# What Are Some Beneficial Health Effects of Rocks and Minerals?

# Potential Health Benefits of Geologic Materials

- •Essential Nutrients
- Pharmaceuticals
- Talismans and Amulets
- Hot Springs
- •Geophagia (?)

Can religion improve health? While the debate rages in journals and med schools, more Americans ask for doctors' prayers.

#### BY CLAUDIA KALB

afternoon, Ming He, a fourthyear medical student in Dallas, came across a man dying in the VA Hospital. Suffering from a rare cancer and hooked up to an oxygen tank, the man, an Orthodox Jew, could barely breathe, let alone speak. There were no friends or relatives by his bed to comfort him. When the young

N A QUIET SATURDAY

student walked into his room, the man looked at her and said, "Now that I'm dying, I realize that I never really learned how to live." Ming He, 26, had no idea how to respond.

"I thought, 'My God, the chaplain doesn't work on weekends, what do I do?' "She held the man's hand for a few minutes in silence; two days later, he died. And as soon as she could, she signed up for "Spirituality and Medicine" at the University of Texas

DEVOTED: Jimmy O'Shaughnessy, 23, is fighting cancer; with the Rev. Kelly Childress at UCLA

Southwestern Medical School, a course that teaches students how to talk to patients about faith and illness.

More than half of the med schools in the country now offer such courses—up from just three a decade ago—largely because patients are demanding more spiritual care. According to a NEWSWEEK Poll,

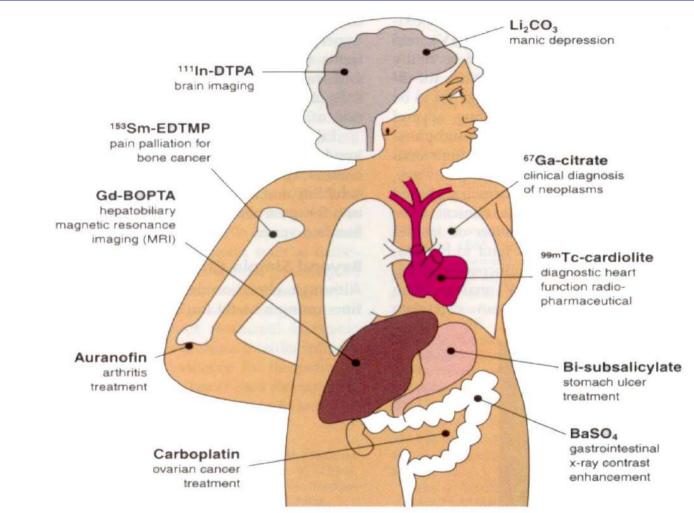


Fig. 1. Metal ions are important in diagnosis and therapy of a host of different human pathologies. Gd, <sup>111</sup>In, and <sup>99m</sup>Tc are used in medical imaging; <sup>153</sup>Sm and Au to relieve pain in bone cancer and arthritis, respectively; Bi to soothe upset stomach; and Li to calm bipolar psychosis. <sup>67</sup>Ga-citrate is used in clinical diagnosis of neoplasms (by SPECT imaging), and Pt is used for cancer treatment.

## Pharmaceuticals



This pharmaceutical, Trisenox, is composed mainly of Arsenic Trioxide. A controversial compound, used to treat Acute-Promyelocytic Leukemia (APL) in relapse patients. In several reports from China, this compound has been shown to induce complete remission in all APL victims studied.

# Elements, Minerals, and Rocks Used in Pharmaceuticals and Health Care Products

- Arsenic pharamacuticals
- Mercury mercurochrome, dental amalgam
- Calcium antacids
- Various Elements in vitamin supplements
- Boron Boric Acid
- Selenium Skin Treatment
- Sulfur Sulfur Drugs

# Elements and Minerals Used in Pharmaceuticals and Health Care Products

- Magnesite Milk of Magnesia
- Barium Enemas and in X-radiography
- Bismuth settles upset stomachs
- Calcite –Tums
- Rutile toothpaste
- Gypsum Plaster of Paris
- Talc Talcum powder

# Elements, Minerals, and Rocks Used in Pharmaceuticals and Health Care Products

- Kaolin koapectate
- Coal Tar skin products
- Pumice Lava soap
- Bauxite (Al) Anti perspirtant, toothpaste
- Fluorite fluoridation
- Halite Preservative
- Zinc oxide skin ointments

# ESSENTIAL ELEMENTS TO ANIMALS AND VEGETATION

TO ALL	TO SEVERAL CLASSES	TO SOME CLASSES	TO SOME SPECIES	POSSIBLY ESSEN- TIAL
H, C, N	Si, V, Co	B, F, Cr	Li, Al, Ni	Rb, Sn
O, Na, Mg	Mo, I	Br	Sr, Ba	
P, S, Cl				
K, Ca, Mn				
Fe, Cu, Zn, Se				

**MAJOR ELEMENTS** 

TRACE ELEMENTS USGS - FAQ

### PATTERNS OF INFLUENCE OF THE ELEMENTS

assimilation increase

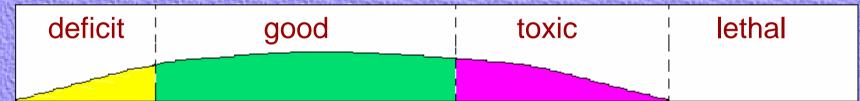
### **MACRONUTRIENTS**

(C, Ca, Cl, P, Mg, K, Na, S, O, H)



### **ESSENTIAL MICRONUTRIENTS**

(As, Co, Cr, Cu, Fe, Mn, Mo, Se, V, Zn, F, I, Si)



### **NON ESSENTIALS**

(Be, Cd, Hg, Ni, Pb, Sb, Sn, Ti etc.)

tolerable toxic lethal

"Everything is poisonous, nothing is poisonous. It is just a question of dosage."

F.R.Siegel – "Environmental Geochemistry"

### **ACTION OF MACRONUTRIENTS**

Ca	Strengthening of bones and teeth; muscular activity; blood coagulation; cellular permeability. Excess may originate liver and bladder stones and renal insufficiency.
Cl	Maintenance of blood pressure; vital as acid constituent during digestion.
K	Maintenance of corporeal fluids; muscular contractions and nervous impulses.
Mg	In bones, together with Ca; activation of muscular contractions; body temperature control; component of several enzymes.
Na	Active in hydrosaline equilibrium; transmission of nervous impulses and transport of metabolites.
P	Bone constituent as apatite; participates in most body chemical reactions. Excess turns hair and bones brittle.

G.Cortecci – "Geologia e Salute" and others F.R. Siegel – "Environmental Geochemistry" O.Selinus e A.Frank – "Medical Geology"

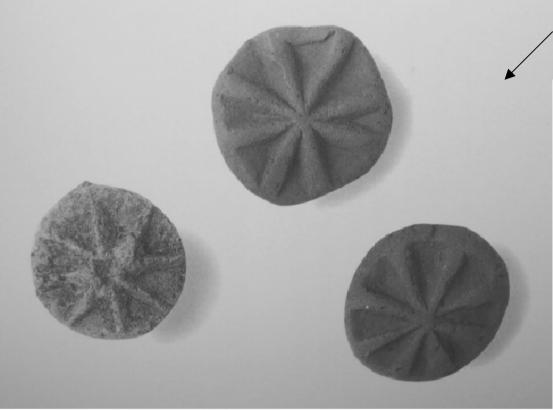
### **ACTION OF MICRONUTRIENTS**

Со	Active in vitamin $B_{12}$ and in chemical reactions. Deficiency causes anemia. Excess causes hearth failures.
Cr	Needed for metabolism of sugar. Deficiency may cause diabetes, intolerance to glycose etc. Excess may result in renal failures. Excess of $Cr^6$ is carcinogenic.
Cu	Component of oxidizing enzymes during metabolism of energy sources; active in the synthesis of hemoglobin, in keratization and in skin and hair pigments. Deficiency leads to osteoporosis and low number of white blood cells.
F	Give strength to teeth and bones, avoiding dental caries and osteoporosis. Excess causes fluorosis of teeth and bones.
Ι	Required by thyroidal hormones, temperature control, body growth, reproduction etc. Deficiency causes abnormal growth of the thyroid.

### **FUNCTION OF MICRONUTRIENTS**

Fe	Essential component of hemoglobin and enzymatic complexes required for energy generation and immunological system.
Mn	Promotion of growth and development; cellular functions; in bones and cartilages; takes part in metabolic reactions. Excess leads to excess of blood. May cause neurological diseases if inhaled into the lungs.
Se	Prevention of vascular and other diseases; neutralizes cells oxidation and aging action of free radicals. Excess turns nails and hair brittle.
Zn	Occurs in all tissues, mostly in bones, muscles and skin; active in the immunological system; regulates body growth; protects the liver. Deficiency reduces body growth.

### Adsorbing clay tablets (Terra sigillata) from ancient Greece



From Lemmos, Melos and Samos islands

Terra sigillata with turkish seals (designing its origin)

Cowen DL & Helfand WH. Pharmacy, an illustradted history. New York, H N Abrams Inc.Publ.1990



LEISHMANIA - WIS 18 dez 95

Ferida da parte frontal da perna esquerda, com forma de "8". Iniciou como pequena ferida na parte superior.

Devido a uma infecção secundária e dificuldades locais de circulação sanguinea, desenvolveu-se rapidamente uma grande mancha vermelha de 7 cm de largura, que quase chegou à planta do pé. Essa mancha tornou-se granulosa, parecendo tornar-se pouco a pouco na moldura da ferida.

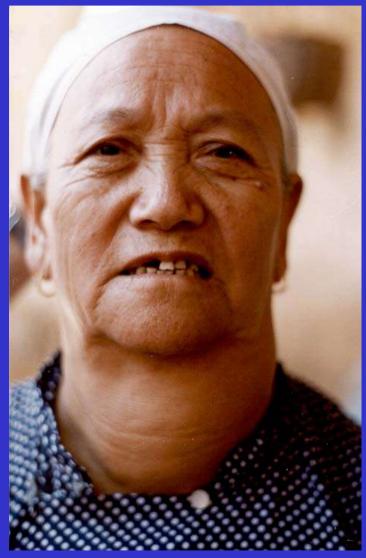
Logo a seguir, apareceram pequenos pontinhos amarelados abaixo da ferida inicial, cada um deles transformando-se numa ferida. Assim foi formado o circulo inferior do "8".

O uso do antibiótico Rudil freou o processo de crescimento, mas não o interrompeu até 18.12.95.

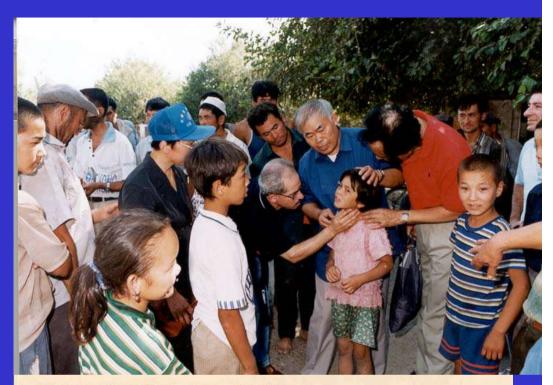
Nessa data a ferida compõese de duas amalgamadas. A maior, acima, ocupa 4 x 2 cm, com sua parte central coberta com casca feita com a pomada Bactroban, e apresenta lento crescimento lateral. A inferior tem 1,8 x 1,0 cm. O "8" mede 5,5 x 4 cm.

Com as injeções, a mancha vermelha perdeu granulosidade, ficando "macia". Em 18 dez media 12 x 12 cm, envolvendo as feridas.

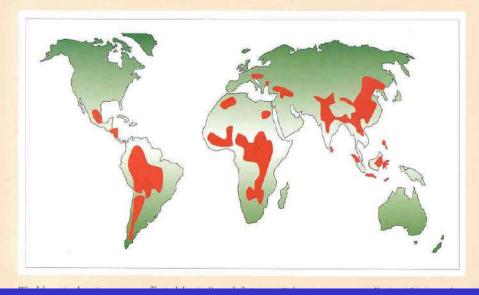
# Goiter



AFIP/USGS Study: Urumqi, China



Element deficiency - lodine







### Talismans and Amulets

Unlike the rock-derived Pharmaceuticals, Talismans and Amulets do not have a known physical effects, but do have a certain psychological effects. Talismans have been used for thousands of years, more common then then now, and were believed to ward off evil and heal certain medical conditions. These Talismans were composed of various rocks and minerals, with each crystal having its own unique healing powers.



Hematite: A stone commonly used in the healing of cardiovascular and circulatory diseases, and detoxification.

Quartz: Along with Rose and Smokey Quartz, this crystal is used in mood related diseases such as depression.



http://www.imaginarius.ca/Healing stones.htm

Talismans and Crystal Amulets, such as these, are composed of a great variety of rocks and minerals. A selection of these are shown on the chart, along with a list of the conditions each treats.



	Arthritis/Joints	Bleeding/Blood	Circulatory System	Depression	Detoxification	Eyesight	Headache	Heart
Amethyst				Х	Х	Х	X	
Aquamarine							X	
Aventurine				Х			Х	
Black Tourmaline	Х			Х	Х			
Bloodstone		X						
Carnelian	Х	X						
Chalcedony								
Citrine								
Flourite	X					Х		
Hematite		X	X		Х			
Lapis Lazuli								Х
Moonstone								
Quartz								
Rose Quartz				Х				
Smoky Quartz				Х				
Green Tourmaline								Х
Turquoise								

	High Blood Pressure	Hypoglycemia	Immune System	Insomnia	Internal/Organs	Lactation	Lungs	Lymph Nodes	Neck	Obesity
Amethyst		X								
Aquamarine				Х				Х	Х	
Aventurine	Х									
Black Tourmaline										
Bloodstone										
Carnelian										
Chalcedony						Х				
Citrine		X			X	^				
Flourite										
Hematite		Х			X					
Lapis Lazuli										
Moonstone							Х			
Quartz										Х
Rose Quartz						X				
Smoky Quartz										
Green Tourmaline				Х						
Turquoise			Х				Х			

### Amulets are prescribed to a variety of diseases and conditions.

	Reproductive System	Scalp/Hair	Skin	Muscles	Glands	Temperature Regulation	Throat	Toothache	Urinary	Tract Infection
Amethyst		X	Х						_	
Aquamarine					X			Х		
Aventurine							X			
Black Tourmaline				X						
Bloodstone	Х									
Carnelian	Х									
Chalcedony										
Citrine										Χ
Flourite										
Hematite						X				
Lapis Lazuli							Х			
Moonstone										
Quartz										
Rose Quartz										
Smoky Quartz										
Green Tourmaline				X						
Turquoise										

# Hot Springs



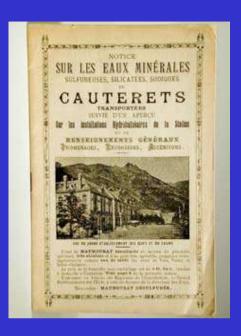


An
American
treasure at
Pagosa
Springs,
and a
British
landmark
at the
Roman
Baths.

Hot springs and other naturally occurring mineral baths, have been used for centuries all across the globe. The were known to have been quite popular in Ancient Greece and Rome, as well as Ancient Japan and among the Native Americans in North America. Hot springs are still very popular today, especially in North America. Over 200 commercial springs exist in the US alone, along with countless Native American and smaller springs in Virginia, Pennsylvania and New York. The springs were believed to have treated a myriad of medical conditions, including venereal diseases. As well, many Government sponsored studies began around the springs, and lasted until the 20th century. Enthusiasm and use of springs and medicinal baths have been declining ever since in both North America and Great Britain.

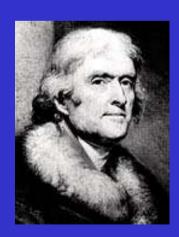


Berkeley
Springs
was a
frequent
favorite of
many
American
notables.



This is a Poster from 1892 about a French mineral spring. Cauterets, in Central France offered relief in their baths from: Asthma, Bronchitis, Rheumatism, Laryngitis, and many other conditions.





Thomas Jefferson, Theodore Roosevelt, Davy Crockett, Henry Clay, Edgar Alan Poe, and Robert Louis Stevenson, along with many other American presidents and notables were all hot springs regulars. Saratoga Springs in New York, and Berkeley Springs in West Virginia were amongst their favorites. They swore by their healing powers as well as the entertainment and relaxation they provided.

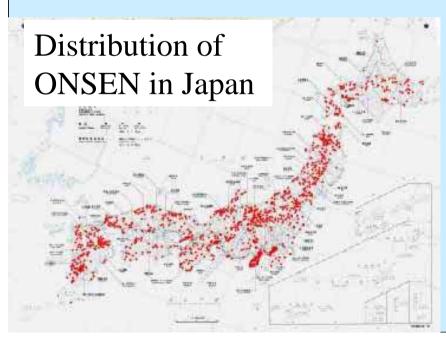


Mio TAKEUCHI

National Institute for Advanced Industrial Science and Technology

### ONSEN is,

"hot water, mineral water, water vapor and other gases that issue from the ground with a temperature in excess of 25 degrees C (77 degrees F) or contain more than a predescribed amount of designated substances "



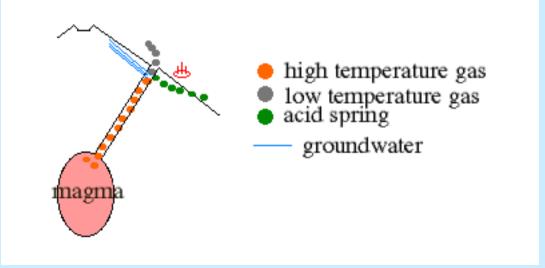
#### The minimum values for ONSEN under the law's definition

substances	total content i/kg j
dissolved substances	>1,000mg
$CO_2$	>250 mg
Li <sup>+</sup>	>,Pmg
$\mathrm{Sr}^{2+}$	>10 mg
$Ba^{2+}$	>,Tmg
$Fe^{2+}$ $Ge^{3+}$	>10 mg
$Mn^{2+}$	>10 mg
$,g^{^{+}}$	>,Pmg
Br <sup>-</sup>	>,Tmg
,h <sup>-</sup>	>,Pmg
,e <sup>-</sup>	>,Qmg
HAsO <sub>4</sub> <sup>2-</sup>	>1.3 mg
$HAsO_2$	>,Pmg
,r	>,Pmg
$\mathrm{HBO}_2$	>,Tmg
$H_2SiO_3$	>50 mg
NaHCO <sub>3</sub>	>340 mg
Rn	>20 ix 10-10 Ci j
Ra	>10pg

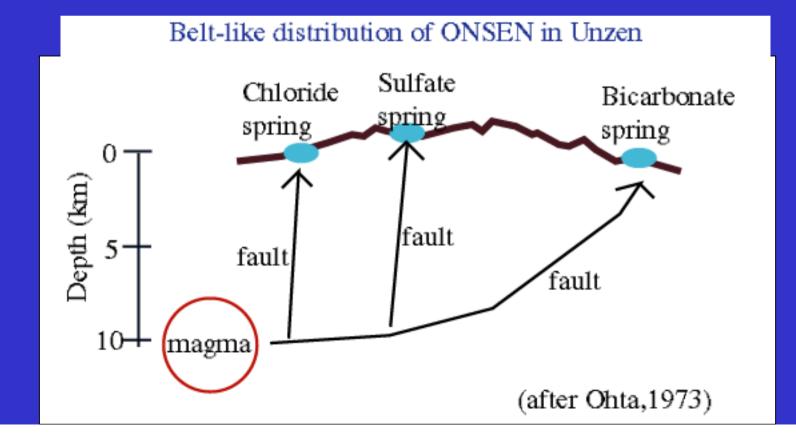
### Circum-Pacific volcanic belt



### How ONSEN is produced?



Simple	Chloride	Hydrogen carbonate	Sulfate	Carbon dioxide	Iron	Sulfur	Acid	Radioactive	
hot spring	spring	spring	spring	spring	spring	spring	spring	spring	



700? B.C Sukunabikona-no-Mikoto, legend

201 A.D. Empress Zingu, spa for wounded soldiers

696 Public hot spring

Empress Komyo, bathing house for the poor

1659-1733 Konzan GOTO

- 1. Heat
- 2. Water pressure
- 3. Chemical constituents
- 4. Mental effect



Disease which is susceptible to treatment	Simple hot spring	Chloride spring	Hydrogenc arbonate spring	Sulfate spring	Carbon dioxide spring	Iron spring	Sulfur spring	Acid spring	Radioactive spring
Neuralgia	>	>	>	>	>	>	>	>	>
Muscular pain	>	>	>	>	>	>	>	>	>
Joint ache	>	>	>	>	>	>	>	>	>
Frozen shoulder	>	>	>	>	>	>	>	>	>
Movement paralysis	>	>	>	>	>	>	>	>	>
A joint stiffens.	>	>	>	>	>	>	>	>	>
Bruise	>	>	>	>	>	>	>	>	>
Chronic digestive organ disease	>	>	>	>	>	>	>	>	>
hemorrhoids	>	>	>	>	>	>	>	>	>
Cold nature	>	>	>	>	>	>	>	>	>
convalescence	>	>	>	>	>	>	>	>	>
Recovery from fatigue	>	>	>	>	>	>	>	>	>

Disease which is susceptible to treatment	Simple hot spring	Chloride spring	Hydrogenc arbonate spring	Sulfate spring	Carbon dioxide spring	Iron spring	Sulfur spring	Acid spring	Radioactive spring
Healthy									
improvement	>	>	>	>	>	>	>		
Limits crack		>	>	>	>		>		
Burn		>	>	>	>				
A chronic skin disease		>	>	>				>	>
Physically weak child		>							
Chronic women's diseases		>					>		>
Arteriosclerosis				>	>		>		>
Hypertension					>		>		>
Menstrual									
disorders						>			
Diabetes							>		
Gout									>
Chronic									
inflammation of									>
the gallbladder									
Cholelithiasis									>









# Geophagia

 Geophagia – A noun: eating earth, clay or chalk; occurs in some primitive tribes or sometimes in cases of nutritional deficiency. Also to as 'Pica.'

> "If a lump of soot falls into the soup and you cannot conveniently get it out, stir it in well and it will give the soup a French taste." -- Jonathan Swift



The "dirt" [shown] is *kaolin*, a white clay mined in Georgia and South Carolina that is used for everything from making ceramics and textiles to diarrhea medicine. http://www.augustachronicle.com/stories/031899/fea\_clay.shtml

In this particular case, many pregnant women in rural southern Georgia, eat *kaolin* or a grayish native clay to Georgia commonly sold in Grocery stores. They crave the "dirt" and claim that it helps quite their pregnancy sickness and makes them feel better.



#### **Prehistoric Hay**



"99% of the American people are deficient in minerals, and that a marked deficiency in any one of the more important minerals actually result in disease." (U.S. Senate Document #264)

InnerStrength is a 100% Plant sourced dietary supplement composed of colloidal minerals extracted from perhaps the earth's largest, purest humic shale "prehistoric hay" vein ever discovered combined with a "Certified Active" Whole Leaf Aloe Vera Concentrate base. InnerStrength is perhaps the most complete, purest, bio available absorbable mineral supplement available today. Excellent for today's active youth and adults.

#### **Colon & Tissue Cleansing**

"Death begins in the colon... I have been a practicing naturepathic doctor for over 20 years and have seen well over 40,000 patients. In that time I have come to realize that autointoxication (re-absorbing your own bowel toxins) is responsible for many of the nagging chronic symptoms that people complain of." Ross Anderson, N.D., M.D., D.C.



Toxins can cause an adverse chemical and physiological reaction within the body. They undermine ones health and cause stress to the biochemical and organ functions. Most often, they are present within the body without our even being aware of it. Many of the symptoms we experience may be the bodies way to altempt to alert us that there is trouble within. The Takara Foot Patch is the latest breakthrough in medical science - created to assist in the removal of these toxins from the body easily and painlessly - while you sleep.



Triple C Health is dedicated to educating and supporting you in your quest for optimal health.

www.triplechealth.com or call 972-943-1387

Haruo Shiramizu, "Onsen no hanashi (A story of Onsen)" (2000)

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http://www.jrea.co.jp/onsen/

http://www.keiju.co.jp/hot-spa.htm

### Acknowledgement

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- http://www.innerself.com/Health/springs\_spas.htm
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   ml

#### Also information from:

- Amercan Public Health Association
- Food and Drug Administration