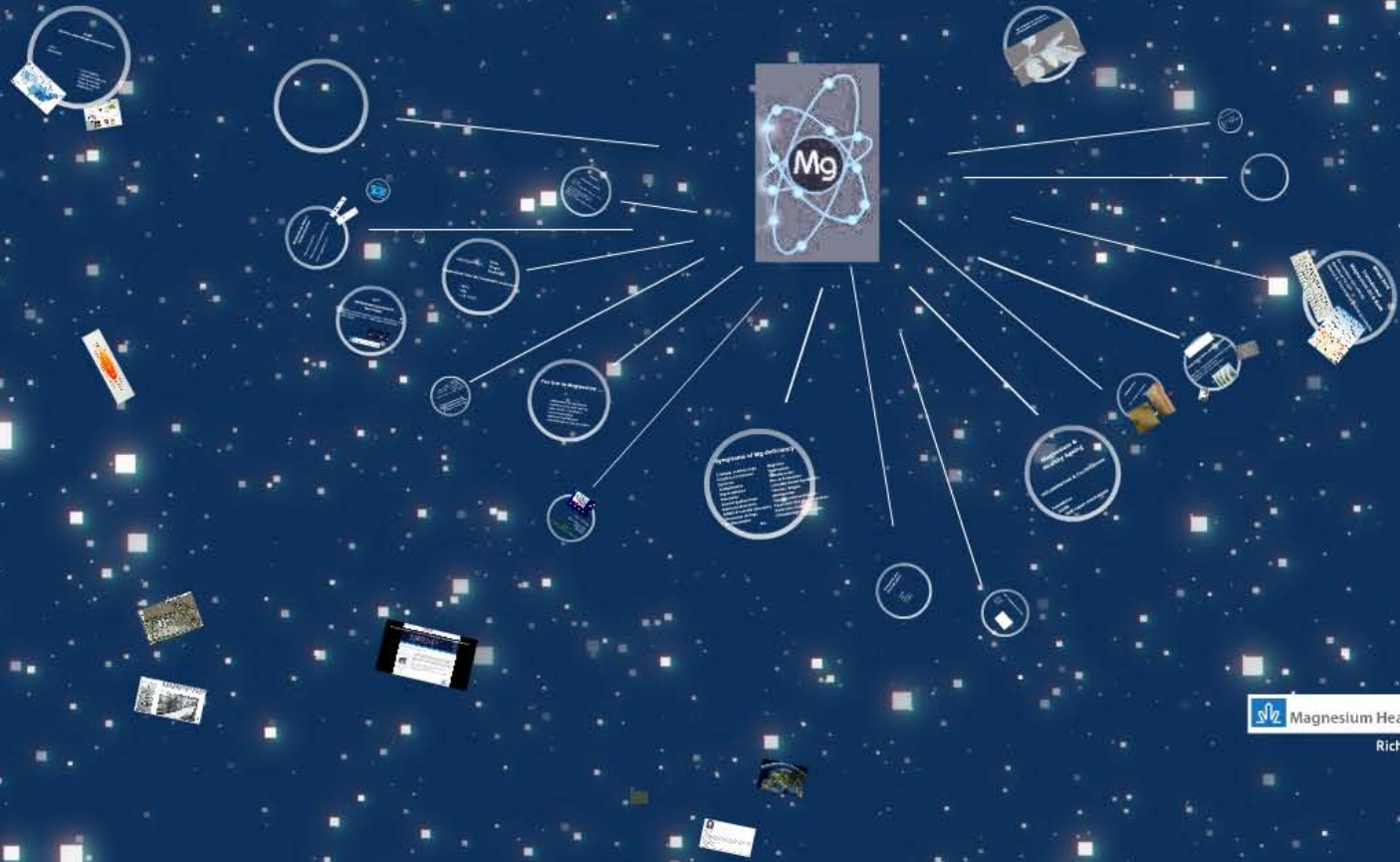
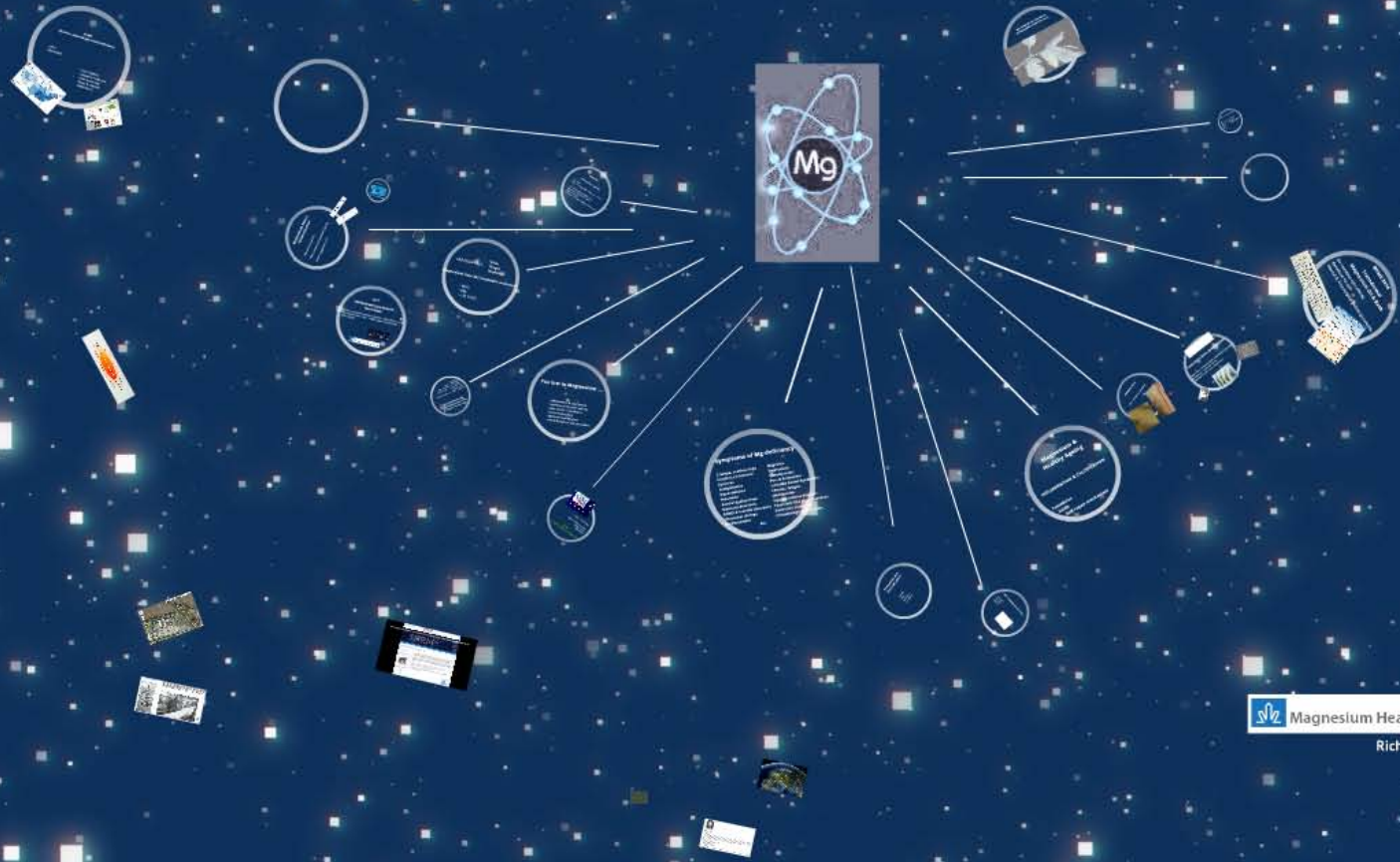


AN EXPERIENCE IN THE UNIVERSE OF MAGNESIUM



AN EXPERIENCE IN THE UNIVERSE OF MAGNESIUM





Magnesium Health Institute

Richard Danel, MD

A satellite view of Earth at night, showing the illuminated continents of Europe and Africa. The city lights are visible as bright yellow and white spots against the dark landmasses. The ocean is dark blue, and the sky is black with some stars visible.

CLMD is worldwide!
(Chronic Latent Magnesium Deficiency)



Ronald J. Elin, M.D., Ph.D.

A. J. Miller Professor and Chairman

Medical Education:

Dr. Elin received his M.D. degree in 1966 and Ph.D. with a major in biochemistry and a minor in pathology in 1969. During that time Dr. Elin completed residency training in anatomic pathology. After a straight medicine internship at the University of California Hospital at San Diego Dr. Elin went to the National Institutes of Health. Dr. Elin spent three years in the National Institutes of Allergy and Infectious Disease as a research associate and completed a clinical pathology residency. In 1975 Dr. Elin became the Chief of the Clinical Pathology Department and in 1977 the Chief of the Clinical Chemistry Service within that department; positions that Dr. Elin held until 1997. Dr. Elin moved to the Department of Pathology and Laboratory Medicine at the University of Louisville in 1997.

Specialties:

American Board of Pathology Anatomic and Clinical Pathology—1974

Subspecialty of Medical Microbiology—1976

Subspecialty of Chemical Pathology—1980

American Board of Medical Microbiology—1977

American Board of Clinical Chemistry—1980

Research Interests:

Dr. Elin has had a research interest in mineral metabolism, particularly magnesium, properties of endotoxin, interference with clinical laboratory testing, and definition of the reference range.

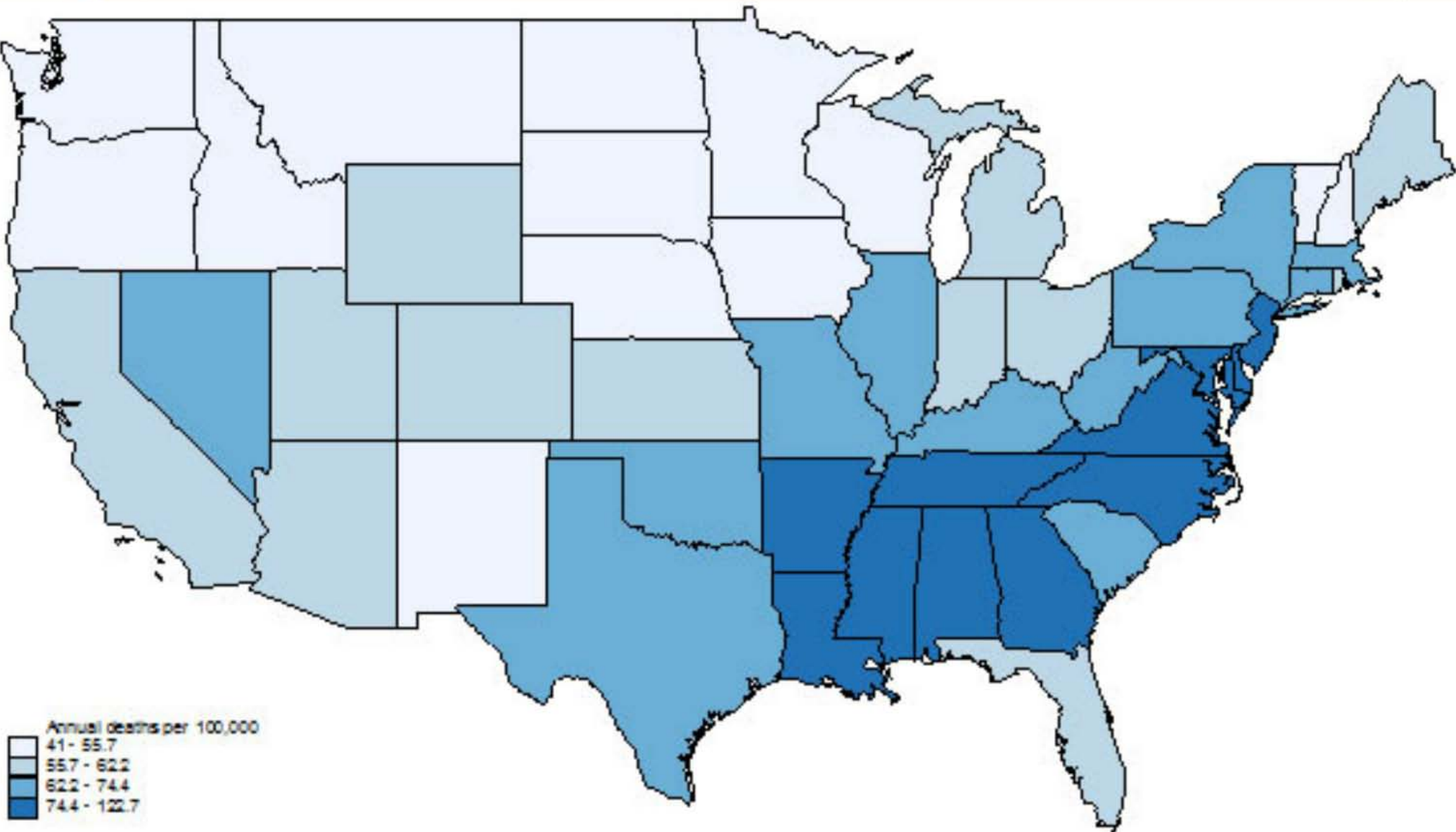
CLMD

Chronic Latent Magnesium Deficiency

- 1983
- Stroke Belt

- Soil Depletion
- Anorganic Fertilizers
- Food processing
- Stress & Lifestyle
- Medicines (!)







ANTACID CAUSES MAGNESIUM DEFICIENCY: Tip of the Iceberg?

PhD successfully defends thesis about magne

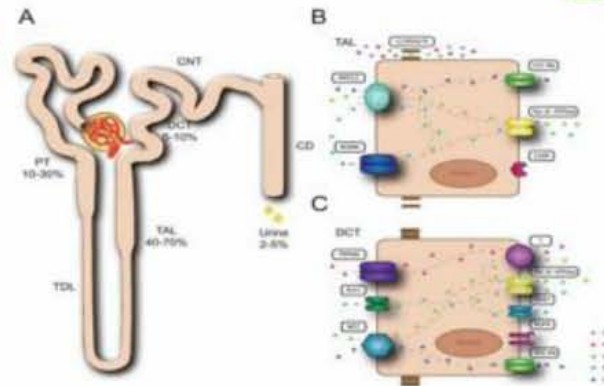
PhD defence Anke Lameris

Date: 4 February 2014
Time: 12.30 hrs
Location: Aula of the University
Speaker: Anke Lameris
Title: Divalent Digestion: Insight in Intestinal Ion Transport

More information:



Radboudumc



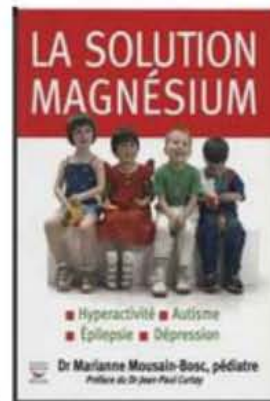
Tip of the Iceberg
Hundreds of drugs cause
magnesium deficiency
[Click to view list](#)

Dr. Marianne Mousain - Bosc fights against one of the most dangerous drugs: "Stop with **Methylphenidate** for children with ADHD, they need Magnesium in stead!"



Dr. Marianne Mousain

Read her epoch - making book:



[Click for French version](#)



[Click for Dutch version](#)

2016

**MAGNESIUM COMMUNITY
World Wide**

- Awareness (supplementation = inevitable / SDRM Mexico 2013)
- Which Supplement? / Elin--> MgCl₂ superb bioavailability!
- Which MgCl₂?



updated May 24, 2016

SDRM

International Society for the Development of Research on

The 'Magnesium Aware community' is rapidly growing. Worldwide and it's high time!

SDRM



- Events
- Membersh
- Reserved /
- Scientific S
- Contacts

Scientific Committee

President

Prof. Federica I. Wolf
Rome (Italy)



*"Dear Colleagues and
Friends..."*



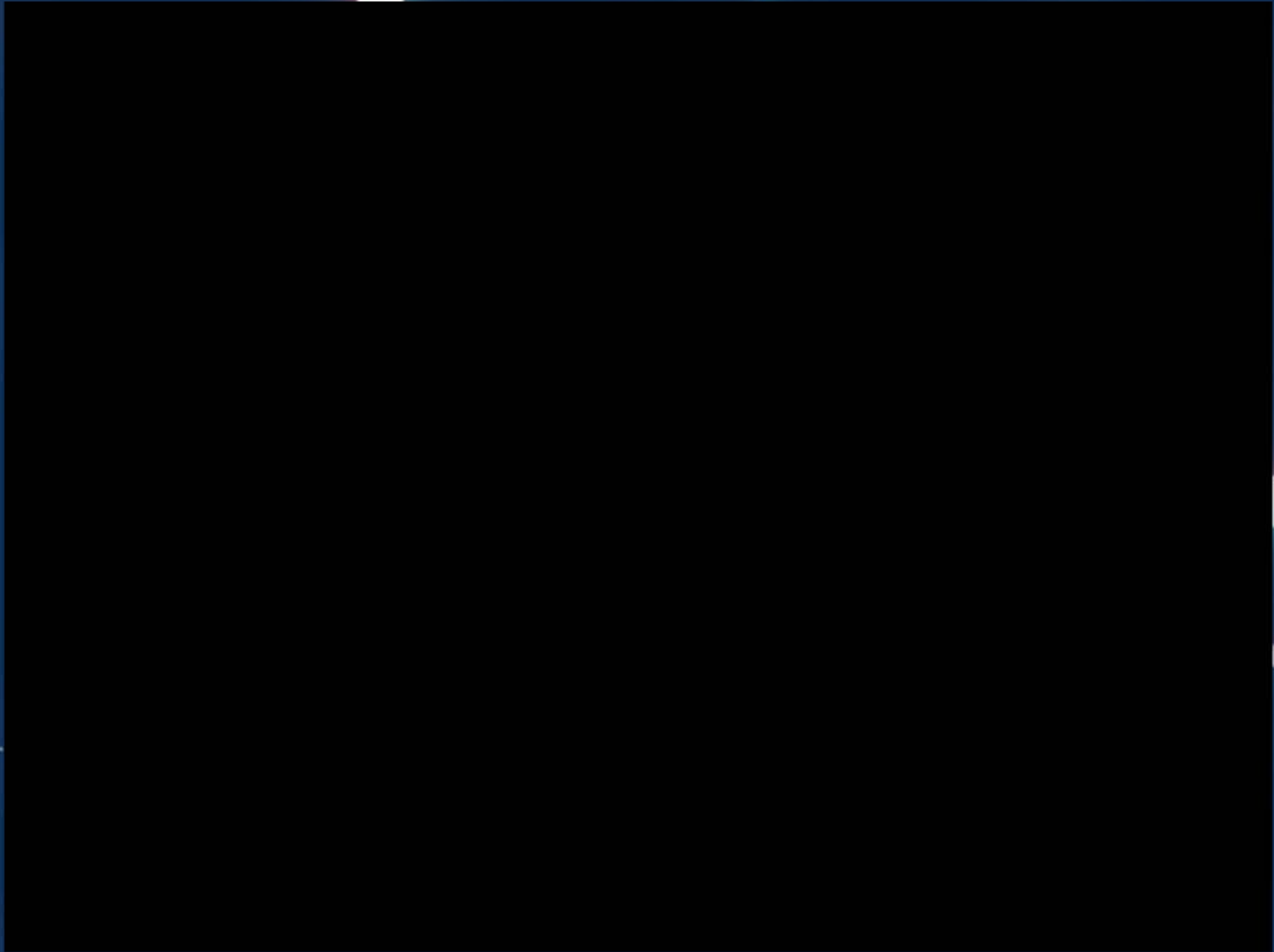
WELCOME TO SDRM

The International Society for the Development of Research on Magnesium (SDRM) is a non-profit organisation. The purpose of the Society is to promote magnesium research in all branches of life science and medicine by increasing the collaboration, diffusion and exchange of information. SDRM holds international scientific meetings and supports the publication and presentation of scientific results.

"Magnesium Research" is the official scientific JOURNAL of the Society:
http://www.magnesiumresearch.com/index_phtml

SDRM was founded in the '70s in Paris by a group of medical doctors under the leadership...[\(Read More\)](#)





LIFE ESSENTIALS

**Water
Oxygen
Magnesium**

Magnesium runs 327 enzymatic processes!

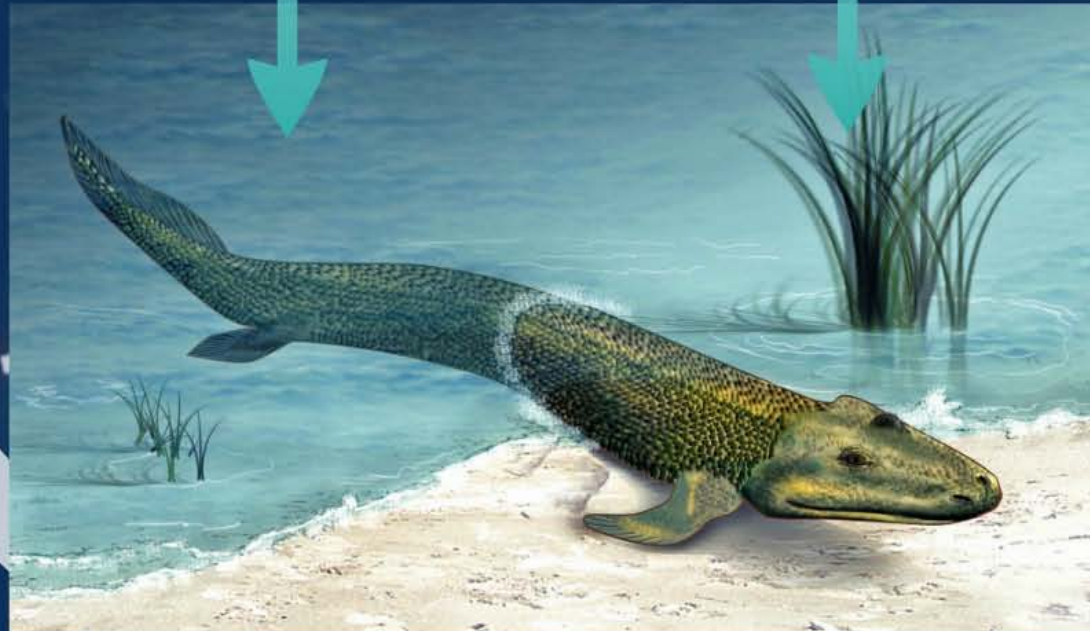
- WHO
- FDA
- < 50 % RDI

Water
Oxygen
Magnesium

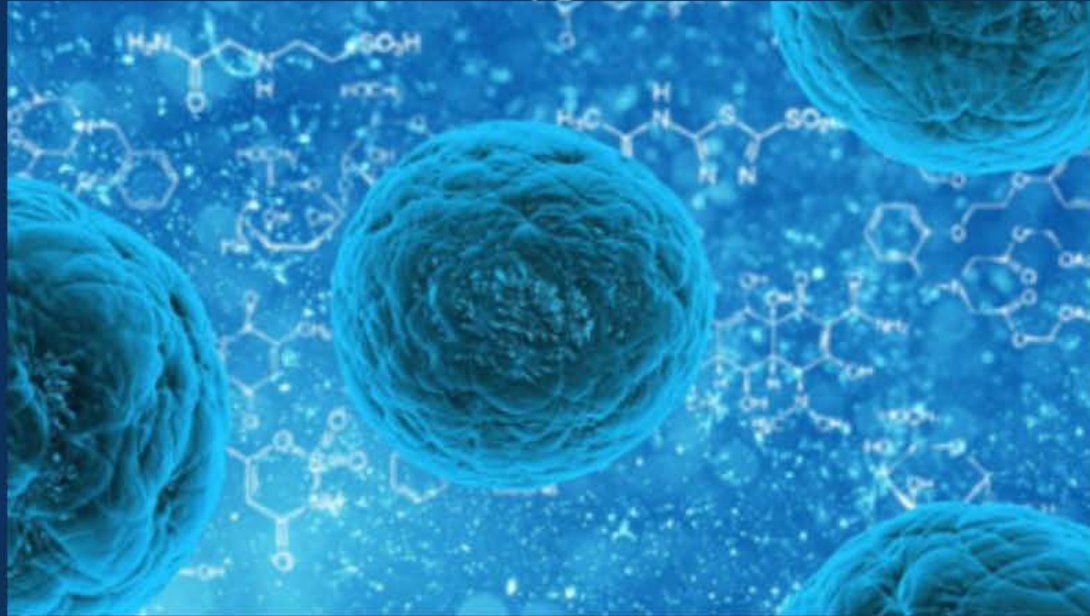
LIFE ESSENTIALS

in ocean
abundantly available

on land
smart approach needed



Interstitium



We carry our own Ocean

BREAKING!

MAGNESIUM & CANCER

Correlation

cancer and magnesium deficiency = proven

**Colo-rectal cancer, prostate cancer,
lung cancer, esophageal cancer,
pancreatic cancer,
EBV-driven (Burkitt, Hodgkin, sarcoma, etc.)**



**MAGNESIUM & PARKINSON
& ALZHEIMER**

INFLAMMATION

**& DIABETES
& METABOLIC SYNDROME
& HYPERTENSION
& STROKE
& CARDIO VASCULAIR DISEASE
& DEPRESSION
& PMS
& MIGRAINE
& - - - - -**

INFLAMMATION



Too low in Magnesium

- **Inflammation & calcification**
- **oxidative stress (free radicals)**
- **wide variety of conditions**
- **accelerated ageing**
- **aggravation of diseases**
- **intensification of pain perception**

What are the causes of magnesium deficiency in Western population?

- Anorganic fertilizers in modern agriculture
- Food processing
- High Calcium diet (Mg/Ca ratio!)
- Lifestyle (stress, stimulants, sugar, high sodium intake)
- Medicine

Symptoms of Mg-deficiency

Cramps, restless legs

Insuline resistance

Seizures

Arrhythmias

Hypertension

Insomnia

Sexual dysfunction

Memory disorders

ADHD & learnin disorders

Character change

Parkinsonism

Migraine

Depression

Osteoporosis

Pre- & Eclampsia

Irritable Bowel Syndrome

Chronic fatigue

Obstipation

Hypersensitive bladder

Psoriatic like skin disorders

Excessive sweating

Immunological disorders

etc.

Magnesium Status Determination

Appropriate test fails

What counts is Intracellular Free Mg

Serum magnesium = 1%

90% of the
total Mg is
in the
e- body

Mario Barbagallo
Magnesium and aging

in the lab
serum
Mg

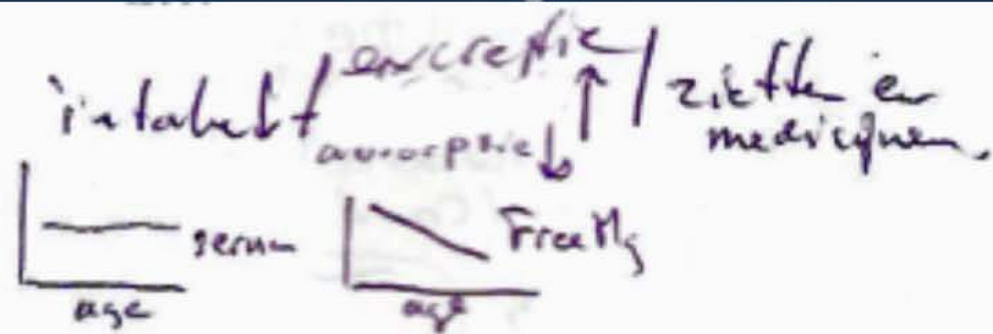
"These are the
survivors"

2011

de zeer sterke
hobby naar
Vijf Mg!

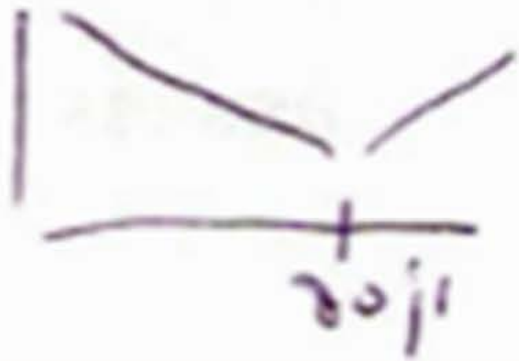
age-related
change in total Mg
in serum

1. Mario Barbagallo Magnesium and aging



T
"The

"These are the survivors"



de zeer sterke
hobby, meer
vrij MS!

Magnesium & Healthy Ageing

INFLAMMATION & CALCIFICATION

Telomeres

DHEA

Cell repair mechanism





Protection and Detoxification

Mercury

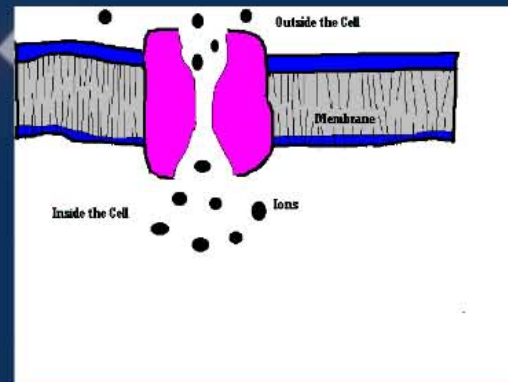
Lead

Cadmium

Aluminium


> 327 enzyme processes

'Chanzime'
Channels
Enzymes



Just in case you are still
confused **MAGNESIUM**
not **CALCIUM** is
the key to
HEALTHY BONES



 HealthyHolisticLiving.com

ent in bone metabo

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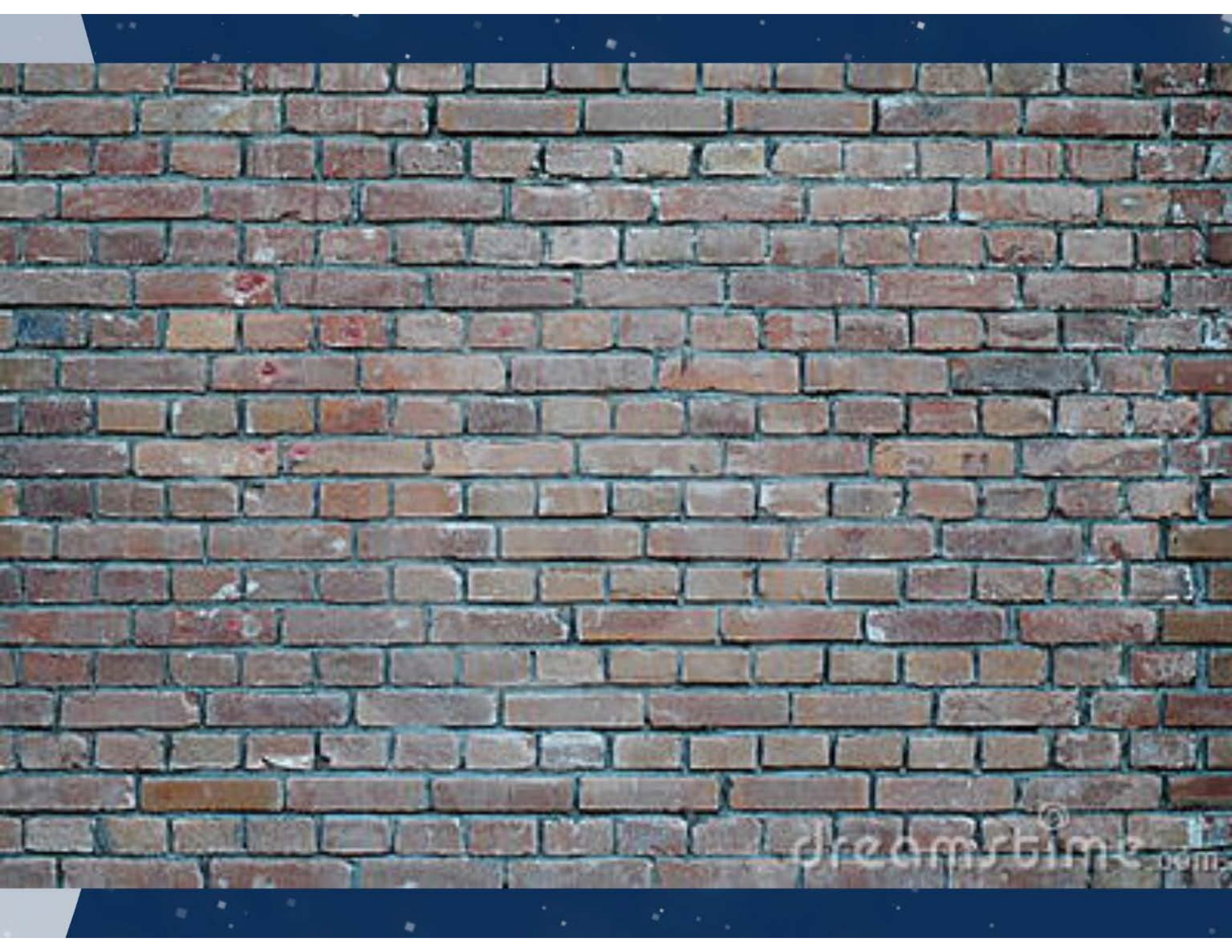


Cement in bone metabolism

Mg/Ca ratio is more important than absolute quantity
Netherlands = champion Ca-diet
Netherlands = champion osteoporosis







dreamstime.com

Food rich in Magnesium ?

Beans

Green vegetables

Nuts

Chocolate

Grains

Broccoli

Avocado

Food processing

Bodem depletion

CA/Mg ratio

Intestinal absorption is poor

Life style and excretion

**BECAUSE OF CA / Mg RATIO
SUPPLEMENTATION IS A MUST**

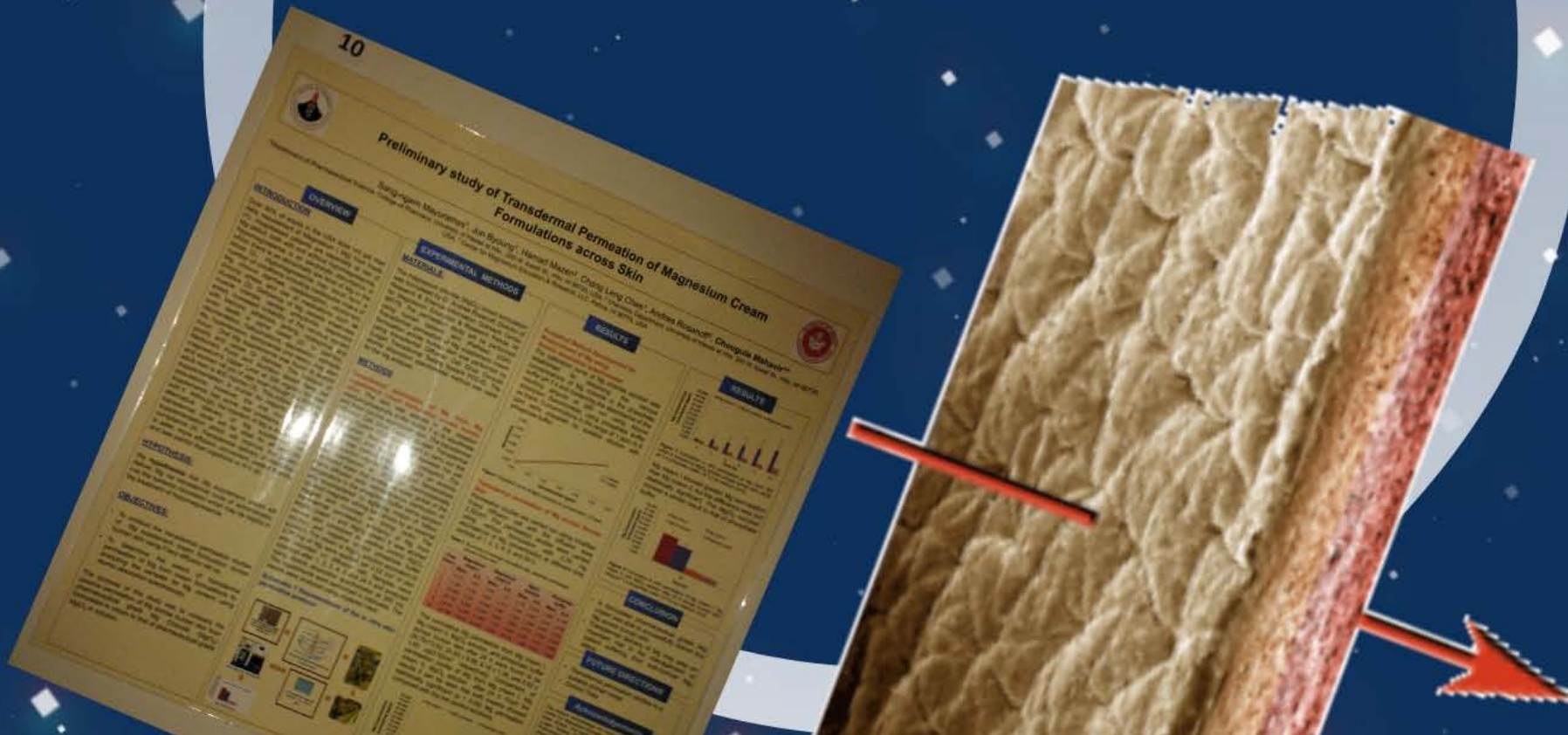


OFFICIAL ADVICE SINCE 2013

- **Pregnancy**
- **Sport & exercise**
- **Ageing**

MEXICO 2013

Proven transdermal permeation



ROME 2016

Transdermal Magnesium Oil & Bath

No intestinal side effects

Beneficial for skin

Mental & Neurological (relaxing) benefits

PERMEATION OF TOPICALLY APPLIED MAGNESIUM IONS THROUGH HUMAN SKIN IS FACILITATED BY HAIR FOLLICLES

Navin Chandrakanth Chandrasekaran^{1,2}, Michael S. Roberts^{2,3}, Ross T. Barnard¹, Washington Y. Sanchez², Yousuf H. Mohammed², Jeffrey E. Grice²

¹School of Chemistry and Molecular Biosciences, Australian Infectious Diseases Research Centre, The University of Queensland, Brisbane, Queensland, 4072 Australia.
²Therapeutics Research Centre, School of Medicine, Translational Research Institute, The University of Queensland, 37 Kent St, Woolloongabba, Queensland, 76131, Australia.
³School of Pharmacy and Medical Sciences, University of South Australia, City East Campus, North Terrace, Adelaide, South Australia, 5001, Australia.

INTRODUCTION

Magnesium is an important micronutrient essential for various biological processes and magnesium deficiency has been linked to several inflammatory disorders in humans. Some anecdotal evidence and published results have attributed amelioration of inflammatory skin conditions to the topical application of magnesium.

OBJECTIVES

1. To understand permeation characteristics of topically applied magnesium ions on human skin.
2. To understand the effect of concentration and time on permeation through human skin.


Assumed transdermal uptake of magnesium

Similarity in kidney and sweat glands of active reabsorption mechanism for magnesium could explain transdermal uptake of magnesium oil ($MgCl_2$)

Kidney

Production of urine in nephron


1. Blood enters urine production unit.
2. Proximal area with pre-urine which still contains much Mg^{2+} and Cl^- amongst other ions.
3. Distal area with active Mg^{2+} reabsorption in order to prevent excessive losses.



Sweat gland

Production of sweat in sweat gland

1. Blood enters sweat production unit.
2. Proximal area with pre-sweat which still contains much Mg^{2+} and Cl^- amongst other ions.
3. Distal area with active Mg^{2+} reabsorption in order to prevent excessive losses.





THE UNIVERSITY OF QUEENSLAND AUSTRALIA

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Assumed to

Similarity in kidney magnesium concentration

Kidney

Product

1.

2.

Assumed transdermal uptake of magnesium

Similarity in kidney and sweat glands of active reabsorption mechanism for magnesium could explain transdermal uptake of magnesium oil ($MgCl_2$)

Kidney

Production of urine in nephron

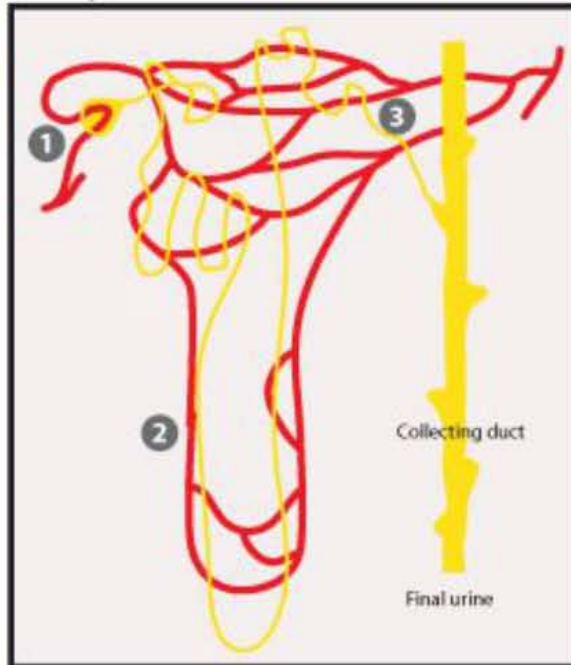
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Sweat gland

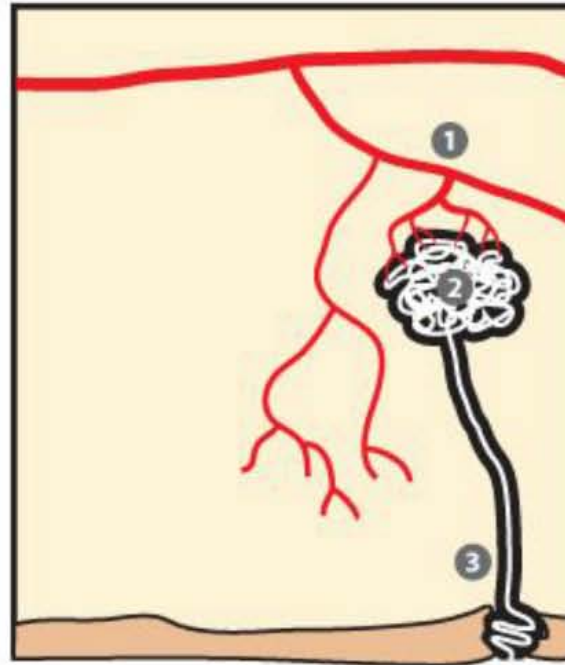
Production of sweat in sweat gland

1. Blood enters sweat production unit.
2. Proximal area with pre-sweat which still contains much Mg^{2+} and Cl^- amongst other ions.
3. Distal area with active Mg^{2+} reabsorption in order to prevent excessive losses.

Kidney cross section



Skin cross section



M IONS THROUGH
LICLES

Jeffrey E. Grice²,

4072 Australia.
land, 76131, Australia.

S
Characteristics of topically

skin.
ration and time
human skin

Meer...

Kaart

Satelliet

Terrein



Tripscompagnie

Westerbrink

50 m

Door Marscha van Noesel



Danel en Janse zijn overtuigd van de heilzame werking van aan badwater toegevoegd magnesiumolie of magnesiumchloride. Zolang die werking niet wetenschappelijk is onderbouwd, willen ze nog voorzichtig zijn met hun beweringen. Daarom hebben Danel en Janse het Magnesium Health Instituut in Veendam opgericht. Danel: "Ons doel met dit instituut is om

leefstijl en voeding, te helpen symptomen en in extreme gevallen zelfs hartritme stoornissen. Of die symptomen het gevolg zijn van een magnesiumtekort is overigens moeilijk vast te stellen. Wel kan er daarmee ontstaan wanneer er te veel magnesium wordt ingenomen, via tabletten bijvoorbeeld."

Richard Danel beschikt over cijfers uit Ameri-

ca. Bij de aan- te koop was, heeft een uitstekende werking, alleen minder sterk dan magnesiumchloride. Een verkoopster in een reformwinkel verklaart dat ze geregeld Dode Zeezout in haar badwater gooit om even te 'ontslakken'.

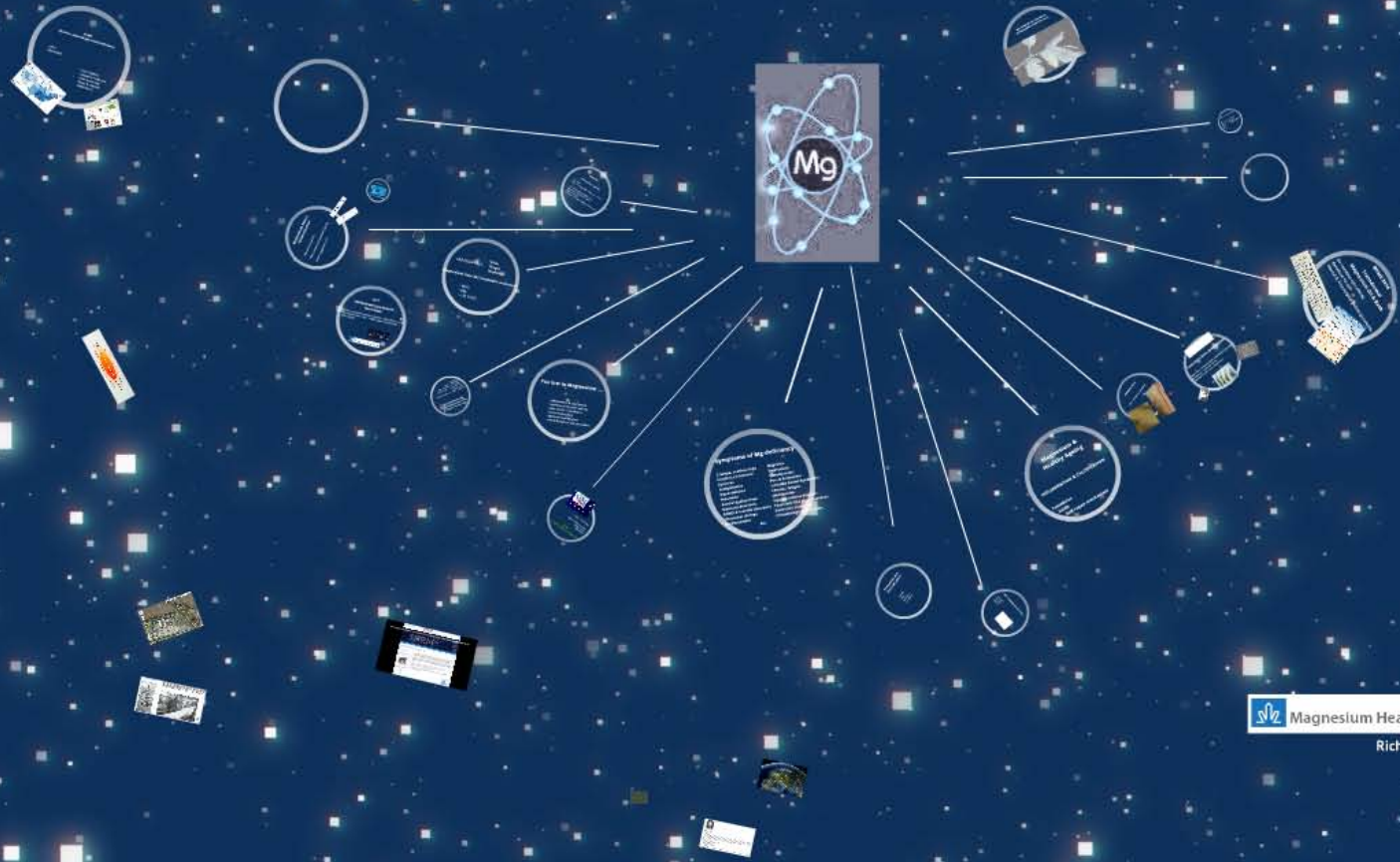
Als het Dode Zeezout of magnesiumchloride geen enkele werking zouden hebben via de huid, waarom vergoeden verzekeraars dan wel



Dane Janse (links) en Richard Danel bij Nedmag.

Foto's: Dennis F. Beek

AN EXPERIENCE IN THE UNIVERSE OF MAGNESIUM



AN EXPERIENCE IN THE UNIVERSE OF MAGNESIUM



**THANK YOU FOR ATTENDING
THE ZECHSTEIN MAGNESIUM COMMUNITY**