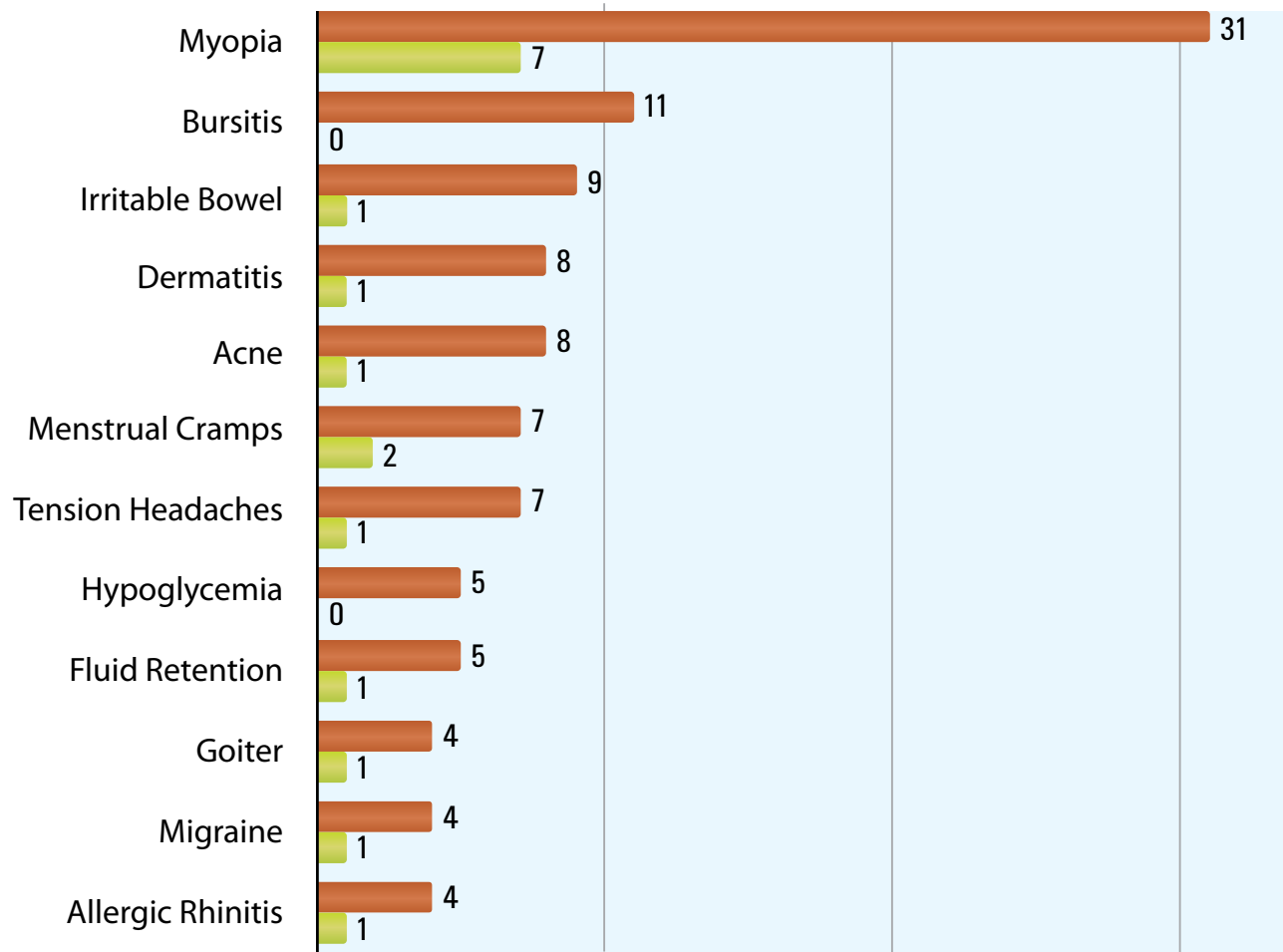
Following are 8 studies that measure reduction in the severity of symptoms from widely varying toxic exposure situations.

1982

Exposure to a toxic fire retardant across the state of Michigan

“Not shown in this chart are numerous observations of improved abilities not usually considered medical improvements. These included ability to think more clearly, feeling more aware, feeling lighter, improved smell or taste, and feeling more energetic.”

Improvement in Medical Conditions



- Cases reporting negative condition, prior to treatment
- Cases reporting no improvement in that condition, post-treatment

Group Studied

103 volunteers (with 19 controls) from a population exposed to a toxic fire retardant chemical accidentally fed to farm animals, including milk cows and chickens.

What was measured

Cases reporting medical conditions pre- and post-sauna detoxification procedure. (Other measures in the study include reduction in high blood pressure, cholesterol, IQ change, and psychological changes measured by the Minnesota Multiphasic Personality Inventory, some related to drug addiction.)

Publication: Medical Hypotheses

Name of Paper: “Evaluation of a detoxification regimen for fat-stored xenobiotics.”

Authors: DW Schnare, G Denk, M Shields, S Brunton

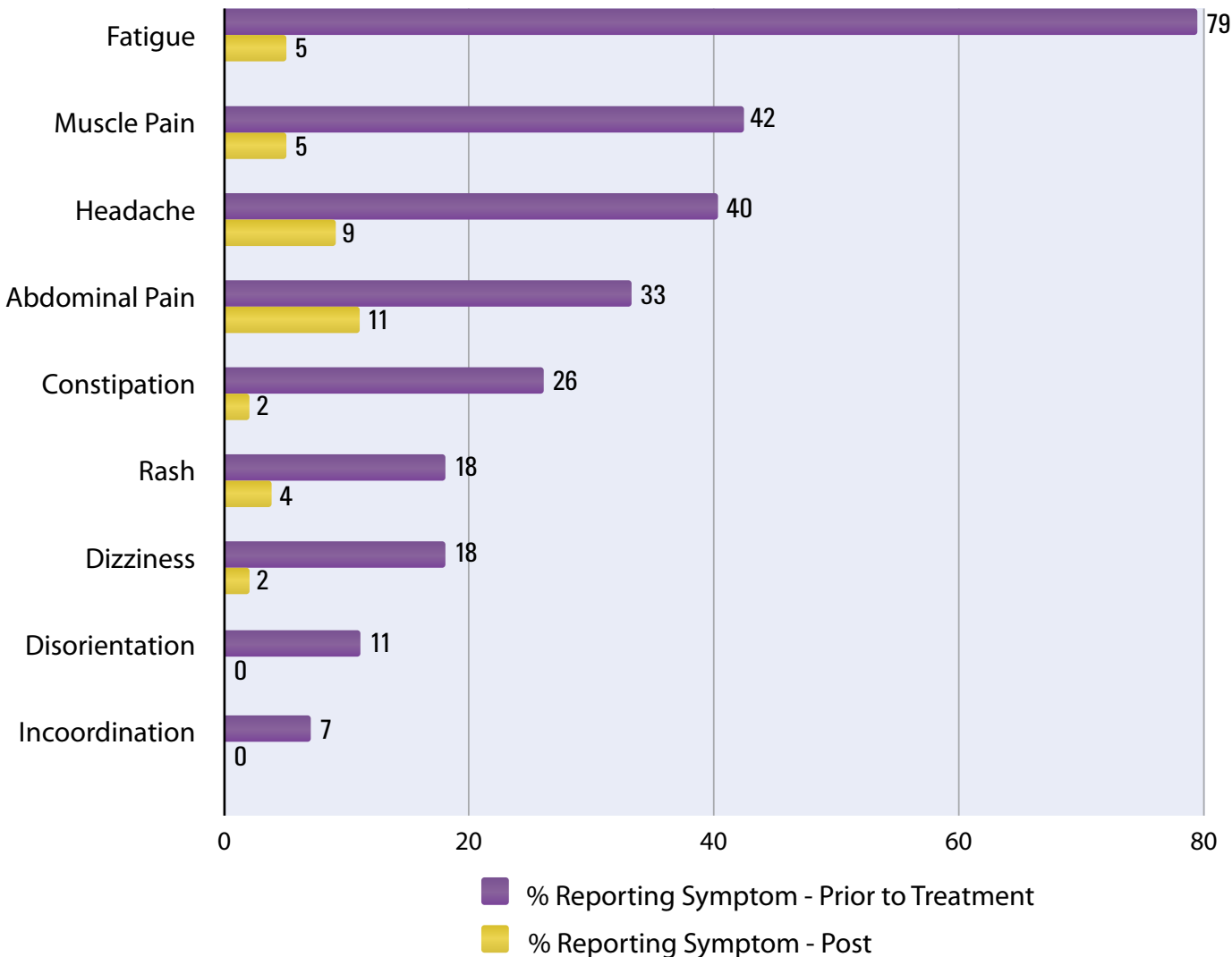
For additional details on this study, see page 28 below.
 Source: Med Hypotheses. 1982 Sep;9(3):265-82.
 Abstract available at: <http://www.ncbi.nlm.nih.gov/pubmed/7144634>

1985

Patients with low level chemical exposure

“Many toxic lipophilic chemicals are stored at very low levels in the fat tissues. Therefore, a chemical-specific approach will not attack a problem which is not definable in terms of one chemical in the first place.”

Symptom Prevalence - Pre / Post Treatment



Group Studied

120 patients referred for treatment whose diagnostic assessment suggested low level chemical exposures.

What was measured

Prevalence of negative symptoms measured by a questionnaire with 70 signs and symptoms. There was also thorough medical evaluation, blood chemistry, etc. Statistical significance: $p < 0.01$.¹

Proceedings: National Conference on Hazardous Wastes and Environmental Emergencies (May 1985, Cincinnati, Ohio)

Name of Paper: “Diagnosis and treatment of patients presenting subclinical signs and symptoms of exposure to chemicals which bioaccumulate in human tissue”

Authors: DE Root, DB Katzin, DW Schnare

For further details, see pg 30 below.
Abstract available at <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.497.4725>

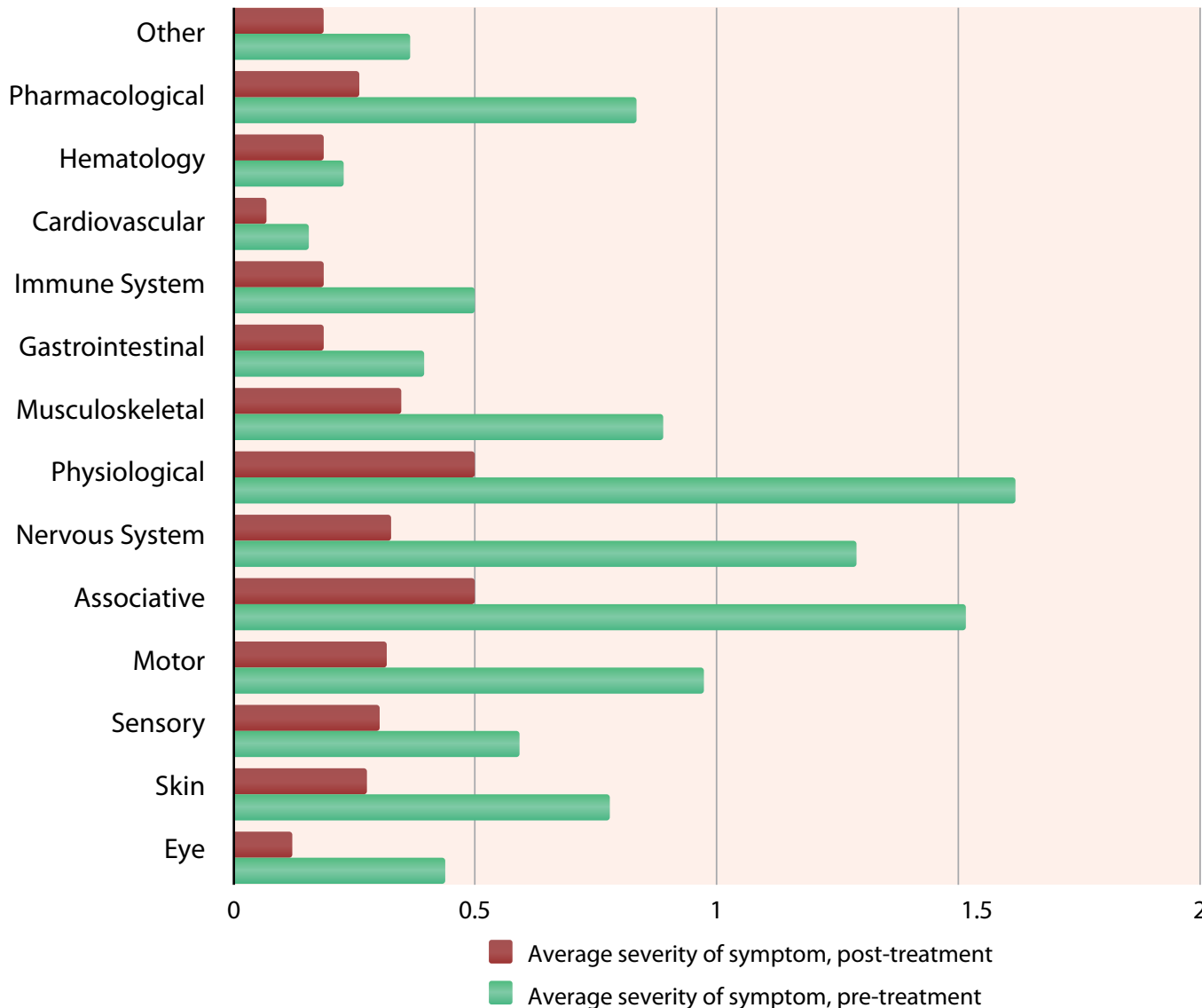
¹ The “p value” is essentially a calculation of how probable it is that an observed result was effected by the studied cause. The lower the number the greater the probability that Cause X produced Effect Y.

1993

Cases with persistent neurotoxic symptoms following chemical exposure.

“We conclude that reduction of chemical body burdens is a logical approach to address health effects consequent to chemical exposure.”

Severity of Symptoms Pre and Post Treatment



Group Studied

48 patients exhibiting neurotoxic symptoms.

What was measured

Patients rated 87 symptoms in 14 categories, both before and after treatment, on a scale of 0 (none) to 5 (severe). Marked improvements were noted. Additionally, standard chemical panels and Neurometer testing (see chart on page 21 below.)

Proceedings: The 1993 International Conference on Peripheral Nerve Toxicity

Name of Paper: “Neurotoxicity and toxic body burdens: Relationship and treatment potentials.”

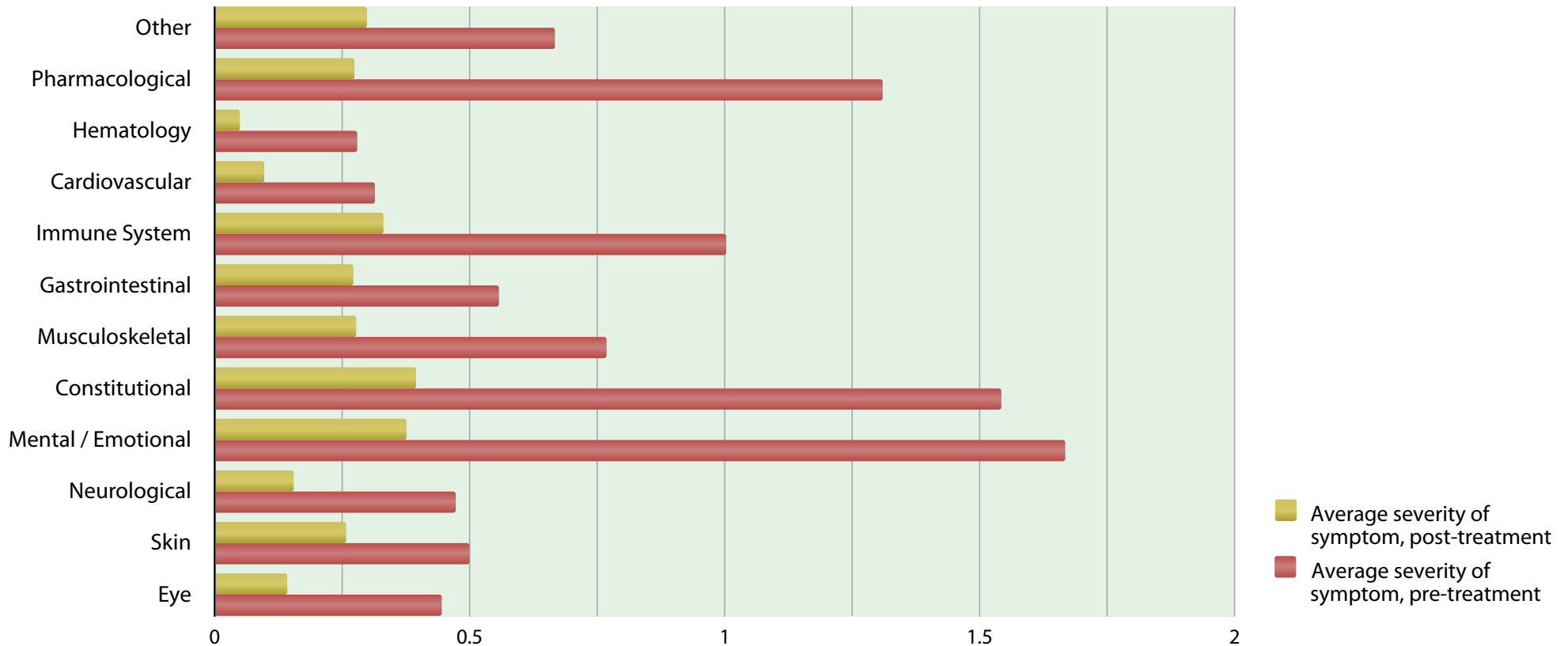
Authors: RM Wisner, DE Root, M Shields, SL Beckmann

For details, see page 37 below.

Source: Wisner, R.M., Root, D., Shields, M., Beckmann, S.L. Neurotoxicity and Toxic Body Burdens: Relationship and Treatment Potentials. International Conference on Peripheral Nerve Toxicity, Proceedings edited by K. Hashimoto, Kanazawa, pp. 49-50, June, 1993.

“Individuals reported marked reductions in drug craving following this program.”

Symptom severity change in drug users



Group Studied

249 persons with histories of drug abuse. (59 clients recent heavy drug use; 152 recent, occasional, light; 49 last used drugs 1 - 10 years prior)

What was measured

87 symptoms rated on a scale of (0) None to (5) Severe. The reduction in symptom severity was statistically significant for 80 of the 87 symptoms, and highly significant for 74 of them, including each of the chief complaints

of this population. Separately, the paper presents drug urine and sweat washout curves measured during treatment. (See charts on page 14 below.)

Presented at: 123rd Annual Meeting of the American Public Health Association (San Diego, 1995)

Name of Paper: “Reduction in Drug Residues: Applications in Drug Rehabilitation”

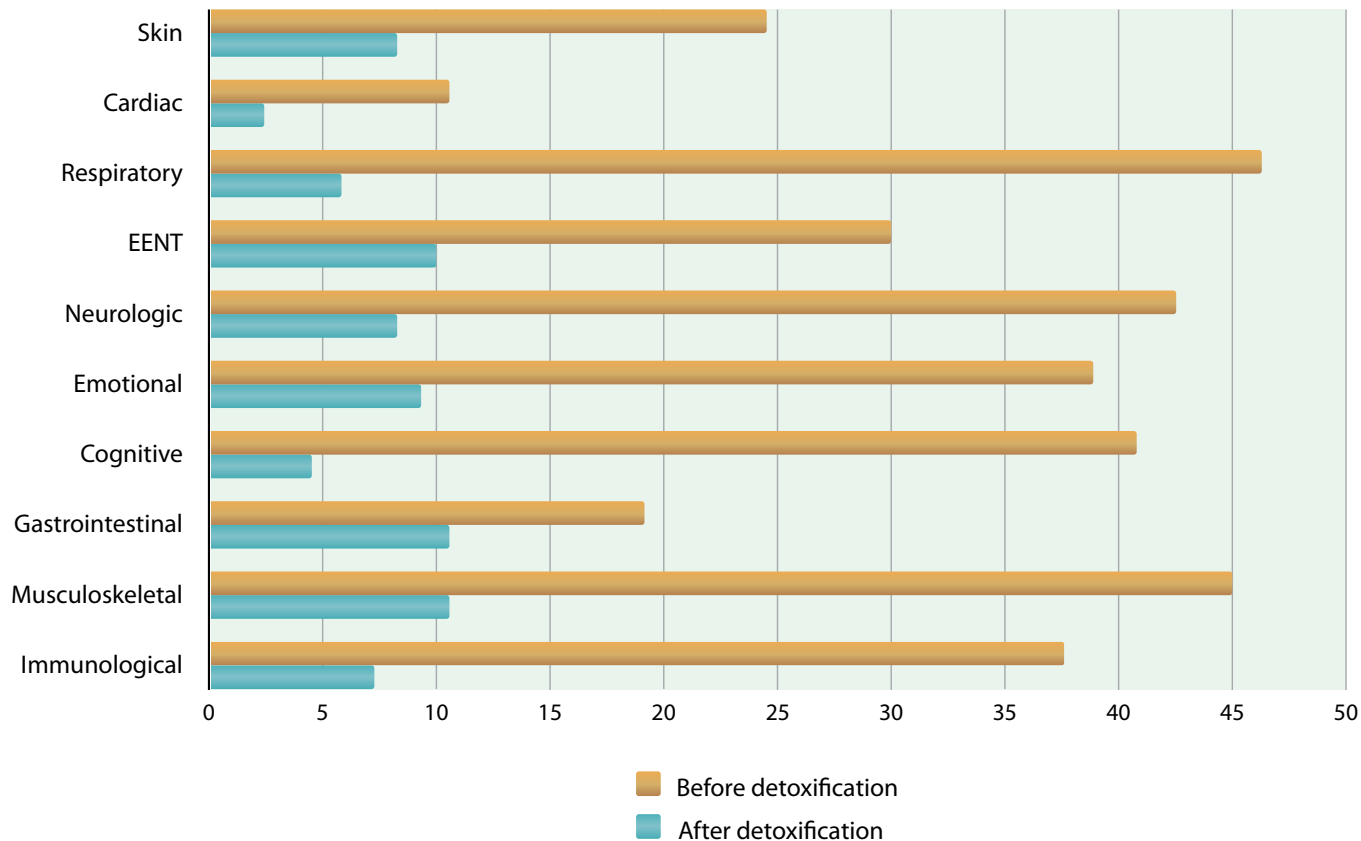
Authors: M Shields, S Beckmann, F Tennant, RM Wisner

2006

Treatment of responders to the 9/11 World Trade Center disaster

“Due to symptom improvement, 84% of those clients requiring medications to manage symptoms related to WTC exposure were able to discontinue their use.”

Cumulative Symptom Severity Score



For details on the paper, see page 46 below.

the full paper may be found at <http://www.townsendletter.com/Dec2006/chemexp1206.htm>

Group Studied

484 firefighters, paramedics, police, sanitation workers, and other responders involved in the clean-up at the site which continued to produce toxic smoke for many weeks after the collapse..

What was measured

The Health History and Symptom Survey consisted of 50 items on ten scales for systems commonly impacted by chemical exposure and was used to assess changes in symptoms over the course of sauna detoxification. Responses are normalized to take into account the fact that there are different numbers of questions per category of symptoms.

Publication: The Townsend Letter (April 2006 #273)

Name of Paper: “Chemical exposures at the World Trade Center: Use of the Hubbard sauna detoxification regimen to improve the health status of New York City rescue workers exposed to toxicants”

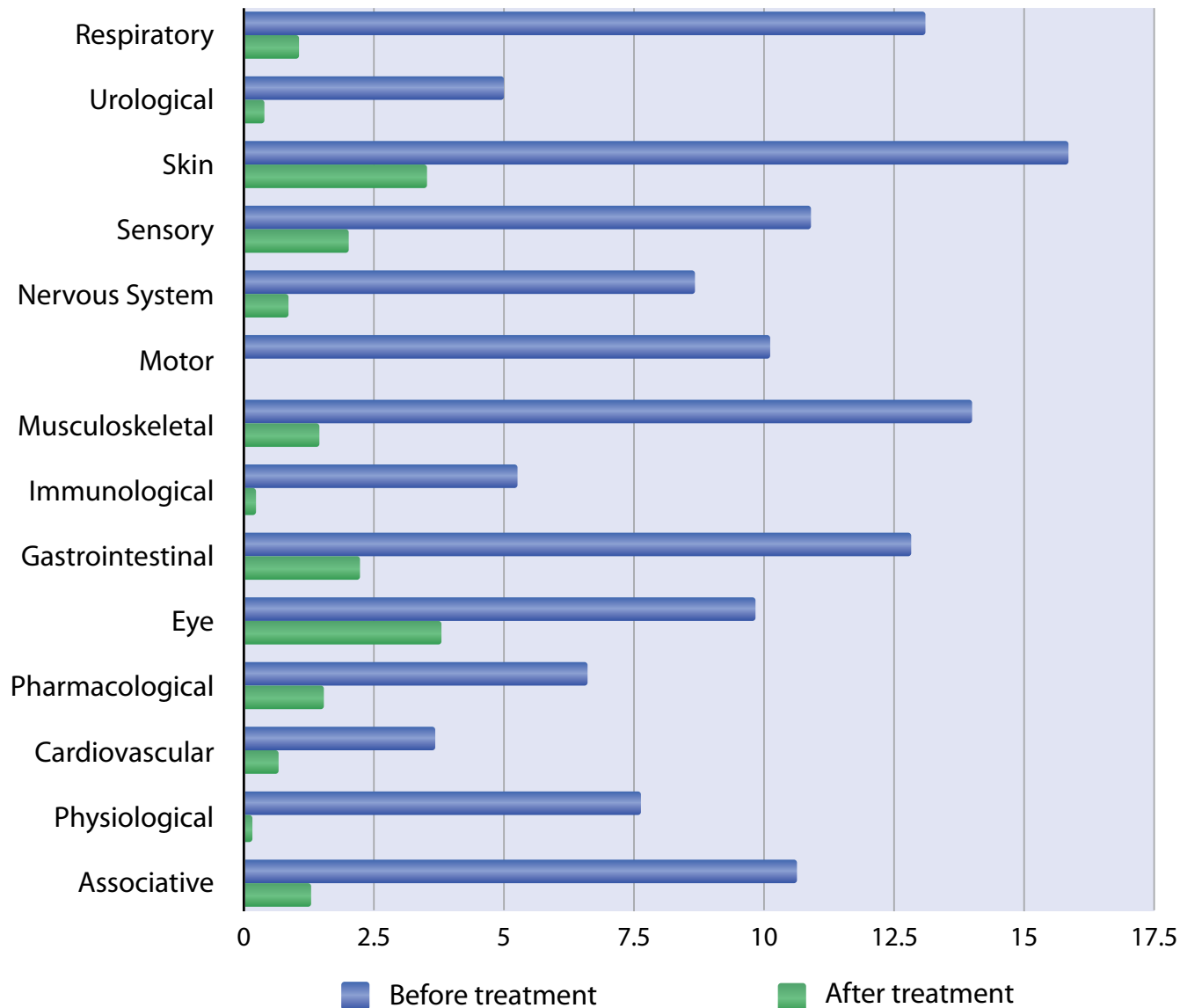
Authors: MA Cecchini, DE Root, JR Rachunow, PM Gelb

2007

Separate case study of treatment of World Trade Center responders

“Health symptoms completely resolved or were satisfactorily improved on completion of treatment...”

Self-reported Symptom Severity



Group Studied

7 men present at the collapse of the Towers who subsequently developed symptoms that remained unresolved with time.

What was measured

Mean severity of self-reported symptoms as measured by a questionnaire. The study also included detailed tissue measurements of PCBs and other toxins pre- and post-treatment; see chart on page 19 below.

Publication: Chemosphere

Name of Paper: “Persistent organic pollutants in 9/11 World Trade Center rescue workers: Reduction following detoxification”

Authors: J Dahlgren, M Cecchini, H Takhar, O Paepk

For details on the paper, see page 47 below.

Source: Chemosphere. 2007 Oct;69(8):1320-5.

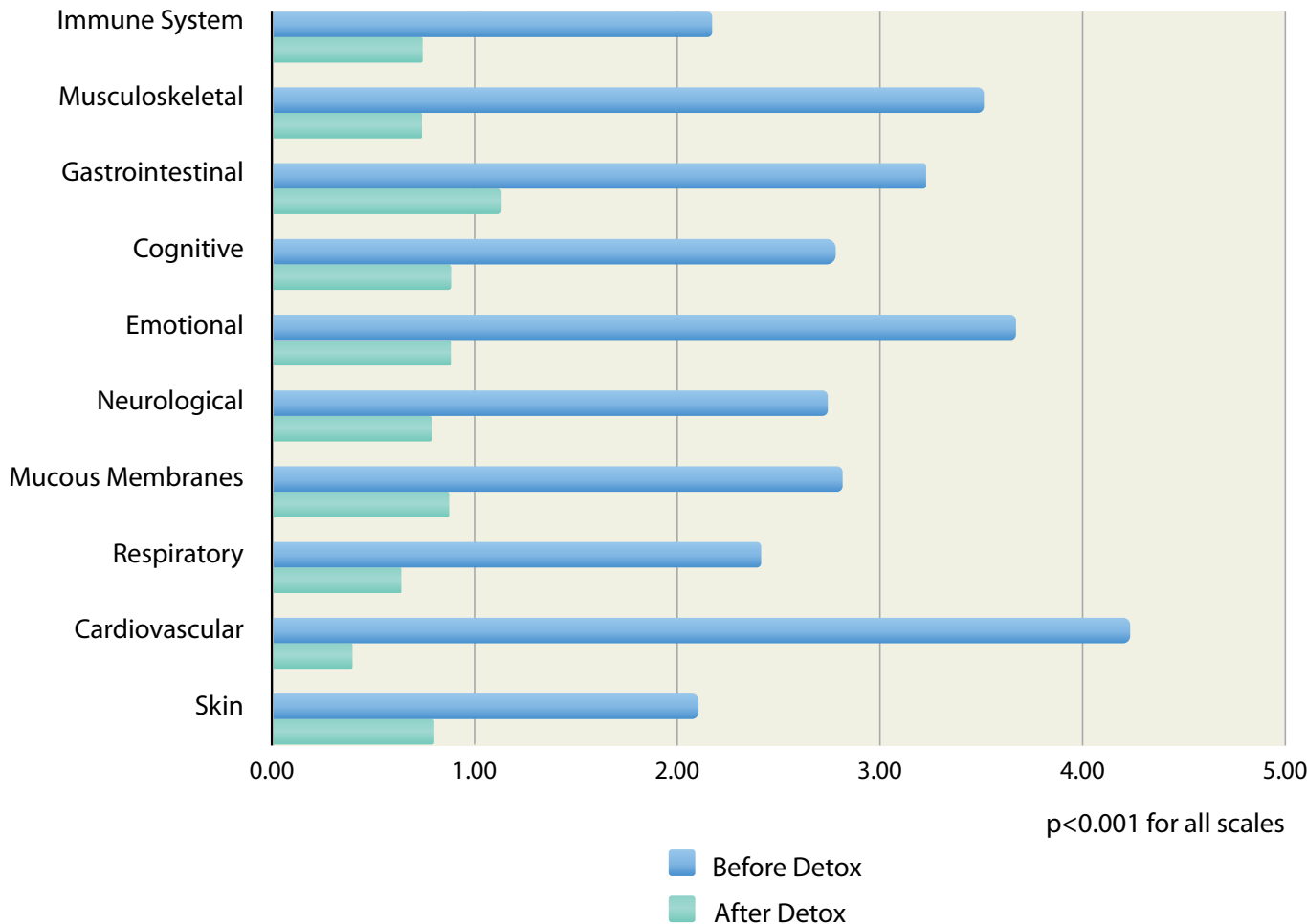
Epub 2007 Jan 17.

Abstract available at: <http://www.ncbi.nlm.nih.gov/pubmed/17234251>

Police officers in Utah after toxic exposure during raids on meth labs

“The vast majority completed the regimen with minimal discomfort or inconvenience, achieving significant reductions in their symptoms and measurably improved the health and quality of life.”

Mean scores of symptom severity pre / post detox



For details on the paper, see page 48 below.

Abstract and downloadable PDF available at: <http://tih.sagepub.com/content/28/8/758.abstract>

Group Studied

69 police officers, narcotics agents, etc involved in raids on Utah meth labs and exposed to drug and other toxins, who subsequently grew ill.

What was measured

Comparison of Meth Cops symptom severity before and after leaving treatment, using a 50-item pre- and post-treatment survey of the preceding 4 weeks' symptoms, sick days, and sleep patterns. Mean scores was significant at $p < 0.001$ for all scales using paired two-tailed Student "t" test. Additional study measures included change in health-related quality of life (page 26 below), a neurotoxicity questionnaire (page 23 below), and mental examination.

Publication: Toxicology and Industrial Health (Nov 2011)

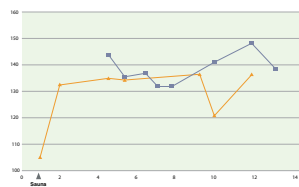
Name of Paper: "Methamphetamine exposure and chronic illness in police officers: Significant improvement with sauna-based detoxification therapy."

Authors: GH Ross, MC Sternquist

Drug Residues Washing Out

1995

Drug residues washing-out in sweat and urine, measured during Narconon (R) program sauna detoxification



(Charts next page)

“Though the severity was higher for symptoms in current users, the complaints overlap remarkably [compared to past users.] This strongly supports the concept that persistent symptoms in the general population [of drug users] are related to past drug use.”

Group Studied

8 clients with histories of active drug abuse voluntarily submitted daily urine and sweat samples before and during the sauna detoxification, which they were doing as part of their Narconon drug rehabilitation programs.

What was measured

Concentration of drug residues in urine and sweat samples was determined by polarized fluorescent immunoassay at a 95% sensitivity of approximately 25 ng/mL.

Following start of sauna treatment, metabolite concentration increased in either sweat or urine in five cases (including Clients 1, 8, and 2 next page).

In two cases the level of drug was below detection prior to treatment but became detectable while doing the detoxification program.

Drugs continued to be eliminated for up to five weeks.

Proceedings: 123rd Annual Meeting of the American Public Health Association (San Diego, 1995)

Name of Paper: “Reduction in drug residues: Applications in drug rehabilitation”

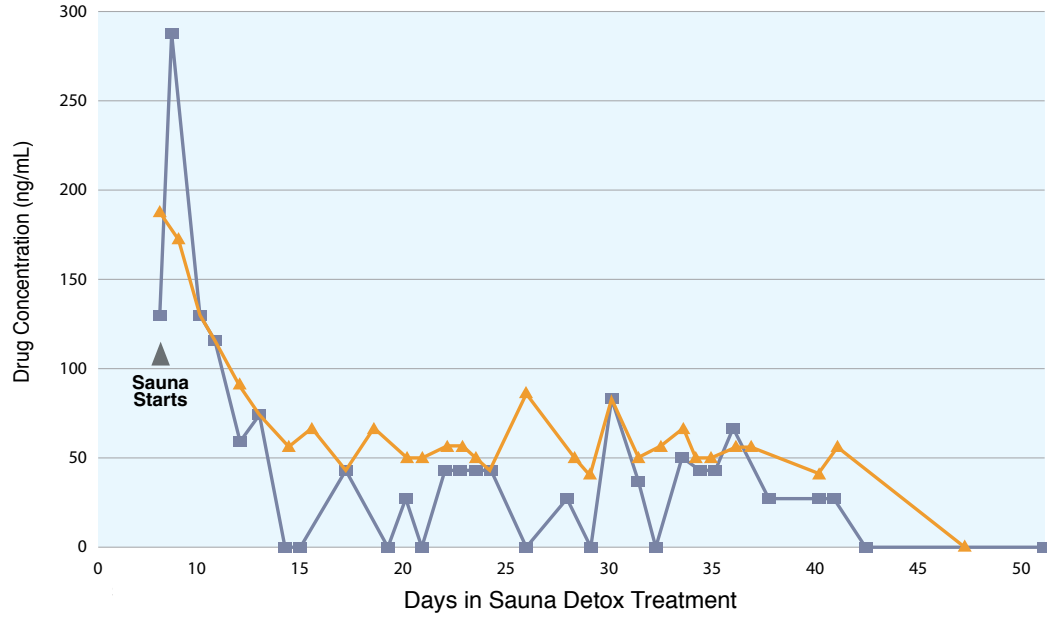
Authors: M Shields, S Beckmann, F Tennant, RM Wisner

For details on the paper, see page 38 below.

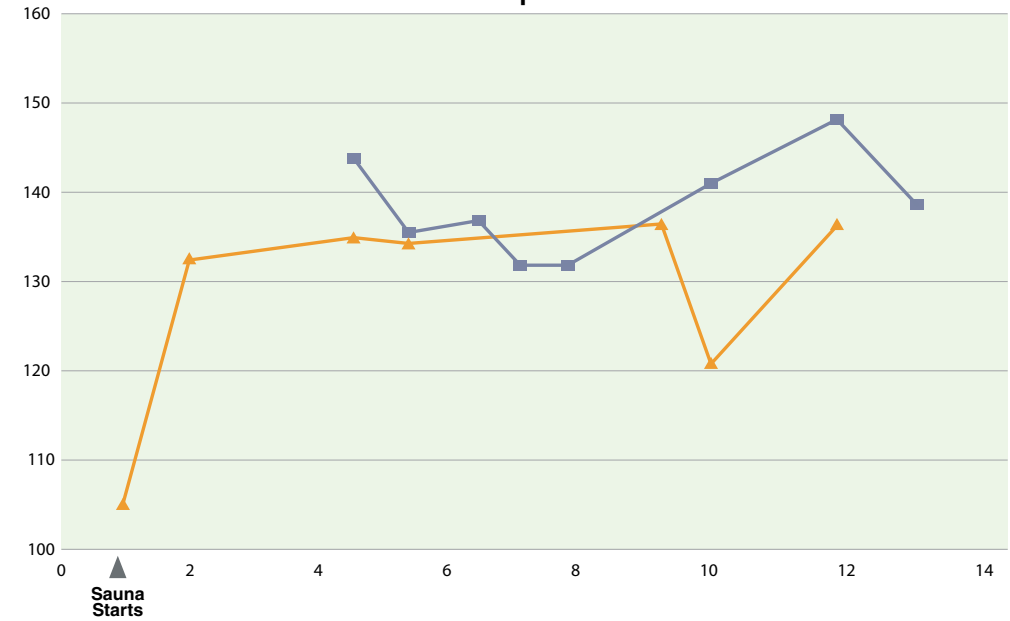
Drug Residues Washing Out in Sweat and Urine

Triangle = Urine
Square = Sweat

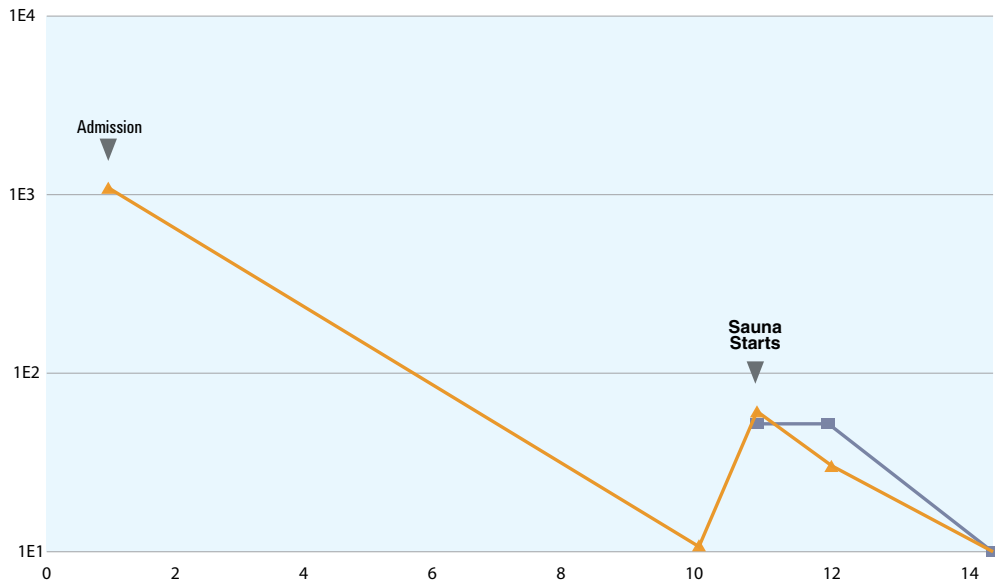
Cocaine Metabolites - Client 1



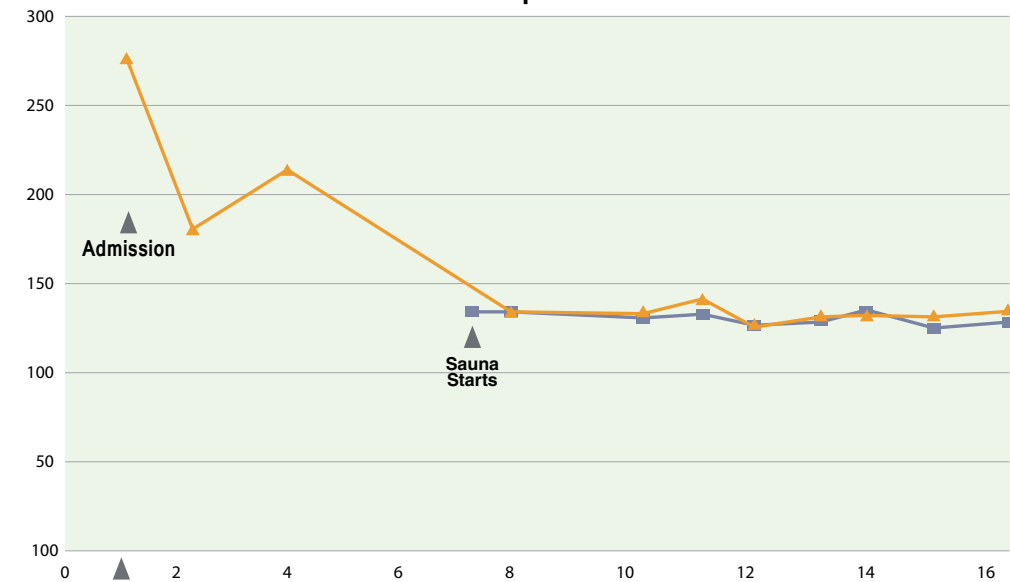
Benzodiazepine - Client 8



Cocaine Metabolites - Client 2



Benzodiazepine - Client 9



Measured reduction in toxic residues

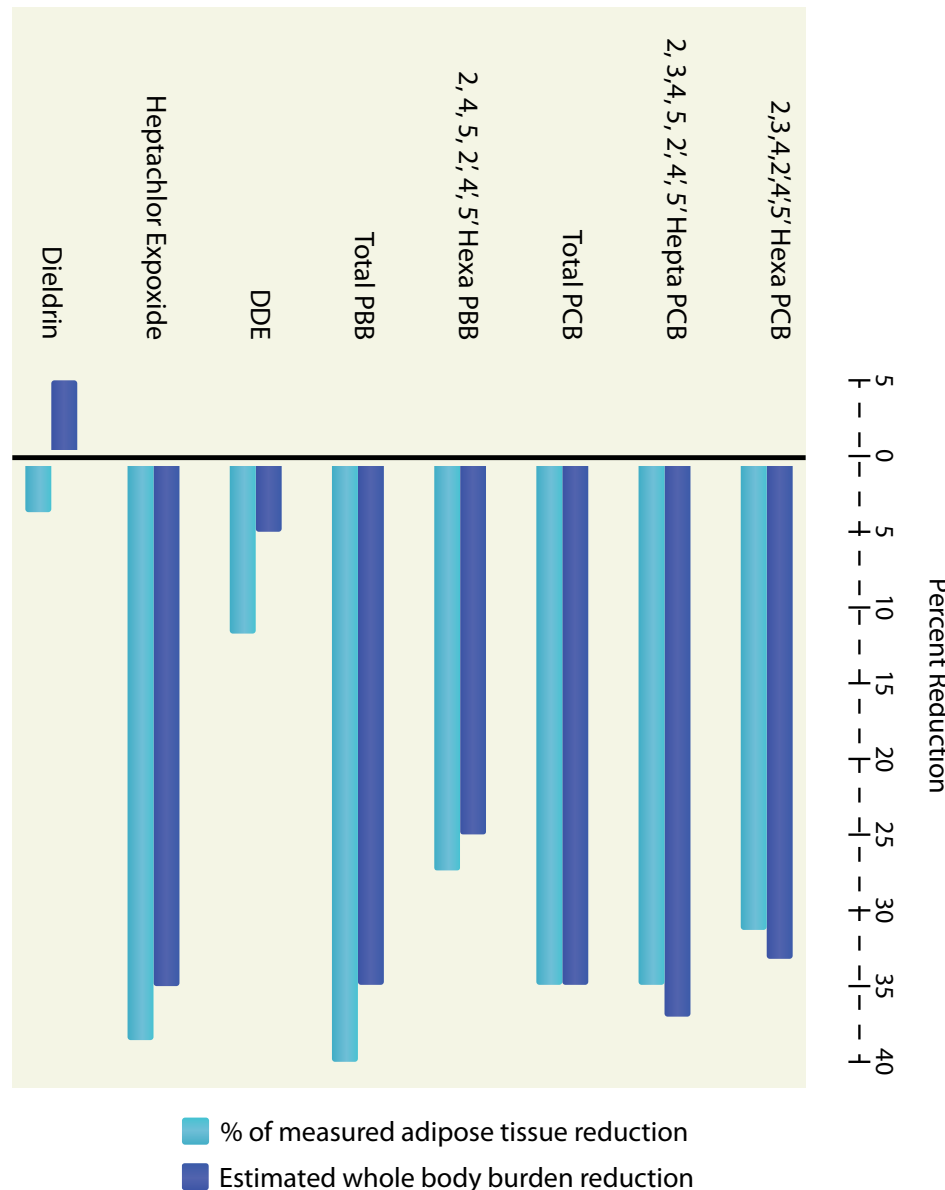
The following four charts measure at pre- and post-sauna treatment the adipose, blood, and sebum concentrations of pesticides, PCBs (polychlorinated biphenyls), PBBs (polybromated biphenyls), and other toxins from exposures including poisoning of the food chain, electronics factory work, and the World Trade Center clean-up.

1984

Mean Post-Treatment Reductions of Adipose Tissue Concentration

“...it is clear that fat, and its associated contaminants, are regularly mobilized from deep stores.”

Adipose toxic reduction



Group Studied

7 male volunteers exposed to PCBs and chlorinated pesticides in Michigan.

What was measured

Samples were taken 1 day prior to treatment, 1 day post, and 4-months post-treatment, obtained by subcutaneous needle aspiration, kept frozen until analyzed. Of the 16 chemicals examined, 13 were present at lower concentrations at post-treatment. Seven of the 13 reductions were statistically significant (reductions ranging from 3.5 to 47.2%, with a mean reduction among the 16 chemicals of 21.3% (standard deviation 17.1%). To determine whether reductions reflected movement to other body compartments or were actual body burden reduction, a follow-up sample was taken 4 months later.

Publication: AMBIO, Royal Swedish Academy of Science Journal of the Human Environment

Name of Paper: “Body burden reductions of PCBs, PBBs and Chlorinated Pesticides in Human Subjects”

Authors: DW Schnare, M Ben, MG Shields

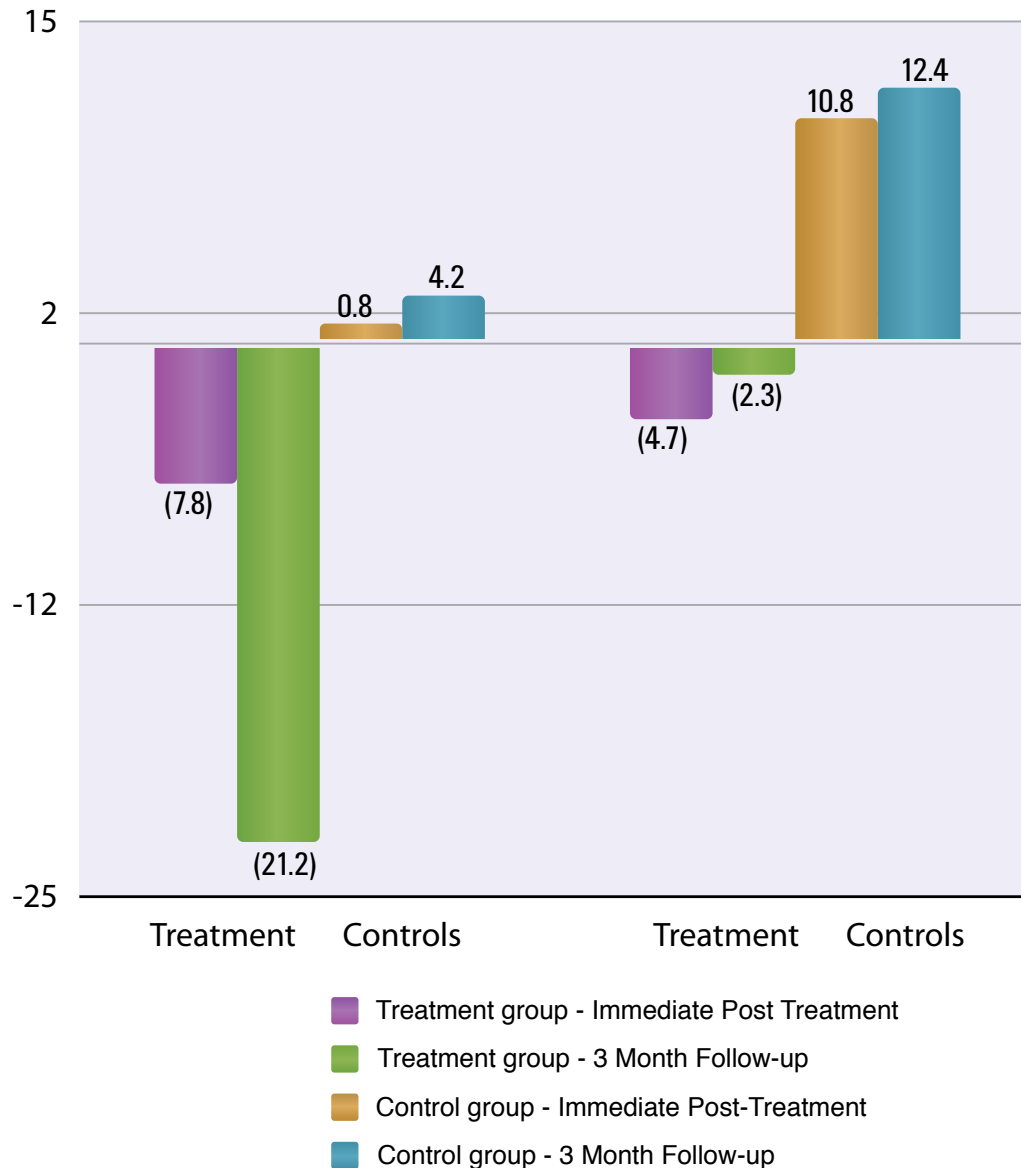
For details on the paper, see page 29 below.
 Source: Ambio, Vol. 13, No 5/6, 1984
 Abstract available at:
<http://www.jstor.org/stable/4313080>
 (The paper by purchase from JSTOR.)

1986

Electrical workers exposed to toxins: Treatment and control body burden reductions

“Human behavioural changes serve as the earliest indicator that some subtle toxic action is occurring in the body, often at a time when the process can still be reversed.”

Comparison of treatment and control changes



Group Studied

5 electrical workers, controls = 5 (all healthy male volunteers from the International Brotherhood of Electrical Workers Local 18)

What was measured

Toxic concentration in adipose tissue (shown here) as well as in blood and sebum - before treatment, immediately post, and 3 months post treatment (working in an environment with continued exposure). All 16 target chemicals were found at quantifiable levels in adipose tissues of all participants. Treatment and control populations did not significantly differ before treatment. At post-treatment, all 16 chemicals were found at lower concentrations of the treatment group, but 11 were higher in the control group. The difference between the two groups was even higher in the 3 month follow-up. (Significance: Pesticides: $p < 0.001$, PDBs: $p < 0.005$)

Proceedings: Hexachlorobenzene - International Symposium (June 1985, Lyons, France) held by the International Agency for Research on Cancer and others.

Name of Paper: “Reduction of the human body burdens of hexachlorobenzene and polychlorinated biphenyls.”

Authors: DW Schnare, PC Robinson

For details on the paper, see page 31 below.
 Source: IARC Sci Publ. 1986;(77):597-603.
 Abstract available at: <http://www.ncbi.nlm.nih.gov/pubmed/3110064>

1989

A Slovenia Case Study: Extreme PCB exposure

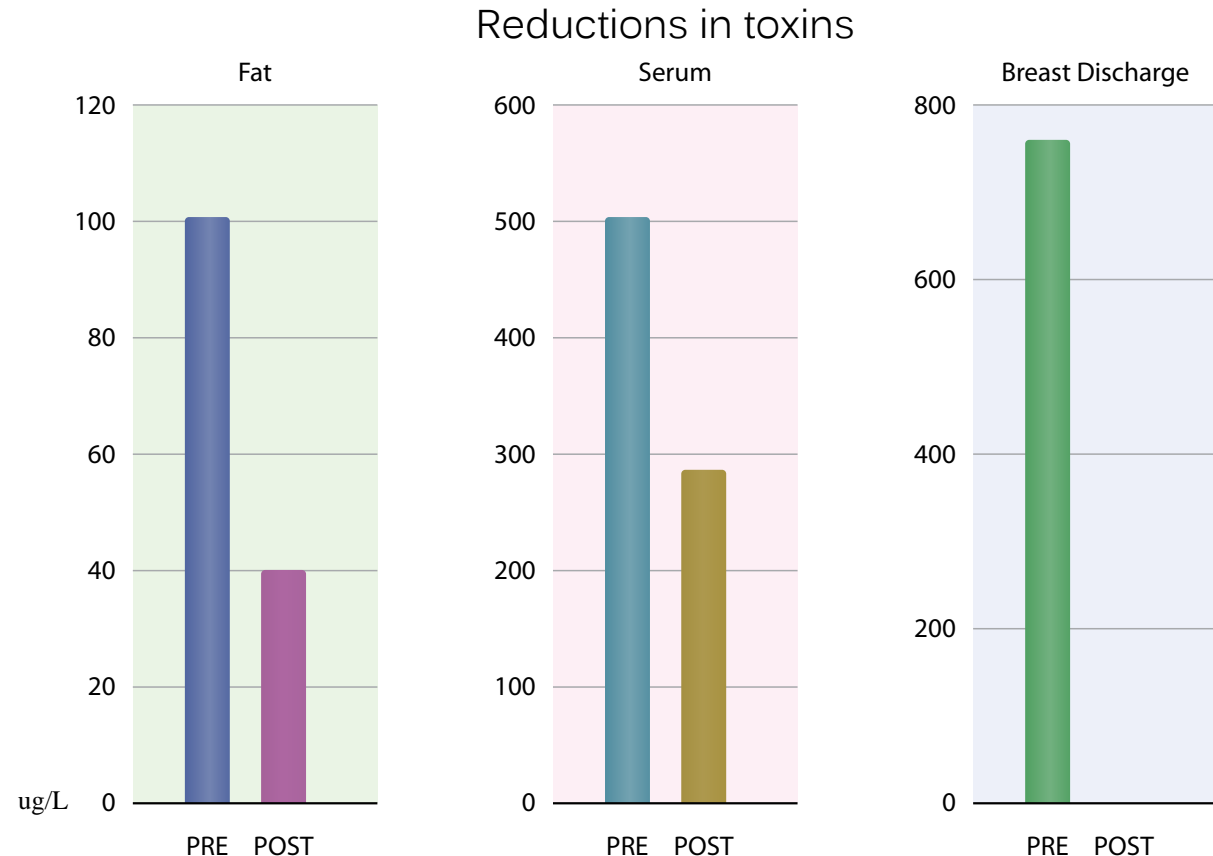
“In cases where a chemical cause of symptoms is anticipated, detoxification is warranted. Our study showed that detoxification reduced body burdens of accumulated chemicals and improved both the clinical picture and the immune status.”

Group Studied

1 woman, an electrical capacitor plant worker in Semic, Slovenia, so severely contaminated she was discharging blue fluid from her breasts.

What was measured

This case study is just one part of a larger study, which included assessment of health and social consequences of the long-term effects of persisting body burden of PCBs (including structural chromosomal damage), even after clean-up had been attempted in Semic. A larger group received the sauna detox protocol. In the case study of this woman, PCB levels were measured pre-treatment and one week post in adipose, serum, and breast discharge. (Note: The paper is well worth reading. It discusses social and political consequences of addressing such toxic events. In this case, the woman returned home after successful treatment to harassment and persecution



by the town’s Communist officials for having drawn unwanted attention to the toxic problem.)

Publication: Post-Audits of Environmental Programs and Projects Proceedings: Environmental Impact Analysis Research Council (New Orleans, LA, 11 Oct 1989)

Name of Paper: “Occupational, environmental, and public health in Semic: A case study of PCB pollution.”

Authors: Z Tretjak, S Beckmann, A Tretjak, C Gunnerson

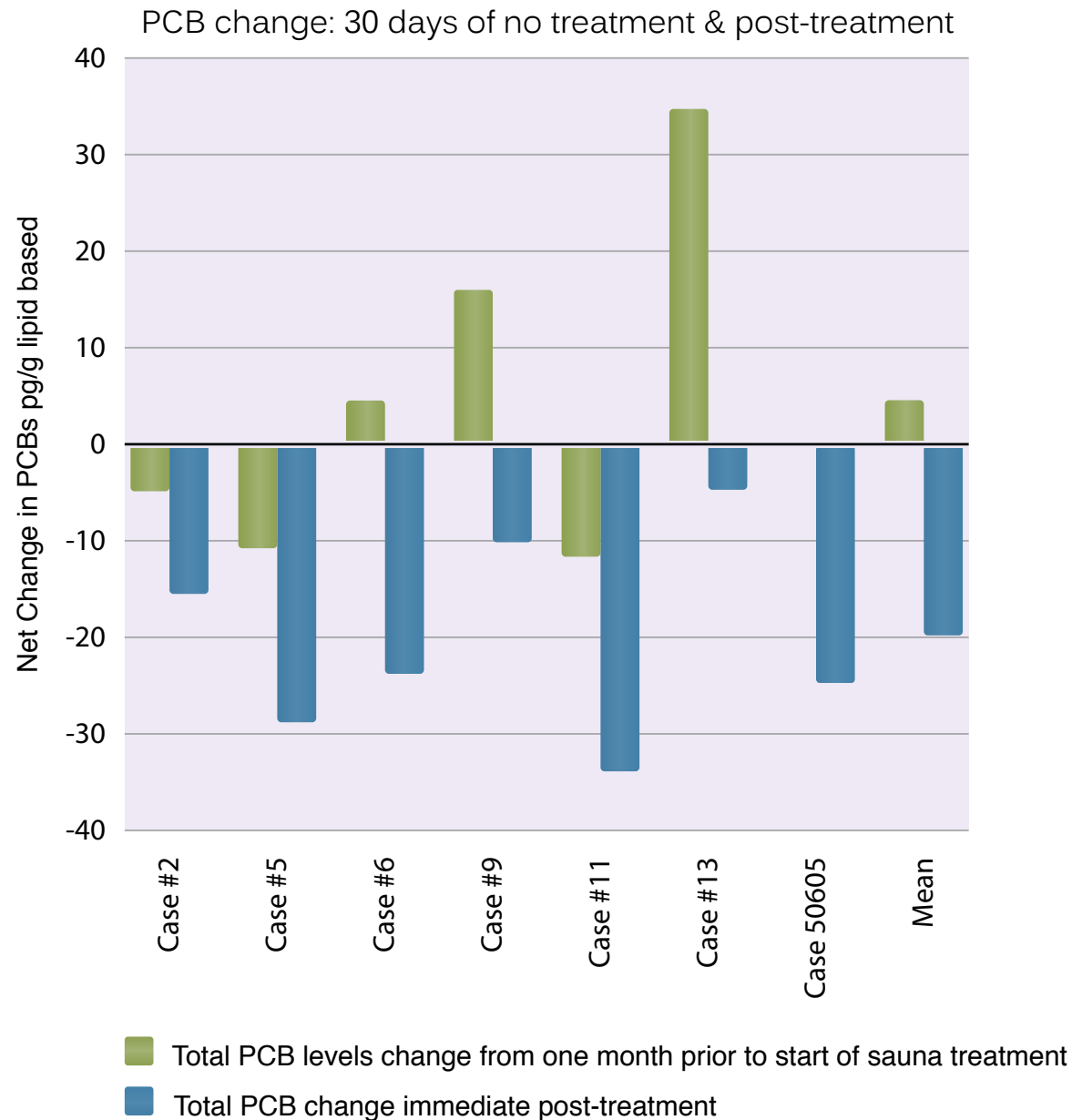
For details on the paper, see page 32 below.

Paper available at: <http://mx1.saunahealthsystems.com/docs/P12%20Case%20Studies,%20Health%20in%20Semic.PDF>

2007

WTC responders: Reduction in PCBs comparing prior 30 days of no-treatment to post-treatment

“This was a complex exposure involving many different compounds and under many different circumstances... These compounds have long half-lives... Even three years after the WTC attacks, thousands of exposure victims continued to have persistent illness.”



Group Studied

7 men present at the collapse of the Towers who subsequently developed symptoms that remained unresolved with time.

What was measured

Blood levels of PCBs comparing the increase or decrease in PCB body burden during the month prior to sauna treatment to post-treatment levels. The chart shows individual changes and the last bar of the right is the group's mean change. The study also included a measure of the group's mean symptom severity change; see the chart on page 10 above.

Publication: Chemosphere

Name of Paper: “Persistent organic pollutants in 9/11 World Trade Center rescue workers: Reduction following detoxification”

Authors: J Dahlgren, M Cecchini, H Takhar, O Paepk

For details on the paper, see page 47 below.
 Source: Chemosphere. 2007 Oct;69(8):1320-5. Epub 2007 Jan 17.
 Abstract available at: <http://www.ncbi.nlm.nih.gov/pubmed/17234251>

Improvement in Nerve Function

The following three charts measure specific improvements in nerve function from three different studies. The first study measured change in perception of electrical current by three major nerves. The second measured changes in balance and reaction time. The third measured self-reported improvement in severity of a specific set of neurotoxic symptoms.

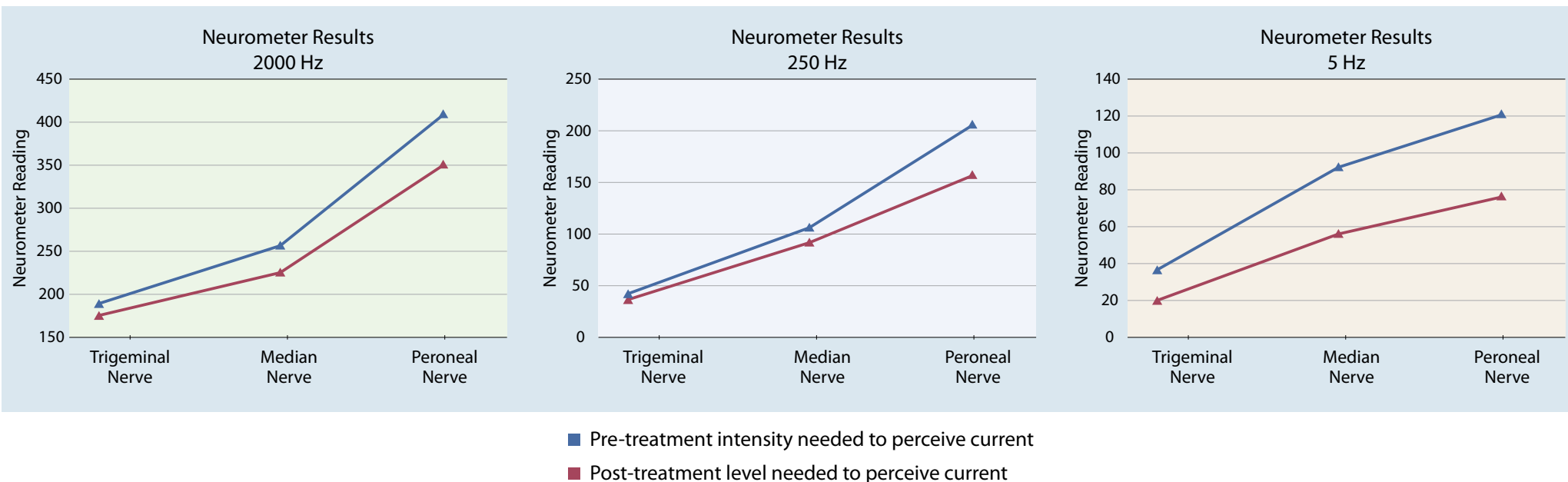
As the 2006 study states, "These findings raised the possibility that damage heretofore thought to be permanent may in many instances be partially reversible."

1993

Electrical current perception in 3 nerves, pre/post sauna detox

“We propose that the persistence of offending chemicals in the body exacerbates the continuance of neurotoxic effects. Based on this premise, an approach designed to reduce body burdens of fat-soluble compounds should lead to a concomitant reduction in neurotoxic effects.”

Improvement in nerve perception of electrical current



Group Studied

48 patients exhibiting neurotoxic symptoms.

What was measured

Before and after sauna detoxification, current perception thresholds (CPT) were measured using the Neurometer, a transcutaneous nerve stimulator. CPTs were measured at three nerve sites: the trigeminal (a cranial nerve that transmits sensations from the face to the brain), the median (in the forearm), and the peroneal (a branch of the sciatic

nerve which supplies movement and sensation to the lower leg and foot.) At each site, the CPT value was measured for each of three frequencies — 5 Hz, 250 Hz and 2000 Hz.

Statistical Sensitivity: $p < 0.05$ for CPT change in trigeminal nerve at 5 and 250 Hz and for the peroneal nerve at 2000 Hz.

Additionally, this study measured changes in self-reported severity of symptoms. See chart on page 7 above.)

Proceedings: The 1993 International Conference on Peripheral Nerve Toxicity.
Name of Paper: “Neurotoxicity and toxic body burdens: Relationship and treatment potentials.”

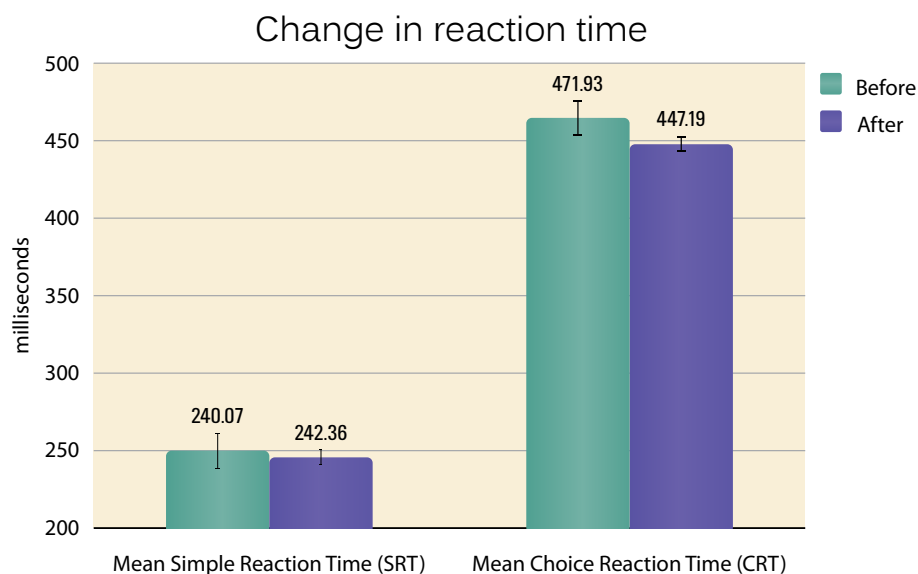
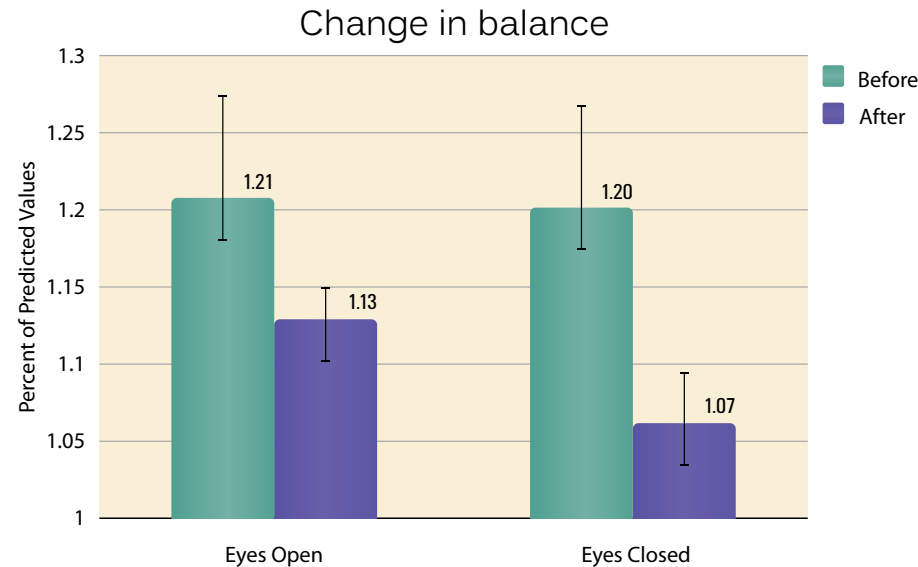
Authors: RM Wisner, DE Root, M Shields, SL Beckmann

For details, see page 37 below. Source: Wisner, R.M., Root, D., Shields, M., Beckmann, S.L. Neurotoxicity and Toxic Body Burdens: Relationship and Treatment Potentials. International Conference on Peripheral Nerve Toxicity, Proceedings edited by K. Hashimoto, Kanazawa, pp. 49-50, June, 1993.

2006

WTC responders: Improvements in balance and reaction time

“These findings raised the possibility that damage heretofore thought to be permanent may in many instances be partially reversible.”



Group Studied

A random cohort of 58 persons from the 484 fireman etc. who were involved in the clean-up at the disaster site.

What was measured

Postural sway test (used in the field to measure mean speed along the path moved with eyes open and closed). The sway test determines impairment of vestibular function.

Statistical significance: $p < 0.012$ comparing pre and post-detoxification results.

Cognitive reaction time (CRT) tests vigilance, discrimination, and speed of reaction. Statistical significance: $p < 0.01$.

The study also collected self-reported severity of symptom change. See chart on page 9 above.

Publication: The Townsend Letter (April 2006 #273)

Name of Paper: “Chemical exposures at the World Trade Center: Use of the Hubbard sauna detoxification regimen to improve the health status of New York City rescue workers exposed to toxicants”

Authors: MA Cecchini, DE Root, JR Rachunow, PM Gelb

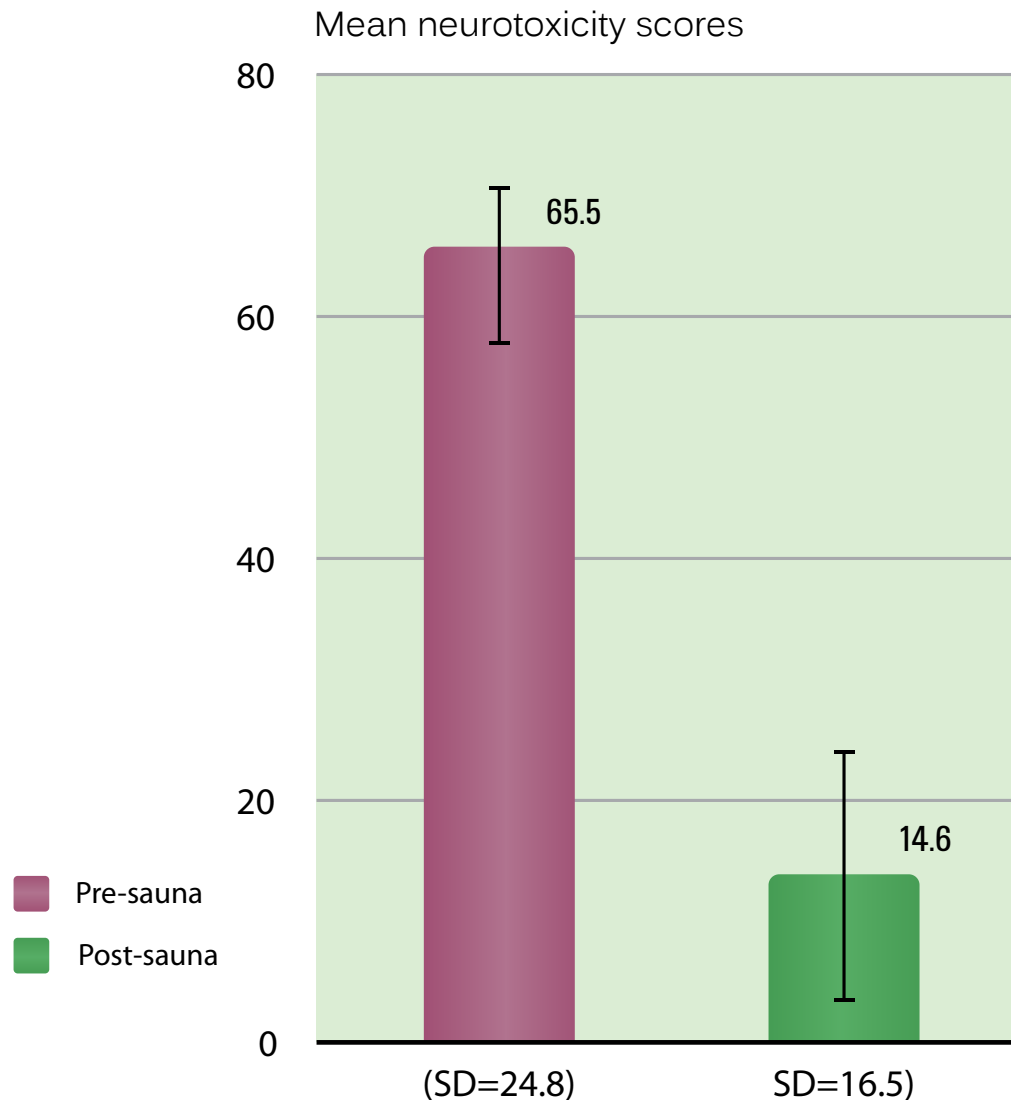
For details on the paper, see page 46 below.

The full paper may be found at <http://www.townsendletter.com/Dec2006/chemexp1206.htm>

2013

Improvement in neurotoxicity symptoms in police officers

“The Centers for Disease Control (2003) states. ‘Treating exposed persons by chemical syndrome rather than by specific agent probably is the most pragmatic approach to the treatment of illnesses caused by chemical exposure.’”²



² CDC(2003) Recognition of illness associated with exposure to chemical agents—United States, 2003. MMWR Morbidity and Mortality Weekly Report 52(39): 938–940.

Group Studied

38 persons from the larger study of 69 police officers, narcotics agents, etc. exposed to toxins during raids on Utah meth labs. (The neurotoxicity questionnaire was delivered from #20 on.)

What was measured

A 13-item pre- and post-treatment neurotoxicity questionnaire (based on R Singer’s Neurotoxicity Guidebook) rated the preceding 3 weeks’ problems involving irritability, social withdrawal, decreased motivation, recent memory, concentration, mental slowness/fog, sleep disturbances, fatigue, frequency and severity of headaches, sexual dysfunction, extremity numbness, and decreased mental sharpness. (Charts of other measured results from this study can be seen on pages 11 and 26.)

Publication: Toxicology and Industrial Health (Nov 2011)

Name of Paper: “Methamphetamine exposure and chronic illness in police officers: Significant improvement with sauna-based detoxification therapy.”

Authors: GH Ross, MC Sternquist

For details on the paper, see page 48 below.

Abstract and downloadable PDF available at: <http://tih.sagepub.com/content/28/8/758.abstract>

Health-related quality-of-life indicators

Finally, moving from abstract chemical or electrical measurements to how people consider they personally feel and how they are doing in life, there are substantive questions that can be asked that answer this in a scientifically acceptable manner — for example, questions dealing with physical activity being limited by illness, missing work, inability to think and function, fatigue, pain.

The Substance Abuse and Mental Health Services Administration (SAMHSA) incorporated these concepts in 2013 in their broad “working definition of recovery”³ from alcohol and other drug addiction. In addition to abstinence they included other measurable concepts such as meaningful daily activities (having a job, returning to school), relationships, and social networks. Recovery includes even a stable and safe place to live, meaning, in the final analysis, home, not prison.

The following two charts report statistically significant changes in quality-of-life indicators after sauna detoxification.

It is for those reasons that the Narconon drug rehabilitation program incorporates the sauna detoxification program in its treatment methodology for its students.

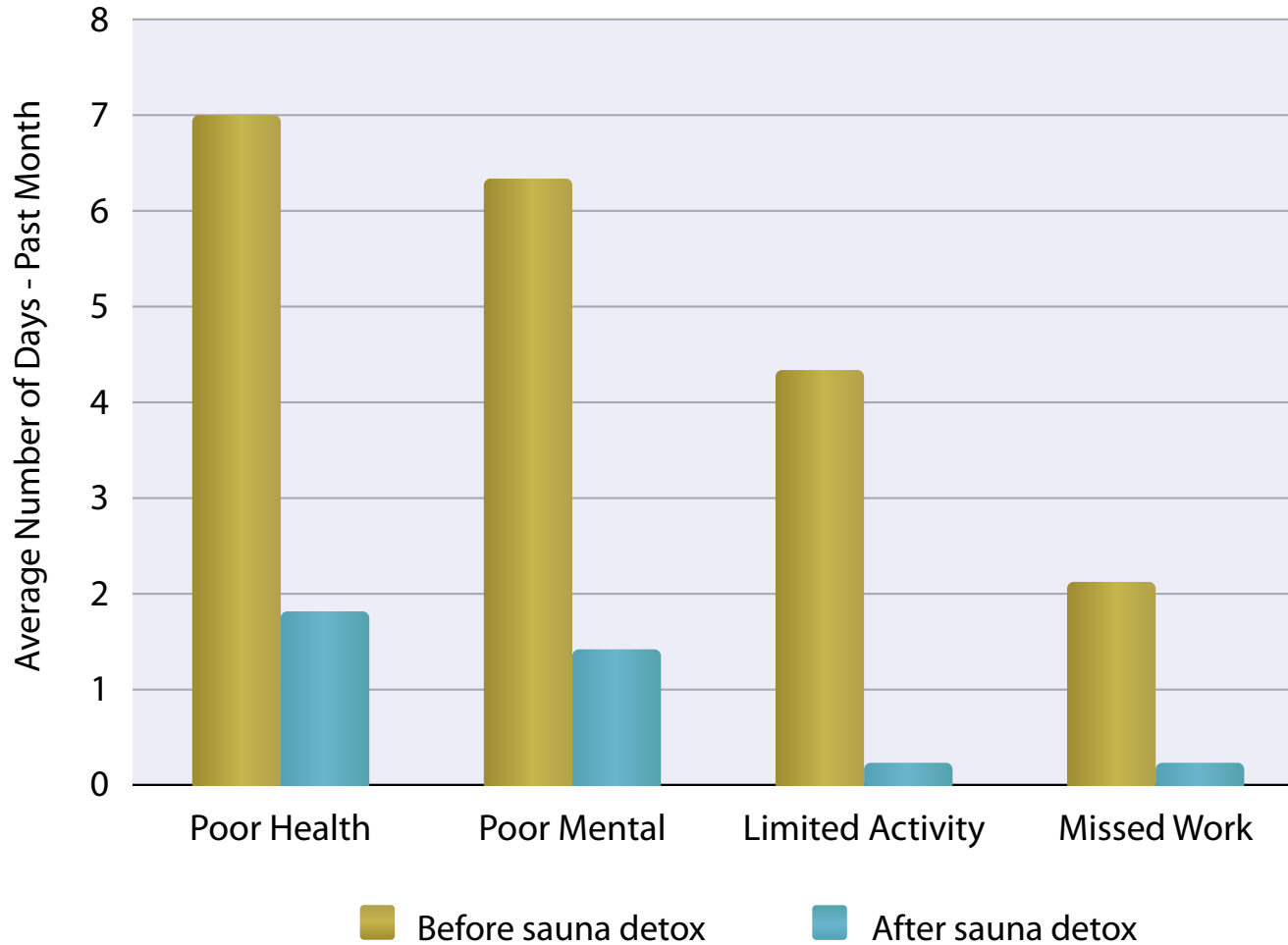
³ SAMHSA’s Working Definition of Recovery: <http://www.samhsa.gov/recovery>

2006

WTC responders: reductions in reports of poor health, limited activity, and missing work

“This regimen has greatly reduced the number of work days that rescue workers miss due to illness, and has resolved anxieties that careers will end prematurely in disability retirement.”

Improvement in quality-of-life indicators



Group Studied

484 firefighters, paramedics, police, sanitation workers, and other responders involved in the clean-up after the collapse of the Towers

What was measured

Core questions from the CDC Health-Related Quality of Life instrument to look at physical and mental health, and how those affected daily activity and the ability to work. (See other result charts from this study on pages 9 and 22 above.)

Publication: The Townsend Letter (April 2006 #273)

Name of Paper: “Chemical exposures at the World Trade Center: Use of the Hubbard sauna detoxification regimen to improve the health status of New York City rescue workers exposed to toxicants”

Authors: MA Cecchini, DE Root, JR Rachunow, PM Gelb

For details on the paper, see page 36 below.

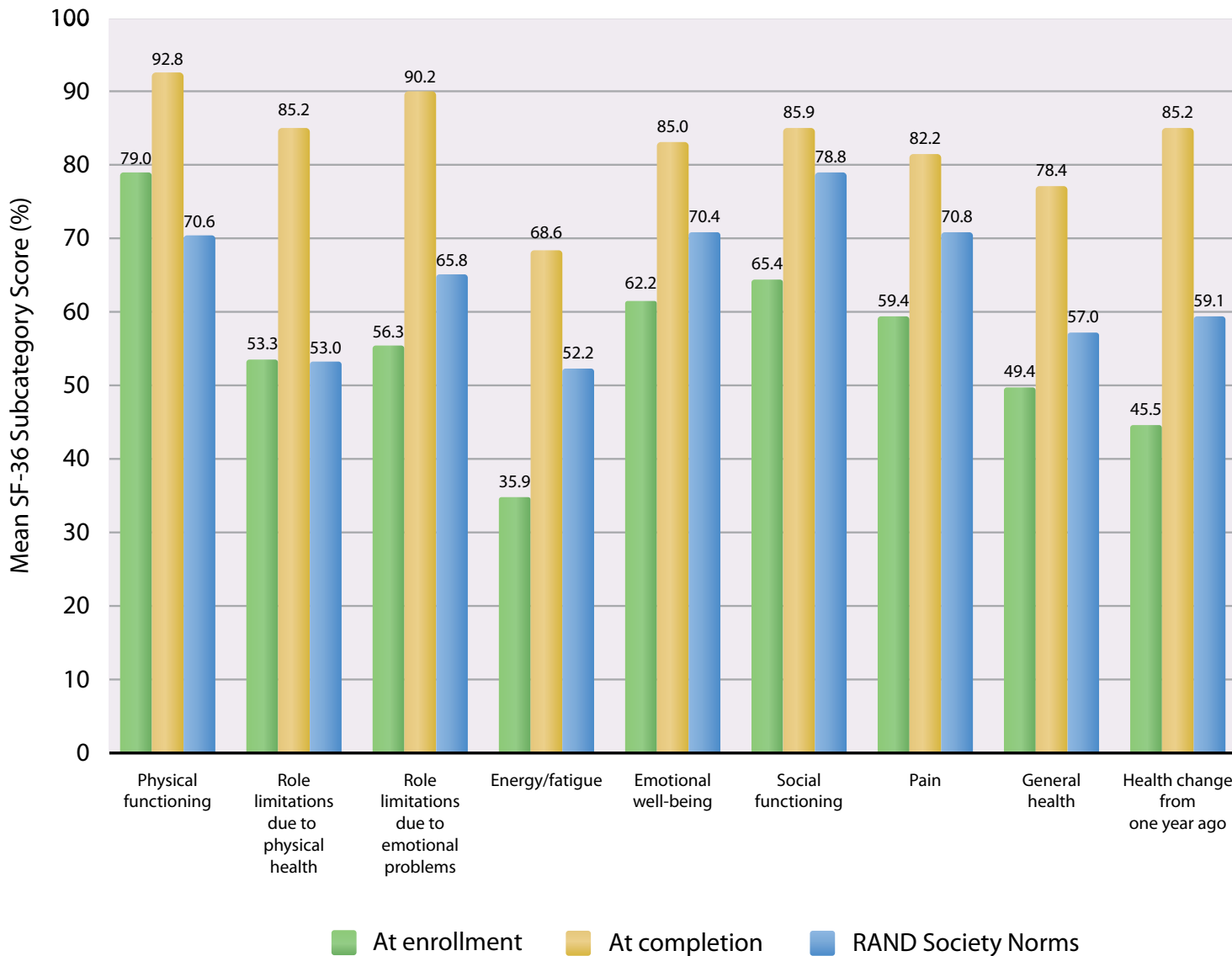
URL: <http://www.townsendletter.com/Dec2006/chemexp1206.htm>

2013

Change in health-related quality-of-life scores in police officers

“The Research and Development Corporation (RAND) 36-item Short Form Health Survey assessed the 4-week health-related quality of life before treatment. The RAND SF-36 scoring mechanism...produces a 9-scale profile of functional ability and physical and mental well-being. SF-36 scores were also compared pre- and post-treatment and to RAND US adult population norms.”

Mean improvement in quality-of-life scores



Group Studied

69 police officers, narcotics agents, etc. exposed to toxins during raids on Utah meth labs.

What was measured

RAND Short-Form Health Survey (RAND SF-36) to measure a range of health-related quality-of-life indicators: The survey was done at enrollment and at completion, comparing with RAND US population norms for each characteristic. Statistical significance: $p < 0.001$ for all scales.

Publication: Toxicology and Industrial Health (Nov 2011)

Name of Paper: “Methamphetamine exposure and chronic illness in police officers: Significant improvement with sauna-based detoxification therapy.”

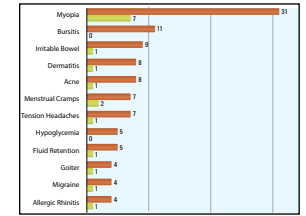
Authors: GH Ross, MC Sternquist

For details on the paper, see page 48 below. Abstract and downloadable PDF available at: <http://tih.sagepub.com/content/28/8/758.abstract>

Details of the sauna detoxification studies by year

Including:

- Toxins treated
- Group observed
- What was measured
- Changes observed
- Complications / Safety
- Conclusions / Discussions



Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Environmental and industrial toxic chemicals.</p> <p>As well as abused drugs including heroin and hallucingens.</p> <p>Medical drugs, Patent meds</p>	<p>103 volunteers</p> <p>Controls: 19</p> <p>(A group exposed to a toxic fire retardant chemical in beef, milk, chicken, and eggs. This chemical was accidentally fed to cattle and chickens, affecting a widespread population across the state of Michigan)</p>	<p>A.High blood pressure</p> <p>B.Cholesterol</p> <p>C.IQ (Wechsler Adult Intelligence Scale)</p> <p>D.Minnesotal Multiphasic Personality Inventory (MMPI)</p> <p>E.Medical conditions.</p>	<p>A.Mean reduction systolic 30.8 mm (p<0.05) diastolic 23.3 mm (p<.01)</p> <p>B. Mean reduction 19.5 mg/100 ml Triglycerides no change</p> <p>C. Mean +6.7 points SD 6.4 (p<.001) Controls: Mean +2.1 SD 8.0</p> <p>D. High profiles decreased: 3rd scale -10.7 (p<.05) 4th scale -8.0 (p<.01) 5th scale -4.5 (p<.05) 6th scale -8.0 (p<.05) Special note on MMPI 4th scale Very High (70+) -9.0 (p<.01)</p> <p>E. Medical Improvement: "... improvement in a wide range of unrelated medical conditions from seborrhea to irritable bowel. In total, eighteen conditions were reported to have improved while twelve others generally showed no change."</p>	<p>"In general, the regimen was tolerated very well, with only minor complications."</p> <p>"The extended periods of time in the sauna were tolerated very well. Individuals with heat intolerance adapted quickly to the sauna temperatures, and over a few days were able to comfortably stay for thirty minutes to an hour at a time with no clinically observed adverse effects"</p>	<p>"The decrease in the fourth [MMPI] scale* suggests hope for sociopaths, a group with fourth scale scores not improved by the National Institute for Mental Health or the Narcotic Addict Rehabilitation Act inpatient programs."</p> <p>"The subset of individuals with opiate and hallucinogen histories ...demonstrate even greater decreases in 4th scale scores. These 4th scale reductions suggest that former drug users may not be condemned to terminal sociopathy."</p> <p>*Note: High scores on the MMPI denote worse state. The 4th Scale concerns antisocial or psychopathic tendencies and particularly relates to drug addicts.)</p>

1984

Paper: “Body Burden Reductions of PCBS, PBBs and Chlorinated Pesticides in Human Subjects”

Authors: DW Schnare, M Ben, MG Shields

Publication: *AMBIO - Royal Swedish Academy of Science, Journal of the Human Environment*
(peer - reviewed)

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>PCBs (synthetic organic chemicals, their manufacture banned in US in 1979)</p> <p>PBBs (similar hazardous chemicals used in electrical manufacturing)</p> <p>DDE (first metabolite of DDT)</p>	<p>7 healthy male volunteers (exposed to fire retardant chemical in food and milk, same as 1982 study.)</p>	<p>Adipose tissue concentrations:</p> <p>A. 1 day prior to treatment,</p> <p>B. 1 day post-treatment,</p> <p>C. 4 months post-treatment.</p> <p>(Samples analyzed blindly.)</p>	<p>A. Pretreatment: 16 organohalides found. (Concentration at 10X above level of detectability.)</p> <p>B. 1 Day Post: 13 toxins at lower concentration. Reductions ranged from 3.5 to 47.2% (Mean reduction among 16 chemicals 21.3%, SD 17.0. 7 of 16 reductions were statistically significant.)</p> <p>C. 4 Months Post: Reduction in all 16 chemicals averaging 42.4% (Range 10.1 to 65.9%, SD 17.1%. 10 of the 16 reductions statistically significant.)</p> <p>Lean body mass measurements confirmed that the reductions were not due to increase in body fat.</p>	<p>No complications or safety issues were noted in the paper.</p>	<p>“The active fraction of the adipose tissue constitutes only five percent — the predominant chemical contaminant storage compartment — and does not appear to contain many contaminants found in the inactive fraction. However, it is clear that fat, and its associated contaminants, are regularly mobilized from deep stores.”</p> <p>“With human exposure to environmental contaminants inevitable, research on reduction of body burdens is critical. The successful reductions, as indicated in this study, presage expansion in post-exposure predisease treatment.”</p>

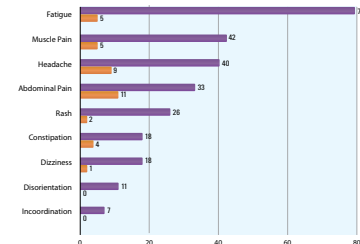
1985

Proceedings: National Conference on Hazardous Wastes and Environmental Emergencies

(May 1985, Cincinnati, Ohio)

Name of Paper: “Diagnosis and treatment of patients presenting subclinical signs and symptoms of exposure to chemicals which bioaccumulate in human tissue”

Authors: DE Root, DB Katzin, DW Schnare



Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion																											
Broad range. Specific toxins not specified in study.	<p>“120 individuals referred for treatment of health effects which diagnostic assessment suggests are likely to be due to low-level chemical exposure.”</p> <p>“...presented symptomatology similar, but not identical, to a chemically exposed population.”</p>	<p>“All patients first had an extensive diagnostic evaluation, including a thorough medical history and physical examination by a physician, chemical evaluation of the blood and, in some cases, adipose tissue as well as sebaceous secretion evaluation.”</p> <p>“...collected information on over 70 signs and symptoms...”</p>	<p>Reduction in Symptom Prevalence: (p<.01)</p> <table border="1"> <thead> <tr> <th></th> <th>Pre</th> <th>Post</th> </tr> </thead> <tbody> <tr> <td>Fatigue</td> <td>79%</td> <td>5%</td> </tr> <tr> <td>Muscle pain</td> <td>42</td> <td>5</td> </tr> <tr> <td>Headaches</td> <td>40</td> <td>9</td> </tr> <tr> <td>Abdominal pain</td> <td>33</td> <td>11</td> </tr> <tr> <td>Constipation</td> <td>26</td> <td>2</td> </tr> <tr> <td>Rash</td> <td>18</td> <td>4</td> </tr> <tr> <td>Dizziness</td> <td>18</td> <td>2</td> </tr> <tr> <td>Disorientation</td> <td>11</td> <td>0</td> </tr> </tbody> </table> <p>6 other symptoms reported lessened. (p<.5)</p> <p>(No statistical significant difference between healthy population symptoms and post-treatment group.)</p>		Pre	Post	Fatigue	79%	5%	Muscle pain	42	5	Headaches	40	9	Abdominal pain	33	11	Constipation	26	2	Rash	18	4	Dizziness	18	2	Disorientation	11	0	No complications or safety issues noted.	<p>“Many toxic lipophilic chemicals are stored at very low levels in the fat tissues. Therefore, a chemical-specific approach will not attack a problem which is not definable in terms of one chemical in the first place.”</p> <p>“While we do not present these data as definitive evidence of a chemical basis for symptomatology observed, the treatment used was noninvasive, reduced chemical body burdens and reduced the severity and frequency of symptom prevalence.”</p> <p>“Large sums of money are being spent to clean up the external environment but, to date, only relatively paltry amounts have been spent investigating the cleanup of our internal milieu.”</p>
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1986

Proceedings: Hexachlorobenzene: Proceedings of an International Symposium (June 1985, Lyons, France)

Name of Paper: “Reduction of the Human Body Burdens of Hexachlorobenzene and Polychlorinated Biphenyls”

Authors: DW Schnare, PC Robinson

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>HCB, PCBs, 4 other pesticides</p> <p>Note: HCB is a toxic fungicide.</p>	<p>5 adult males, 5 adult controls</p> <p>(selected from International Brotherhood of Electrical Workers, Local #18)</p> <p>Note: Both groups continued to work during treatment in the environment exposed to toxins. This would explain how the Controls had higher toxic content post-treatment.</p>	<p>Adipose Tissue, Blood, Skin Oil:</p> <p>A. Before treatment.</p> <p>B. Immediately post-treatment.</p> <p>C. 30 Days Post-treatment.</p> <p>D. Blood every 4 days during treatment, 1 day post-treatment, & 10 days post-treatment.</p>	<p>Mean body burden reduction:</p> <p>A. All 16 target chemicals were found approx 10X detectable level, pre-treatment.</p> <p>B. Post-treatment: All 16 chemicals at lower concentration, but in the Controls 11 were higher. * Mean difference between treatment and controls: 8.6% for pesticides. 15.5% for PCBs.</p> <p>C. At 3 Month Follow-up: Mean difference was 25.4% for pesticides and 14.7% for PCBs.</p> <p>D. Blood levels of chemicals did not change significantly pre- or immediately post.</p>	<p>“The treatment is a relatively complex 3-week regimen of aerobic exercise, polyunsaturated oil supplements, heat stress (sauna at 60°-80 °C) and mineral and vitamin supplements. This regimen is vigorous, and requires adequate sleep, good nutrition and a well ordered daily schedule.”</p>	<p>“Symptom remission associated with body-burden reduction may be a particularly important research topic for HCB exposure. Symptoms of HCB exposure reported by Peters et al. (1982) are similar to those most significantly reduced in the Root population and include weakness, paraesthesias, nervousness, constipation, joint pain and skin fragility. We observed remission of similar symptoms after treatment in subjects exposed to polybrominated biphenyls, which has held for over 2 years.</p> <p>“A second area of symptom remission which has been studied is behavioural. As Spyker (1975) indicated, human behavioural changes serve as the earliest indicator that some subtle toxic action is occurring in the body, often at a time when the process can still be reversed. Improvements in mental acuity, long-term stored memory and abnormal personality are documented results of treatment to reduce chemical body burdens (Schnare et al., 1982). Some of these improvements took place more than a decade after chemical exposure, suggesting that chemically related neurological and behavioural symptoms are to some extent reversible. “</p>

1989

Proceedings: Environmental Impact Analysis Research Council - Post-Audits of Environmental Programs & Projects (New Orleans, LA, Oct 1989)

Name of Paper: "Occupational, Environmental, and Public Health in Semic: A Case Study of PCB Pollution"

Authors: Z Tretjak, S Beckmann, A Tretjak, C Gunnerson

See also: 1990 - Paper: "PCB Reduction and Clinical Improvement by Detoxification: An Unexploited Approach."

Authors: Z Tretjak, M Shields, S Beckmann

Publication: Human & Experimental Toxicology (1990) 9, 235-244. (Peer-reviewed.)

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion																								
PCBs	<p>I. A Case Study: Single woman severely ill from PCB exposure in her contaminated work & living environment - Capacitor manufacturing plant in Semic, Slovenia, Yugoslavia.</p> <p>II. Group Study (same environment) 11 workers, 12 Controls.</p> <p>(Further study of this second group presented below: 1990 - Environmental Science and Health)</p>	<p>A. Adipose and serum PCB levels - Pre, Immediate Post, & 4 Month Follow-up.</p> <p>B. Breast discharge and other health indicators.</p> <p>(For group study of 11)</p> <p>C. SCA (Structural Chromosome Aberrations)</p> <p>D. Self reported severity of symptoms</p>	<p>A. Pre-treatment: Fat level 102 mg/kg, serum 512 ug/L. Post: Fat level reduced 60%, serum reduced 34%.</p> <p>B. Breast discharge: Pre-treatment: PCB level 712 ug/L. Post: After 10 years of continuous symptom, the discharge disappeared. Other symptoms improved or disappeared, including abdominal cramps, bloating, fatigue, aches & weakness, joint swelling, chloracne.</p> <table border="1"> <thead> <tr> <th>C. % SCAs:</th> <th>Pre- (1986)</th> <th>Post- (1987)</th> </tr> </thead> <tbody> <tr> <td>P.F.</td> <td>40%</td> <td>3%</td> </tr> <tr> <td>B.H.</td> <td>34</td> <td>8</td> </tr> <tr> <td>S.N.</td> <td>14</td> <td>3</td> </tr> <tr> <td>S.J.</td> <td>12</td> <td>2</td> </tr> <tr> <td>R.B.</td> <td>10</td> <td>3</td> </tr> <tr> <td>H.M.</td> <td>6</td> <td>6</td> </tr> <tr> <td>P.S.</td> <td>4.5</td> <td>3</td> </tr> </tbody> </table> <p>D. Strong improvement in all categories. Little or no change in Controls.</p>	C. % SCAs:	Pre- (1986)	Post- (1987)	P.F.	40%	3%	B.H.	34	8	S.N.	14	3	S.J.	12	2	R.B.	10	3	H.M.	6	6	P.S.	4.5	3	<p>"During the study no complications were encountered which could be attributed to either the tests or the treatment."</p>	<p>"Detoxification is demonstrated to be a positive medical intervention, capable of markedly aiding the occupationally exposed, symptomatic worker."</p> <p>"In cases where a chemical cause of symptoms is anticipated, detoxification is warranted. Our study showed that detoxification reduced body burdens of accumulated chemicals and improved both the clinical picture and the immune status."</p>
C. % SCAs:	Pre- (1986)	Post- (1987)																											
P.F.	40%	3%																											
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1989

Publication: Clinical Ecology (Vol VI, #2)

Name of Paper: “Improvement in Perception of Transcutaneous Nerve Stimulation Following Detoxification in Firefighters Exposed to PCBs, PCDDs and PCDFs”

Authors: M Shields, SL Beckmann, G Cassidy-Brinn

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Acute exposure to PCBs, dibenzofurans, dibenzodioxins in the work environment.</p>	<p>17 firefighters, part of a group of 100 who responded to a transformer explosion at Louisiana State Univ.</p>	<p>Peripheral neuropathy with the Neu-rometer. (Neuropathy: numbness in the extremities, burning sensation, tingling. Symptomology included headaches, decreased attention span, fatigue, decreased mental acuity.</p>	<p>Prescreening: 5 of 17 demonstrated moderate to severe neuropathy. All 17 showed statistically significant deviation from a healthy population. ($p < .005$) Post-treatment: 2 patients showed marginal improvement, 1 moderate, 2 fully recovered.</p>	<p>No complications or safety issues noted.</p>	<p>“...the symptomatic complaints of these individuals had worsened over the 4 to 5 months following exposure, despite their removal from active participation in the fire department and, therefore, the lack of opportunity for re-exposure. Physical findings, such as skin lesions, had also continued through this period.” “A detoxification regimen that has been shown to remove or reduce the body burden of xenobiotics was shown to be efficacious in the remission of neuropathy. It is interesting to speculate that the continuing neuropathy observed following toxic exposure may, in some cases, be due to the persistence of these chemicals in the adipose tissue. Damage heretofore thought to be permanent may in many instances be partially reversible.”</p>

1989

Publication: Archives of Environmental Health (Nov/Dec 1989, Vol 44 #6) (A follow-up study to the Clinical Ecology paper above.)

Name of Paper: “Neurobehavioral Dysfunction in Firemen Exposed to Polychlorinated Biphenyls (PCBs):

Possible Improvement after Detoxification”

Authors: KH Kilburn, RH Warsaw, MG Shields

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>PCBs, PCDFs, PDDD, and other byproducts of burning electrical transformers.</p>	<p>14 firemen involved in the capacitor factory fire incident plus 14 controls, also firemen,</p>	<p>Pre- and Post-treatment Neurobehavioral tests:</p> <ul style="list-style-type: none"> • Body balance (1 min radius of sway), • IQ (3 Wechsler tests), • Culture Fair Tests 2A & 2B (non-verbal design), • Dexterity/coordination • Profile of Mood 	<p>Complaints noted 2 days to 3 mths after the incident:</p> <p>Extreme fatigue (n=8) headache (n=7) muscle weakness (n=9) aching joints (n=5) arthritis - zero memory loss (n=8) impaired concentration (n=6)</p> <p>8 Wks Post-treatment:</p> <p><u>Significantly improved:</u> Memory, cognitive function, motor performance,</p> <p><u>Non-significant improvement:</u> Culture Fair, POMs</p> <p><u>Worsened:</u> Balance (eyes open)</p>	<p>“Firemen were monitored with physical and neurological examinations and serum and urine chemical assays with replacement of minerals lost by sweating. The 14 men completed the program, and 14 of 14 completed all of the repeated neurobehavioral testing 6 wks later.”</p>	<p>“An ideal experiment would have matched exposed and referent firemen and tested them before the incident, and testing would have been repeated after exposure and again after detoxification. Our opportunities for observation were limited and fell short of such an experimental design. Opportunities were most restricted by our learning of this PCB incident several months after it occurred.</p> <p>“Thus, this preliminary report does not pre-sume to answer all questions about the neurotoxicity of PCBs and fire-generated products, but it is intended to alert others to the possibility of chronic neurobehavioral impairment so that the problem can be investigated.”</p>

1989

Proceedings: UN Man and his Biosphere & the USSR Academy of Sciences Committee (Oct 19, 1989)

Name of Paper: “Human Contamination and Detoxification: Medical Response to an Expanding Global Problem”

Authors: RM Wisner, M Shields, DL Curtis, SL Beckmann

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Varying toxic exposures. See individual cases.</p>	<p>5 Cases Exposed to:</p> <p>1) Iso-propylene in a fire,</p> <p>2) Paints, epoxies, acetones, sprays, etc.</p> <p>3) Chloroform & other toxins in home,</p> <p>4) PCBs,</p> <p>5) Chlordane and pesticides.</p>	<p>Blood levels of toxins pre- and post-treatment <i>plus</i> physical and medical complaints.</p> <p>4) Plus liver enzymes.</p> <p>5) Adipose levels.</p>	<p>1) Skin condition and headaches improved, toxic chemical below detection after treatment.</p> <p>2) Dermatitis, joint pains, neurological complaints improved Toxic levels reduced 35 - 95%.</p> <p>3) All physical complaints resolved or reduced, chloroform etc. below detection.</p> <p>4) Considerable physical improvement, liver enzymes normal range, PCBs reduced 19%.</p> <p>5) Adipose tissue levels reduced significantly (25 - 69%), remissions of physical and mental symptoms.</p> <p>NOTE: All cases were able to return to productive work life.</p>	<p>No complications or safety issues noted.</p>	<p>“Health consequences from chemical exposure may entail complete disability or reduced ability to work. In fact, as the number and variety of chemicals used by modern societies expands, one can expect the number of individuals removed from the work force due to chemical exposure to parallel this expansion.”</p> <p>“All of these individuals were unable to work or had reduced work capacity prior to treatment. Each of them was treated with the method of detoxification developed by Hubbard, previously shown to reduce body burdens of several toxic compounds.”</p> <p>“In each of these cases the individual was able to return to work following treatment. Though the results presented herein are anecdotal, they confirm previous findings in the peer-reviewed literature and demonstrate that this approach can be effective in reducing body burdens of toxic compounds and returning individuals to the workplace.”</p>

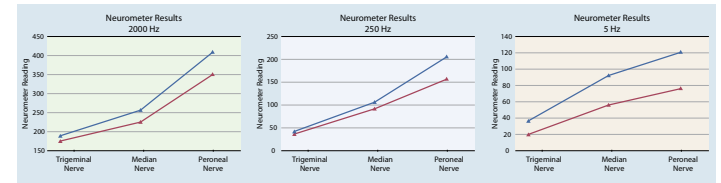
1990

Publication: Journal of Environmental Science & Health (Further study of Semic group in Human & Experimental Toxicology, 1989, above.)

Name of Paper: “Xenobiotic Reduction and Clinical Improvements in Capacitor Workers: A Feasible Method.”

Authors: Z Tretjak, DE Root, A Tretjak, R Slivnik, E Edmondson, R Graves, SL Beckmann

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
PCBs, PCDDs, PCDFs	<p>11 capacitor factory workers</p> <p>Controls: 13 co-workers</p>	<p>Adipose and serum levels of PCBs.</p> <p>Cholesterol.</p> <p>Triglycerides.</p> <p>Serum AST, ALT, and gGT.</p>	<p>Pretreatment: Mean PCB levels 28.0 mg/Kg in adipose, 188.0 ug/L in serum.</p> <p>Post-treatment: PCBs reduced 42% in serum ($p < 0.05$). In adipose reduced 30% for 6 patients without concurrent disease, 10% for those with concurrent disease (serum stayed level).</p> <p>4 month follow-up: Mean adipose PCB slightly higher than post for all treatment groups.</p> <p>PCB levels increased in controls.</p> <p>Changes in cholesterol, etc. did not correlate with PCBs.</p> <p>All patients reported marked improvement post-treatment with most retained at follow-up.</p>	<p>“ There were no drop-outs and no complications were noted due to the tissue sampling.”</p> <p>“ No new signs and symptoms appeared during the course of the study. All participants had a steady body weight and blood pressure. The symptoms improved markedly in all treated patients.”</p> <p>Those treated with concurrent diseases included diabetes, ulcer, gall stones, prostatitis, colonic diverticulosis.</p>	<p>“ This study presents, to the best of our knowledge, the first attempt to monitor PCB body burden reductions in a group with such elevated initial levels. Although the high variability of PCB levels in this small group did not allow definite statements based on statistical significance, a clear reduction in PCB levels was observed in those patients without concurrent medical disease.</p> <p>“These reductions, along with the observed improvements in the clinical picture for all treated patients, suggest that this is a method to consider in the treatment of symptomatic individuals who have accumulated persistent lipophilic chemicals.”</p>



1993

Proceedings: 1993 Int. Conference on Peripheral Nerve Toxicity.

Name of Paper: “Neurotoxicity and Toxic Body Burdens: Relationship and Treatment Potentials”

Authors: RM Wisner, DE Root, M Shields, SL Beckmann

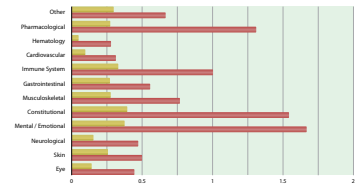
Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
Unspecified	48 patients exhibiting neurotoxic symptoms.	Standard chemical panels plus symptomology. Neurometer (transcutaneous nerve stimulator): Quantitative assessment of current perception threshold (CPT) in Trigeminal Median, and Peroneal nerves at 5 Hz, 250 Hz, and 2000 Hz.	Marked reduction in symptoms. Improvements in CPT noted in all nine tests, statistically significant (p<0.05) in 3 of the 9.	No complications or safety issues noted.	“We conclude that reduction of chemical body burdens is a logical approach to address health effects consequent to chemical exposure.”

1995

Presented at: 123rd Annual Meeting of the American Public Health Association (San Diego, 1995)

Name of Paper: “Reduction of Drug Residues: Applications in Drug Rehabilitation”

Authors: M Shields, S Beckmann, F Tennant, RM Wisner



Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Cocaine, meth-amphetamine, benzodiazepene</p>	<p>8 clients in residential drug rehab treatment (Narconon)</p> <p>249 clients with history of drug abuse listed symptoms before and after treatment.</p>	<p>Drug metabolites detected by fluorescent immunoassay in sweat and urine.</p> <p>Group of 249 filled out symptom questionnaire pre and post-sauna treatment.</p>	<p>Drug metabolites were detected in all clients in both sweat and urine.</p> <p>Following start of treatment metabolite concentration increased in either sweat or urine in 5 cases. In 2 cases, drug level was below detection prior to treatment but became detectable during detoxification. Drugs continued to be eliminated for up to 5 weeks.</p> <p>249: Prior to treatment, chief complaints included fatigue, irritability, depression, intolerance of stress, reduced attention span, decreased mental acuity... Following treatment, both past and current users reported marked improvements in symptoms with most returning to normal range. Statistically significant for 82 of the 87 symptoms, highly significant for 74 including the chief complaints of this population.</p>	<p>“The detoxification method developed by L. Ron Hubbard has previously been shown safe and effective in reducing levels of various chemicals in humans, including PCBs and pesticides, and in decreasing the adverse signs and symptoms associated with exposure to these chemicals.”</p>	<p>“Use of this detoxification program at Narconon is based on the premise that drug residues remain in body tissues long after active use has ceased and that these residues contribute to both persistent symptoms and the craving for drugs.</p> <p>“This study demonstrates that the detoxification program developed by Hubbard is effective in alleviating many of the symptomatic complaints reported by drug users.</p> <p>“Individuals report marked reductions in drug craving following this program.</p> <p>“Considering the high level of recidivism in drug users, the potential effects of drug residues on recidivism, and the alleviation of these effects through detoxification, it becomes evident that detoxification treatment has broad application in the drug rehabilitation field.”</p>

1995

Presented at: 123rd Annual Meeting of the American Public Health Association (San Diego, 1995)

Name of Paper: “Treatment of Children with the Detoxification Method Developed by Hubbard”

Authors: RM Wisner, M Shields, S Beckmann

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Domestic and environmental (school) toxic exposure. The chemicals included: chlordane, 4 phenylcyclohexane, Aldrin & Dieldrin, heavy metals, paints & solvents</p>	<p>18 children from 10 families that grew ill after a known change in the environment.</p> <p>Ages at time of exposure were neonatal to 15.</p> <p>Ages at time of treatment were 4 to 21.</p>	<p>Patient-rated severity of 87 symptoms, pre and post.</p> <p>Chief complaints included headache, environmental sensitivity, fatigue, allergies, respiratory problems, recurrent infections.</p>	<p>On follow-up 87% reported long-term improvements in symptom profiles.</p> <p>One case history: A 14 year old girl and her whole family grew ill after misapplications of dieldrin to their home 2 years previously. The teenager had headaches, acne, nausea.</p> <p>Adipose tissue samples were taken pre and post: Dieldrin below detection. DDE (DDT metabolite) Pre 2.08 ppm Post 0.24 ppm</p> <p>After treatment, the girl reported improvements in headaches and acne.</p>	<p>“The standard Hubbard protocol was given to these children. However, there were physician modifications to allow for their decreased body size. In addition, extra attention was paid to clearly informing the patients as to the purpose of the program and its end point, so they knew what to expect and could communicate well with the supervisory staff.</p> <p>“Specific modifications included:</p> <ol style="list-style-type: none"> 1. Lower niacin starting (25 mg), incremental, and end point doses 2. Reduced oil doses to avoid gastric distress 3. Powdered vitamins (not pills) at less than adult doses made palatable in fruit juice mixes 4. Treatment intervals reduced to maximum of fifteen minutes—smaller body sizes having more rapid core temperature increases 5. Extra supervision to monitor: dehydration, overheating, and inadequate salt or mineral replacement 6. Total treatment time per day reduced to three hours 7. Additional dietary supervision.“ 	<p>“Familial chemical contamination will continue to occur in our modern society. Where children have become ill following chemical contamination, detoxification treatment provides a viable approach. The treatment is safe and provides long-term improvements in the health profiles of exposed children in-creasing their ability to become productive members of society.”</p> <p>“One case history: A 6 year old girl had been exposed in utero to “new carpet” fumes. Lab mice died when exposed to the same carpet for several hours. 4-phenylcyclohexane was suspected. Young girl was ill and unable to leave home or perform rudimentary tasks. After treatment, her task performance improved and she was able to go outside home and take art classes.</p>

Name of Paper:

- (0) "Detoxification in Obninsk - An Overview"
- (1) "Detoxification Process Peculiarities in Kazakhstan,"
- (2) "Dynamics of Immune System Parameters during Detoxification Treatment,"
- (3) "Assessment of Antioxidative and Phagocytic Status of Organism during Detoxification of Persons Contaminated with Radionuclides in Territories of Briansk"

(These were among a series of papers delivered by Russian/Kazakh/Ukrainian scientists on the delivery of the Hubbard sauna detox protocol to clean-up workers after the Chernobyl nuclear reactor explosion)

Authors: (1) RS Zhaparkhanova, BA Ospanova, (2) BP Surinov, VG Isaeva, (3) GI Sazhenin, EM Parshkov

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>1) Effects of severe radiation exposure (Chernobyl workers received 17 - 25 ber.)</p> <p>(Note: A 'ber' is a Soviet era measurement of radiation received, approx. equivalent to 1 RAD.)</p>	<p>1) 78 Kazakh workers living near nuclear test sites + 10 Chernobyl Atomic Power Station (ChAPS) disaster clean-up crewmen.</p> <p>2) 28 ChAPS workers.</p> <p>3) Same group of 28.</p>	<p>1) Symptoms during and after treatment.</p> <p>2) Serum levels of immunoglobulins (IgG, IgM, Iga) and thymus function.</p> <p>3) Functional activity of blood polymorphonuclear leukocytes and antioxidative activity of plasma, at start, middle, and upon conclusion of treatment.</p>	<p>1) Restimulations experienced by the ChAPS workers manifested as [transitory] weakness, shortness of breath, headache, giddiness, bad sleeping, depression, pain in bones, spine, and internal organs, shivering.</p> <p>Kazakh workers passed with less pain and insignificant manifestations. All patients then completed successfully.</p> <p>2) "Immune parameters of patients who entered treatment with disturbed immunity returned to normalized condition. Positive effects appeared to continue after completion."</p> <p>3) "For patients with initially deviated levels of the above parameters, detoxification normalized these parameters by the end of the course of treatment...This strongly indicates a general improvement of the organism and an increase in its resistance to environmental challenges as the result of detoxification treatment."</p>	<p>0) "No side effects, e.g., psychological and physical discomfort, significant disturbance of basic regulative and vital systems, were noted either at the initiation of or during the course of detoxification treatment."</p>	<p>0) Twenty-eight members of the group successfully completed the full detoxification protocol. All of them were discharged with significant improvement in their state of health by both subjective and objective criteria."</p> <p>1) "IQ increased by 10 units on average, with the patients reporting a sense of cheerfulness, lightness and renewed energy."</p> <p>2) The results indicate that the program of detoxification improves the condition of the immune system.</p>

1998

Proceedings: International Post-Emergency Response Issues Conference (Wash DC, Sept 1998), Co-sponsored by EPA, CDC, DOD, FEMA, etc

Name of Paper: “Rehabilitation of a Chernobyl Affected Population Using a Detoxification Method”

Authors: AF Tsyb, EM Parshkov, J Barnes, VV Yarzutkin, NV Vorontsov, VI Dedov (A cooperative effort between the Medical Radiological Research Center of the Russian Academy of Sciences and International Human Detoxification Services (Great Britain))

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Health effects from exposure to severe radiation.</p>	<p>24 males (long-term residents of radioactive contaminated area), randomly selected.</p> <p>This paper is a summary of all the Chernobyl papers presented at the Stockholm 2nd International Detoxification Conference in 1997.</p>	<p>In addition to standard physical examination and clinical tests, special examinations were conducted to determine various physical responses to the program (extended biochemical blood tests; cellular and humoral immunity status evaluations, assay of thyroid hormone levels, estimation of antioxidant activity in the blood serum, and evaluation of the functional activity of neutrophils).</p> <p>Diagnostic psychological evaluations.</p> <p>Functional state of the heart, liver, kidneys, and pancreas was conducted. In addition, lipid exchange and micro-element metabolism were monitored.</p> <p>In all, twenty-two biochemical parameters of the blood were evaluated.</p> <p>Functional status of each patient’s immune system.</p>	<p>“At the end of the detoxification program the level of integral antioxidant activity returned to the initial activity in almost all the patients. A year after the completion of the program, the level of antioxidant activity was found to have increased 2-3 fold over the pre-detoxification levels. This finding suggests that detoxification may have rehabilitated the immune system, and that these levels reflect the body’s now more successful resistance to the chemically and radiologically contaminated environment.”</p> <p>“Follow-up examinations of the participants conducted at 1 and 9 months after the completion of the program indicated that chronic diseases present at the start of the detoxification study were in lengthy remission, and an improvement in resistance to acute respiratory diseases was noted in a number of patients.”</p>	<p>See findings to the left and right of this column.</p>	<p>“There is evidence suggesting that the program revitalizes the immune system and improves the general physical condition of the participant. In spite of its robust regimen, there is an absence of negative health effects. While out of normal range fluctuations of several key biochemical parameters were noted during the process, the deviated parameters renormalized upon completion of the course of treatment.</p> <p>“In addition, the detoxification program devised by Hubbard possesses a powerful psychotherapeutic potential that has been associated with significant improvement in the general health of the participant. Increases in physical and mental endurance, activity level and resistance against stress can be expected.”</p>

2001

White Paper: “Chemical Contamination and Human Detoxification: A Review of Results from the Method Developed by L. Ron Hubbard”

Authors: JG Barnes, DE Root, Carl Smith

(Quoting here only from the section by Dr. David E. Root concerning his 20-year occupational health practice.)

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Highly varied. See groups treated to right.</p>	<p>3,500 persons treated falling in these general classifications: Occupational exposures; illicit drug abuse; prescription drug abuse; and large group exposures (veterans of the Vietnam and Gulf Wars, Chernobyl and WTC rescue workers, etc.)</p> <p>+ 2 Gulf War Case Histories (Presented to a Congressional Hearing on this issue.)</p>	<p>Gulf War Case 1: Marine Lt Col ingested pyridostigmine bromide tablets and used clothing impregnated with DEEP permethryn, and received anthrax vaccine. Complaints: Multiple joint, muscle and tendon pains, headaches, fatigue, memory problems, irritability, lack of energy and sleep problems.</p> <p>Gulf War Case 2: Marine Lance Corporal, stationed in Kuwait where oil fires burned, also took pyridostigmine bromide tablets and had clothing impregnated with DEEP permethryn, also exposed to lindane for delousing of prisoners. Skin rashes, knee and shoulder pain, as well as cough producing black sputum, multiple muscle aches, slurred speech, dizziness, nervousness.</p>	<p>“Marked improvements have been noted in individuals with a significant chemical exposure history, and who had manifested so-called “multiple chemical sensitivity syndrome.”</p> <p>“Symptom improvement in such cases has not been less than 30 percent, with many cases achieving improvement of 70 - 100 percent.”</p> <p>Gulf War Case 1: After treatment, he felt that his symptoms were at least “95% improved.”</p> <p>Gulf War Case 2: Post-treatment he felt at least “80 to 90% improved” compared to pretreatment levels of symptomatology.</p>	<p>“One of the most noteworthy findings in the work done over the last 20 years is the absence of negative effects resulting from the regimen itself. For example, the total absence of iatrogenic effects in a group of 3,500 individuals treated in a clinical setting is remarkable.</p> <p>“As long as the contraindications are observed, and the protocol developed by Mr. Hubbard is followed, detoxification clearly poses no risks.</p> <p>“From time to time, questions arise whether the levels of niacin used in the program could be hepatotoxic. Liver damage is a well documented, if un-common, effect associated with sustained release niacin, but this is not the case for the crystalline form of niacin that is utilized in the Hubbard protocol.”</p>	<p>“The pace of research and regulative reform is extremely slow—the order of magnitude of decades, in most cases. In the meantime, accumulated toxins have the potential to poison on a continuous basis. What is certain is that the substances in question are not nutrients, and are not integral to normal biologic functions.</p> <p>“While much work can yet be done to document specific benefits and explore varied applications, two decades of research projects have established firmly that the detoxification program developed by Mr. Hubbard is an effective means to reduce the body burden of synthetic chemicals.”</p>

2005

Presented at: The Third International Conference on Chemical Contamination and Human Detoxification, Hunter College, New York, NY, Sept 22-23, 2005

Name of Paper: “Dynamics of the main systems of the body in the course and after the detoxification program”

(Pooled analysis of three detoxification trials in Russia following the Chernobyl reactor disaster)

Authors: E Parshkov, V Sokolov, A Proshin, V Doroshchenko, J Barnes, S Gaiman

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Health response to severe radiation exposure.</p> <p>1991, 1995, 1996 and followed up until 2005.</p>	<p>40 clean-up workers after the Chernobyl nuclear reactor explosion.</p> <p>(See 1997 and 1998 papers.)</p>	<p>Comparison of the health parameters of the participants of the sauna detoxification program — 370 parameters per patient quantitatively evaluated.</p> <p>Same parameters with a control group matched for age, gender, location of residence — applicable because of long-term exposure to radioactive fallout, etc.</p>	<p>“Results of the study showed, that positive changes occurred not only in the objective characteristics of physiological adaptation, but also in the subjective self-estimation of the individuals.”</p>	<p>“Detoxification markedly improved the general physical and psychological conditions of the participants. There was an absence of negative health effects.”</p> <p>“No decompensated disorders of major regulatory and life maintaining systems were revealed.”</p> <p>“No post-treatment parameters were worse than the individuals in the control groups, and some parameters are better. This clearly demonstrates that the program has no deleterious long-term effects.”</p>	<p>“In accordance with the results of this study, the detoxification program developed by L. Ron Hubbard may be recommended for application in clinical practice for the general rehabilitation of the body and the withdrawal of toxins.”</p>

2005

Presented at: The Third International Conference on Chemical Contamination and Human Detoxification, Hunter College, New York, NY, Sept 22-23, 2005

Name of Paper: "Sauna Detoxification: A treatment program for veterans who have symptoms associated with chemical exposure."

Authors: DE Root

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Case 1: Chemicals and unknown particles contained in smoke after World Trade Center (WTC) disaster,</p> <p>Case 2: Kuwait burning oil field toxins, DEET, permethrin, pyridostigmine bromide (Marine Corps Lt Col, case covered in 2001 White Paper.</p> <p>Case 3: Desert Storm chemical mix.</p> <p>Case 4: Vietnam Agent Orange, WTC clean-up toxins,</p>	<p>Four Case Studies:</p> <p>Case 1: US Army National Guard pilot volunteered 6 months at WTC. Subsequently hospitalized for asthma and pneumonia. Many other symptoms. Taking 10 meds daily at start of treatment.</p> <p>Case 3: Wife of Lt Col in Case #2 who was collaterally exposed to Desert Storm chemicals.</p> <p>Case 4: 56 yrs old, exposed 36 years ago to Agent Orange. Volunteered in WTC disaster clean-up.</p>	<p>Comprehensive health work up on all cases:</p> <p>Laboratory tests included CBC, comprehensive metabolic panel, thyroid panel, lipid panel, ECG, and urinalysis.</p>	<p>Case 1: Discontinued all prior medications. Following course of treatment, he applied to restore flight status. Through the Army Medical Center he completed a careful general internal medicine evaluation and a series of comprehensive specialty assessments. Army records indicated his irritable bowel syndrome, cough and breathing completely resolved and stated "he is now able to run 5 miles in 50 minutes." He passed all tests, was deployed to Iraq, and then received flight clearance.</p> <p>Case 3: During her program she noted yellow tan stains on her towels and at times black spots. She also experienced night sweats and recurring skin acne (which cleared up.) By treatment completion she had fully regained her energy levels and had returned to regular exercise. Her PAP tests and menstrual cycles also returned to normal.</p> <p>Case 4: Diagnosed with bronchitis and treated with antibiotics that did not help. Many other mental and physical symptoms impairing his life. By treatment completion his symptoms had completely resolved.</p>	<p>All discomforts and changes during the sauna treatment were transitory and ceased by treatment completion with full recovery, or nearly so, to complete patient satisfaction.</p>	<p>Case 1: Currently directing all National Guard rescue efforts in New Orleans following the destruction of hurricane Katrina, he stated: "To my knowledge, a recovery of this nature has never happened before."</p> <p>Case 3: "Prior to her husband's return from deployment her exercise habits included resistance training and daily 6 mile jogs. At her enrollment physical exam in September 1996, she stated she was no longer able to do this due to fatigue and joint discomfort... By treatment completion she had fully regained her energy levels and had returned to regular exercise."</p> <p>Case 4: "I can go a couple of weeks without coughing once. That's not a small improvement. That's an unbelievable improvement."</p>

Presented at: The Third International Conference on Chemical Contamination and Human Detoxification, Hunter College, New York, NY, Sept 22-23, 2005

Name of Paper: “Sauna detoxification of metals, pesticides and chemicals: Addressing the background exposures and increasing health problems of an industrial society.”

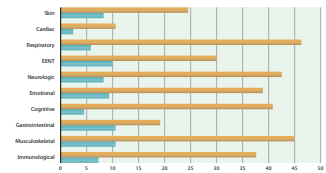
Authors: CG Maulfair

Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>“The following three cases are similar in that none had a known exposure incident. We surmise an etiology of gradual exposure and increased body burden that occurred over time and resulted in disease... Routine metals testing showed toxic levels of various heavy metals”</p>	<p>Case 1: 45 yr old female - A good health history except for mild familial glaucoma, persistent bleeding gums, and migraine headaches</p> <p>Case 2: 40 yr old female - Chief complaints: High sensitivity to chemicals and various nervous, endocrine, circulatory, allergic and skin symptoms. She had tried 15 prescription meds and 5 over-the-counter.</p> <p>Case 3: 38 yr old female: Serious mood swings, fatigue, dizziness, and some gastro-intestinal problems.</p>	<p>Case 1: Test results were within normal ranges except for mineral evaluation which revealed significant toxic metals and urine hormone which indicated low normal estrogen. She was diagnosed with heavy metal overload. Fat biopsy also indicated pesticides.</p> <p>Case 2: Laboratory tests included hair and red blood cell trace mineral analysis,, comprehensive stool analysis, CBC, comprehensive metabolic panel, 24-hour urine hormone collection, urinalysis, metals. Tests revealed significant intestinal dysbiosis and malabsorption, anemia, significant toxic metal overload, low estrogen levels.</p> <p>Case 3: Same tests as above. Normal range except for significant heavy metal load.</p>	<p>Case 1: A persistent rash that existed prior to treatment resolved as did the tendency of her gums to bleed, which did not reoccur after treatment.</p> <p>Case 2: Transitory stinging and burning of scalp and smell of ammonia in sweat (attributed to hair relaxer used for years). Also transitory skin rashes and patter of scalp burns. All disappeared. Fecal metal analysis during the program showed elimination of many metals including antimony, arsenic, beryllium, tungsten and uranium.</p> <p>Case 3: Fecal metal analysis during the program showed elimination of many metals especially mercury, arsenic, copper and uranium. Many substances appeared in her sweat along with distinctive odors (“One day she smelled like mosquito repellent for several hours.”)</p>	<p>Significant transitory phenomena accompanied the procedure of toxins sweating out. All diminished and disappeared with full recovery by end of treatment.</p>	<p>Case 1: “...most incredibly I have such a sense of well being. After being diagnosed with cancer I felt anxious about my future. I was sure there was an environmental factor at play and was uncertain how to handle this issue. The purification program was my answer. I truly believe I have been given back my life.”</p> <p>Case 2: “The first thing I noticed was the improvement in my blood circulation, my fingers and toes used to be white, almost blue, and painful ...I have also noticed a decrease in joint pain. My past scalp irritations due to chemical relaxers caused sensitivity and burning... are now healing well. My visual perception increased and I am more aware of my surroundings, my friends have noticed I have lost weight. I am more energetic and feel happy.”</p> <p>Case 3: “I now have more energy, in fact a lot of energy. I feel more connected and emotionally alive. Friends say I look healthier; my eyes are expressive and clear...You accomplish sooo much in such a short period of time. Thank you.”</p>

Publication: The Townsend Letter (April 2006, #273)

Name of Paper: “Chemical Exposures at the World Trade Center: Use of the Hubbard Sauna Detoxification Regimen to improve the Health Status of New York City Rescue Workers Exposed to Toxicants.”

Authors: MA Cecchini, DE Root, JR Rachunow, PM Gelb



Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Complex array of toxins in the smoke and air during rescue and recovery work after the World Trade Towers collapse.</p>	<p>First Three Years: Review of 484 cases (Sept 2002 - Sept 2005). 273 firefighters, 52 sanitation workers, 19 paramedics, 23 police officers, and 117 others.</p> <p>63 left the program prior to completion (87% completion rate.)</p> <p>All were referred to the project because of persistent symptoms following exposure to WTC toxins.</p>	<ol style="list-style-type: none"> 1. Structured medical exam. 2. Comprehensive Health History and Symptom Survey (developed specifically for this project). 3. IQ testing. 4. Panel of standard laboratory tests including CBC, comprehensive metabolic panel, thyroid panel, ECG, and urinalysis. 	<ul style="list-style-type: none"> • All clients reported improvement in subjective symptoms. • All clients reported improved perception of health. • Health History and Symptom Survey: Prior - 4.4 days of limited activity or 2.1 missed days. Post - 0.2 days missed or limited activity (including days doing the program.) • Due to symptom improvement, 84% of those clients requiring medications to manage symptoms related to WTC exposure were able to discontinue their use. • Over half the clients required multiple pulmonary medications on entry to achieve near-normal pulmonary functions. On completion of detoxification, 72% of these individuals were free of pulmonary medication yet had improved pulmonary function tests. • There was a statistically significant improvement in thyroid function tests. • There was a statistically significant improvement in Choice Reaction Time (CRT) and Intelligence Quotient (IQ), suggestive of improvement in cognitive function. • Statistically significant improvement in Postural Sway Test indicated improvement 	<p>“The Hubbard method is the only such treatment being offered to New York rescue workers. The improvements attained in almost 500 cases argue for broader implementation of the program, supported by additional evaluation and research efforts.”</p> <p>(See also ‘Changes Observed’ column - left.)</p>	<p>“While the data presented in this paper was collected in the context of routine outcome monitoring rather than in a controlled study, the results are encouraging. The number of WTC-exposed individuals (more than 500) who have achieved the rehabilitative goals of sauna detoxification therapy – restoring quality of life and job fitness – is significant.</p> <p>“The improvements in self-reported symptoms, an indication of a marked return to wellness, are supported by reduced need for medication.</p> <p>“These findings are further confirmed by objective measures.</p> <p>“This regimen has greatly reduced the number of work days that rescue workers miss due to illness, and has resolved anxieties that careers will end prematurely in disability retirement.</p> <p>“Anecdotal reports from spouses, family members, and employers describe dramatic changes in the quality of family life as a result of such improvements.”</p>

Publication: Chemosphere (peer-reviewed)

Name of Paper: “Persistent organic pollutants in 9/11 World Trade Center rescue workers: Reduction following detoxification”

Authors: J Dahlgren, M Cecchini, H Takhar, O Paepk

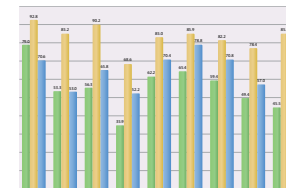


Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
PCBs, PCDFs, PCDDs	7 men (present at the collapse and involved in the cleanup of the World Trade Center towers) who subsequently developed symptoms that remained unresolved with time.	<p>Thorough medical examination, structured health and symptom questionnaires, and neurophysiological testing.</p> <p>All tests, evaluations, and sample collections were repeated approx. one month after initial testing in order to provide a comparison.</p> <p>Then they received the Hubbard sauna treatment protocol.</p> <p>On completion of treatment, all subjects had their blood drawn for post-treatment evaluation.</p>	<p>“Subjects reported a similar pattern of health complaints and manifested symptoms including respiratory impairment, mental/emotional distress (two met PTSD criteria), decreased sensory systems, chronic muscle and joint pain, gastrointestinal disorders, and skin rashes.</p> <p>“These symptoms were completely resolved or were satisfactorily improved on completion of treatment. The neurophysiological test results also improved.</p> <p>“Many congeners (of the PCBs etc.) were found at elevated levels, in ranges associated with occupational exposures. Post-detoxification testing revealed reductions in these congeners and despite the small study size, some reductions were statistically significant.”</p>	No complications or safety issues noted.	<p>“Health symptoms completely resolved or were satisfactorily improved on completion of treatment...”</p> <p>“The persistent symptomatology and its successive improvements with detoxification is consistent with medical records from the nearly 400 WTC-exposed men and women who completed detoxification treatment.</p> <p>“This pilot study is limited by its small sample size. No relationships can be inferred between the PCB contamination found and the observed symptoms, or between reduction in these levels and the improvements following treatment.</p> <p>“However, it is interesting that studies evaluating the adverse effects of high levels of PCB exposure commonly list neurologic, immune and neuroendocrine effects, neurobehavioral effects, rashes and acne, nausea and other gastrointestinal problems. Occupational studies suggest that exposure to PCBs may also cause irritation to the nose and lungs, blood and liver changes, fatigue, and depression.”</p>

Publication: Toxicology and Industrial Health (Nov 2011) (Peer - reviewed)

Name of Paper: “Methamphetamine exposure and chronic illness in police officers: Significant improvement with sauna-based detoxification therapy”

Authors: GH Ross, MC Sternquist



Toxins Treated	Group Observed	What was Measured	Changes Observed	Complications / Safety	Conclusions / Discussion
<p>Methamphetamine and related toxic chemicals from extended contact plus smoke inhalation, etc.</p>	<p>69 police officers, narcotics agents, etc. exposed to methamphetamine and other toxins in raids on meth labs in Utah, who subsequently grew ill.</p> <p>Symptoms present in more than 50% of officers included:</p> <p>fatigue 96%, insomnia 91%, headaches 90%, heartburn 81%, personality changes 78%, numbness in hands and/or feet 77%, memory loss 77%, allergic history 75%, poor concentration 75%, back and joint pains, shortness of breath on exertion, skin irritation, anxiety/depression, abdominal gas/pain, etc.</p>	<p>Pre and Post:</p> <ol style="list-style-type: none"> 1. RAND SF 36 Scores (change in health-related quality of life) 2. 50-item Symptom Severity, poor health days, sleeping patterns. 3. 13-item Neurotoxicity questionnaire. 4. Mini-Mental State Examination. 	<ol style="list-style-type: none"> 1. Post-treatment, the officers' health-related quality of life scores showed statistically significant improvements when compared with pre-treatment scores ($p < 0.001$) across all subscales, 2. Symptom severity scores were significantly reduced post-treatment for all scales. ($p < 0.001$) Days reporting poor physical or mental health, limited activities due to poor health, or sick days were all significantly reduced. ($p < 0.001$) Participants' sleep improved from 5.8 to 7.6 average ($p < 0.001$). 3. The mean pre-treatment neurotoxicity score was 65.5 (SD 24.8), while the post-treatment mean score was 14.6 (SD 11.5) ($p < 0.001$). 4. No measurable change was detected comparing mean pre- and post-treatment scores 	<p>“Mean treatment length for the 64 patients who completed the treatment was 33 days (range: 15–56 days). For the 5 who did not complete the treatment, the mean treatment length was 29 days (range: 23–25 days). Reasons for discontinuation: inability to sleep the basic 6.5 hours minimum needed (1), gout (1), work or other schedule conflicts (3).”</p> <p>All other discomforts, physical or emotional, were transitory and did not require medical consultation or missing days. These included niacin flush, emotional swings, cough and congestion, flu-like symptoms with and without fever, headache, fatigue, stomach cramps, and body aches.</p>	<p>“When evaluated individually, some officers might appear to have a psychiatric diagnosis. When viewed collectively, however, the pattern could just as reasonably be interpreted as neurotoxic in origin. The Centers for Disease Control (2003) states. ‘Treating exposed persons by chemical syndrome rather than by specific agent probably is the most pragmatic approach to the treatment of illnesses caused by chemical exposure.’</p> <p>“To our knowledge, this is the first time a sauna-based ‘detoxification program’ has been evaluated in methamphetamine-exposed police officers. The vast majority completed the regimen with minimal discomfort or inconvenience, achieving significant reductions in their symptoms and measurably improved the health and quality of life. This suggests that this program could help similarly exposed police officers elsewhere.”</p>

Regarding the Use of Niacin (Vitamin B3)

The form of niacin that is used in the Hubbard program is crystalline niacin, also known as “immediate release” (IR) niacin. High doses of crystalline niacin have been used effectively as a therapy to prevent heart disease for more than 50 years 19-21.

“Overall, the perception of niacin side effects is often greater than the reality,” observes a recent review of safety considerations regarding the nutrient. Rare side effects, which resolve when niacin use ceases, can include reversible blurred vision, nausea and vomiting, and the exacerbation of peptic ulcers. Clinically unimportant and small «10%) laboratory abnormalities can include slower blood clotting, increased uric acid, and decreases in platelet count and serum phosphorus 22.

The “niacin flush” is the most bothersome side effect associated with this supplement. However, “with its transient and non-pathological effects, the flushing reaction in response to supplemental nicotinic acid deserves to be characterized as a nuisance, but not as a hazard” 23. The Coronary Drug Project tested safety and effectiveness of treatment with 1-3g/day for high cholesterol and coronary outcome. At a 1-year follow-up, mortality was reduced in the treated group 24.

In an effort to eliminate the “flush” response, “sustained release” (SR) forms of niacin were developed in the 1960s with, as one researcher characterizes it, “problematic results” 25. The primary concern with SR niacin has been a potential for chemically-driven liver damage (hepatotoxicity) 26.

When the term “niacin” is evoked in the context of detoxification, the distinction between the two forms is critical to addressing questions regarding program safety. As numerous studies have revealed, the health effects associated with the two forms are quite different.

These differences were demonstrated in a clinical trial comparing the effects of administering increasing levels of both crystalline (IR) and slow release niacin 27. The trial involved 46 adults. Half were given IR niacin, and half SR niacin. After an initial treatment period, doses were sequentially increased and participants received 1000, 1500, 2000 and 3000 mg/d of niacin, maintaining each dosage level for 6 weeks. None of the patients taking IR niacin developed hepatotoxic effects, while 12 (52%) of the 23 patients taking SR niacin did. Citing these findings, as well as case reports of adverse liver effects associated with the

use of SR niacin 28-42 the researchers recommended that its use be restricted. A reason has been discovered for the difference in effect from administration of the two forms of niacin⁴³, in essence that the differing absorption rates of the two different forms result in their entering different metabolic pathways 26-44. (A 1-g dose of IR niacin would be absorbed and metabolized within 2 hours, while absorption of a 1-g dose of SR niacin would take >20 hours 45.)

On one pathway, metabolizing of the IR form produces molecules that cause the “flushing” reaction. When niacin is absorbed slowly, as with SR formulations, a second pathway produces metabolites associated with hepatotoxicity 46,47. This phenomenon is reflected in case histories of individuals who developed liver abnormalities while taking SR niacin, and whose liver tests returned to normal after switching to IR niacin 30.

The issue of absorption has some relevance in considering the dosages of IR niacin used in the Hubbard program. These progress in stages, in balance with other nutrients, beginning at 100 mg/day and potentially reaching as much as 5 g/day’. It is important to note that many participants do not reach the

highest dosages. Program completion is generally accomplished in 30 days or less; consequently, the time spent at any given dose would be a matter of days.

While these dosages are above those recommended for dietary supplementation, they are consistent with those seen in therapeutic administration of niacin for management of elevated blood lipids. The monograph for Niacor (an FDA approved commercial niacin product) notes that the maximum adult dosage is 6 g per day. Doses of IR niacin as high as 6 g have been maintained for as long as 6 months with minimal effect and no impact on liver function 30 . Participants in the IR/SR comparison study mentioned above 28 received 3 g per day for six weeks with no hepatotoxic effects observed. Adverse effects associated with IR niacin intake are likewise absent in clinical delivery of detoxification to thousands of cases 5.

In 1998, the FDA approved an “extended release” (ER) form of niacin, with the trademark Niaspan. The ER form was developed in an effort to avoid both the flushing response to IR niacin and the hepatotoxicity associated with SR forms 42.

It is worth noting that drug users who inject drugs are at increased risk for Hepatitis C. In these cases, or where there is a history of liver disease, a physician must determine whether the

individual is a candidate for the detoxification program. A recent literature review suggests that IR niacin can be used safely in some patients with chronic liver disease with appropriate monitoring 47.

The above passage quoted from:

“The Use of Niacin in the Hubbard Detoxification Program” A FASE Science Report Foundation for the Advancements of Science and Education
Authors: Kathleen Kerr, MD, FASE Senior Research Associate

Carl Smith,
FASE Editor in Chief
Address correspondence to
carl.smith@fasenet.org

References:

5. Communication from David E. Root, MD, MPH, FACOEM, who was medical director of an occupational health clinic and oversaw each of the 3,500 cases on which these observations are based. Prior to entering private practice, Dr. Root was a career officer in the Air Force, serving as a flight surgeon and retiring as a Colonel. He has participated as a co-investigator in several studies relating to the program, including projects in the former

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