

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.

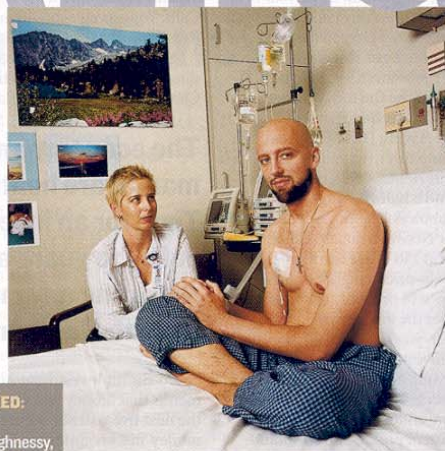
FAITH & HEALING

BY CLAUDIA KALB

ON A QUIET SATURDAY afternoon, Ming He, a fourth-year 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 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,

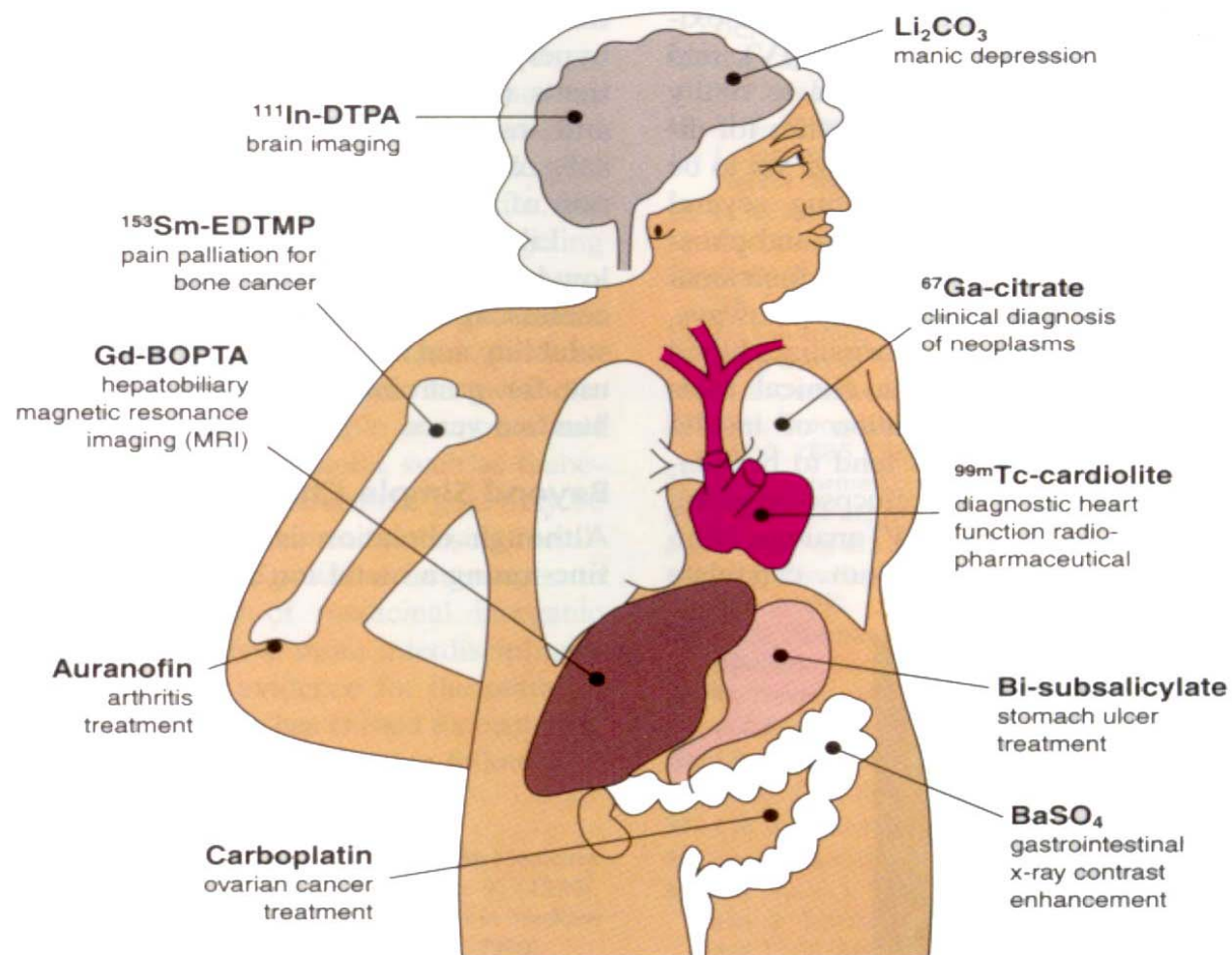


Fig. 1. Metal ions are important in diagnosis and therapy of a host of different human pathologies. Gd, ^{111}In , and $^{99\text{m}}\text{Tc}$ are used in medical imaging; ^{153}Sm and Au to relieve pain in bone cancer and arthritis, respectively; Bi to soothe upset stomach; and Li to calm bipolar psychosis. ^{67}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 - pharmaceuticals
- 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 ESSENTIAL
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

PATTERNS OF INFLUENCE OF THE ELEMENTS

assimilation increase



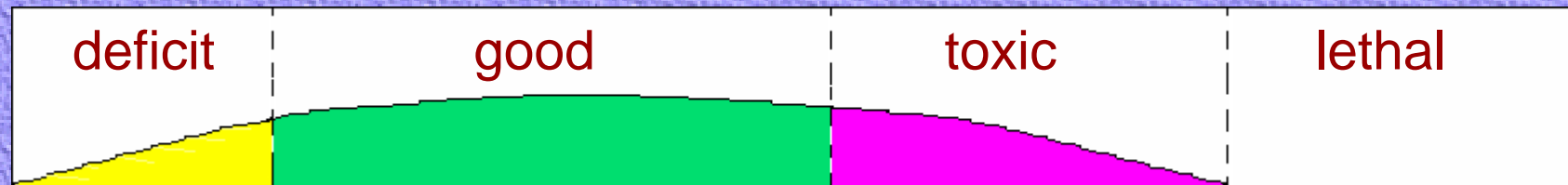
MACRONUTRIENTS

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



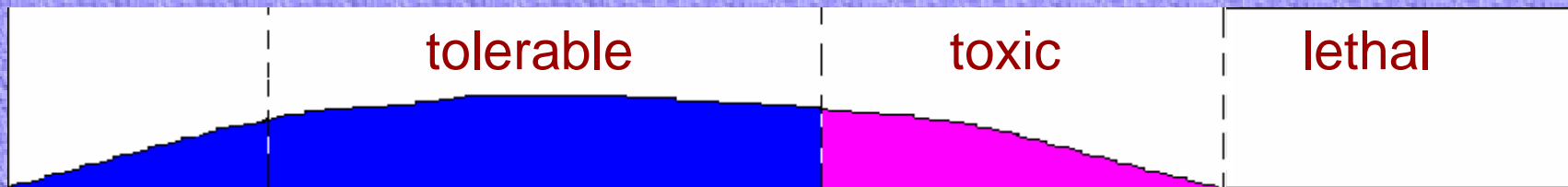
ESSENTIAL MICRONUTRIENTS

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



NON ESSENTIALS

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



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

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

Co	Active in vitamin B₁₂ and in chemical reactions. Deficiency causes anemia. Excess causes hearth failures.
Cr	Needed for metabolism of sugar. Deficiency may cause diabetes, intolerance to glyucose etc. Excess may result in renal failures. Excess of Cr⁶ 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.
I	Required by thyroidal hormones, temperature control, body growth, reproduction etc. Deficiency causes abnormal growth of the thyroid.

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

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.

G.Cortecci – “Geologia e Salute” and others
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Adsorbing clay tablets (*Terra sigillata*) from ancient Greece

From Lemmos, Melos and Samos islands



Terra sigillata with
turkish seals
(designing its
origin)



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 sanguínea, 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 círculo 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 compõe-se 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 granulidade, ficando "macia". Em 18.dez media 12 x 12 cm, envolvendo as feridas.

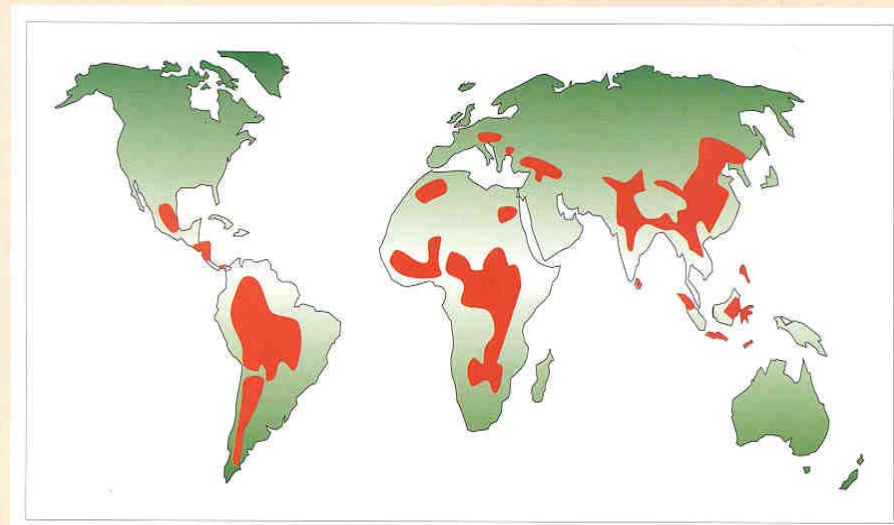
Goiter



AFIP/USGS Study: Urumqi, China



Element deficiency - Iodine







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.



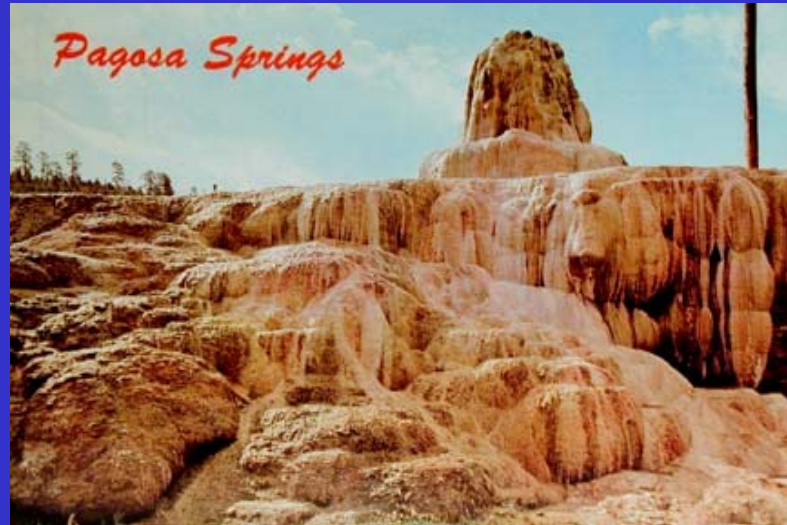
Hematite: A stone commonly used in the healing of cardiovascular and circulatory diseases, and detoxification.

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

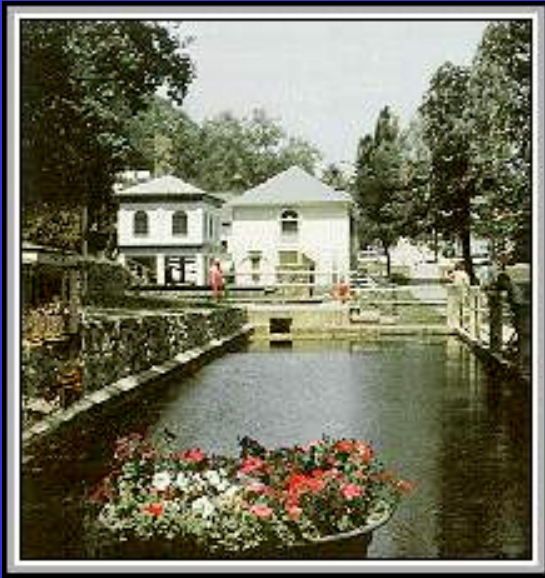
Hot Springs



Hot springs and other naturally occurring mineral baths, have been used for centuries all across the globe. They 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.

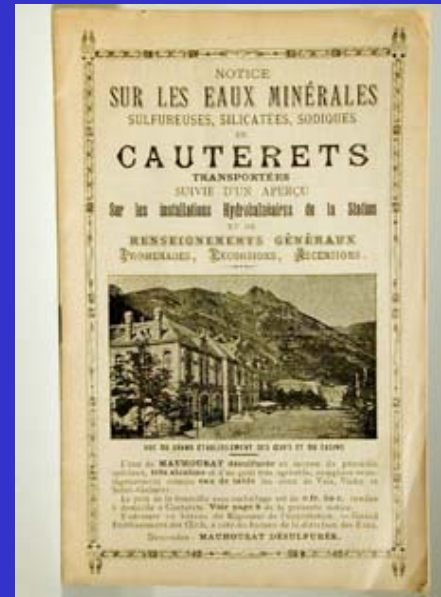


An American treasure at Pagosa Springs, and a British landmark at the Roman Baths.

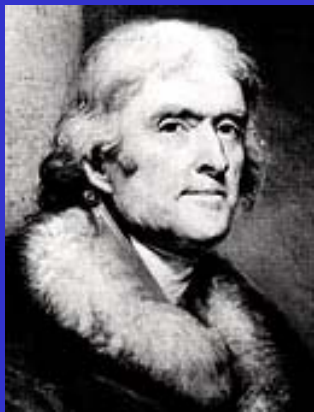


Berkeley Springs was a frequent favorite of many American notables.

<http://www.sacredsites.com/final40/180.html>



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 Allan 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.



Balneotherapy,
medical use of hot spring, ONSEN,
in Japan

Mio TAKEUCHI

National Institute for Advanced
Industrial Science and Technology

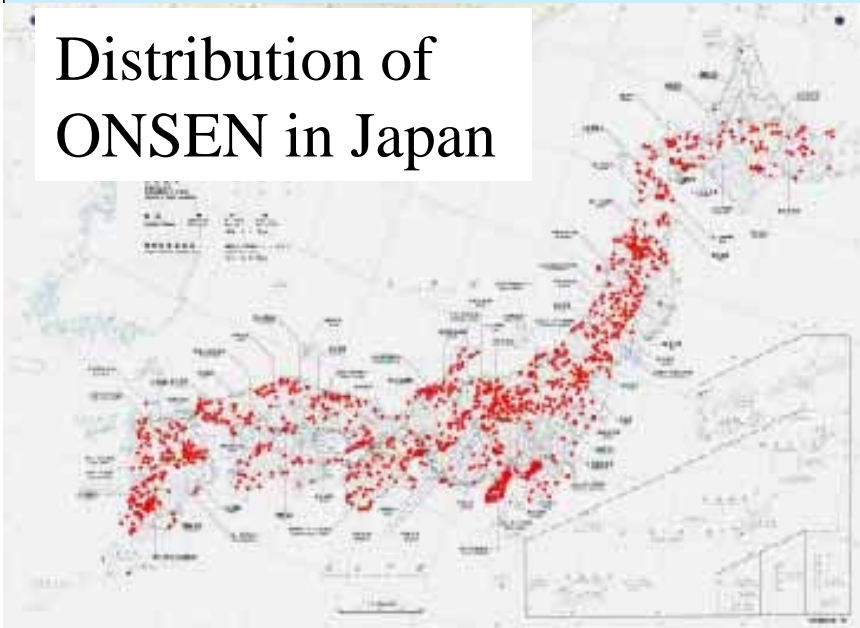
ONSEN is,

"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 prescribed amount of designated substances "

The minimum values for ONSSEN under the law's definition

substances	total content i/kg j
dissolved substances	>1,000mg
CO ₂	>250 mg
Li ⁺	>,Pmg
Sr ²⁺	>10 mg
Ba ²⁺	>,Tmg
Fe ²⁺ Fe ³⁺	>10 mg
Mn ²⁺	>10 mg
,g ⁺	>,Pmg
Br ⁻	>,Tmg
,h ⁻	>,Pmg
,e ⁻	>,Qmg
HAsO ₄ ²⁻	>1.3 mg
HAsO ₂	>,Pmg
,r	>,Pmg
HBO ₂	>,Tmg
H ₂ SiO ₃	>50 mg
NaHCO ₃	>340 mg
Rn	>20 ix 10-10 Ci j
Ra	>10pg

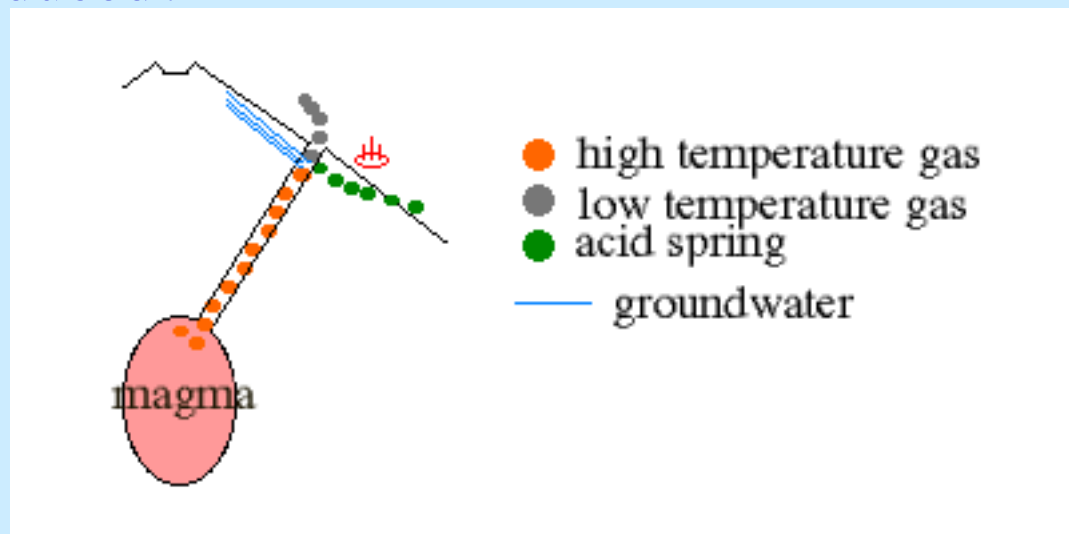
Distribution of ONSSEN in Japan



Circum-Pacific volcanic belt

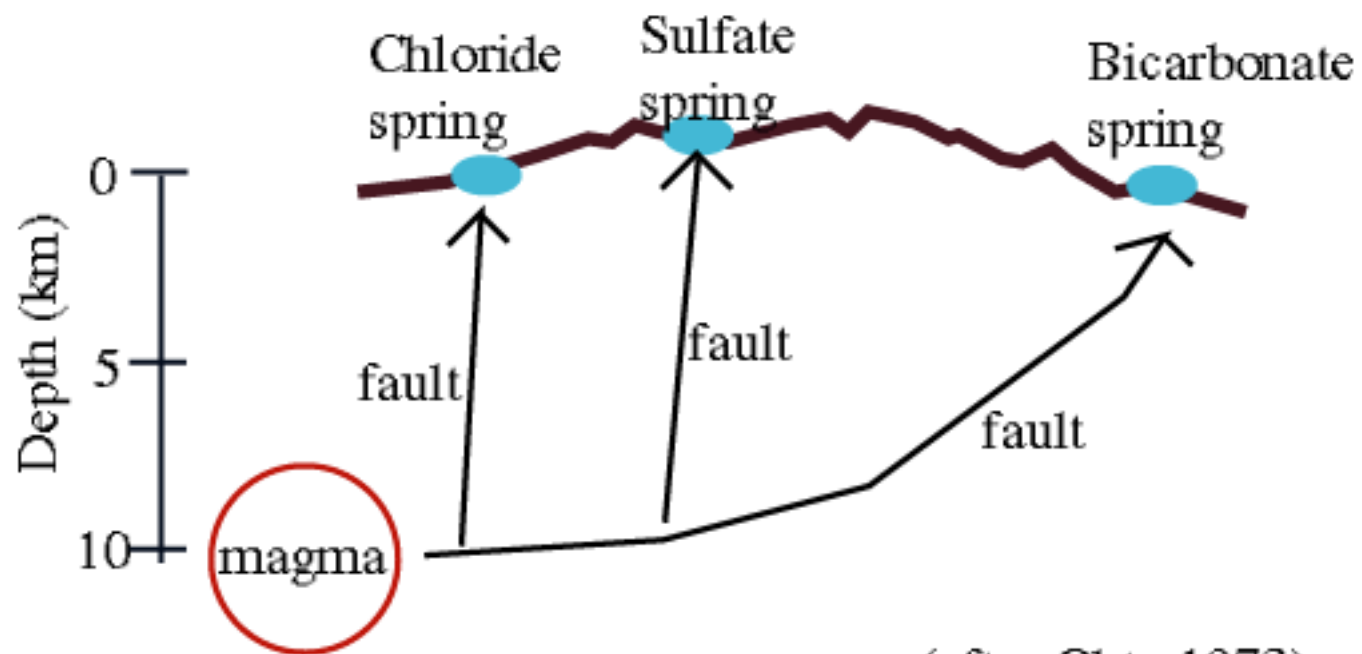


How ONSEN is produced?



Simple hot spring	Chloride spring	Hydrogen carbonate spring	Sulfate spring	Carbon dioxide spring	Iron spring	Sulfur spring	Acid spring	Radioactive spring
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Belt-like distribution of ONSSEN in Unzen



(after Ohta, 1973)

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

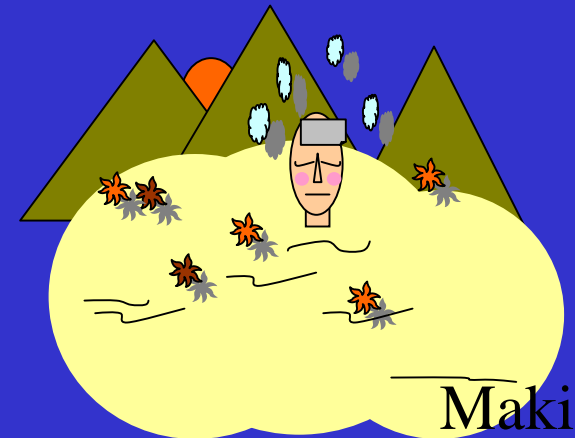
201 A.D. Empress Zingu, spa for wounded soldiers

696 Public hot spring

730 Empress Komyo, bathing house for the poor

1659-1733 Konzan GOTO

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

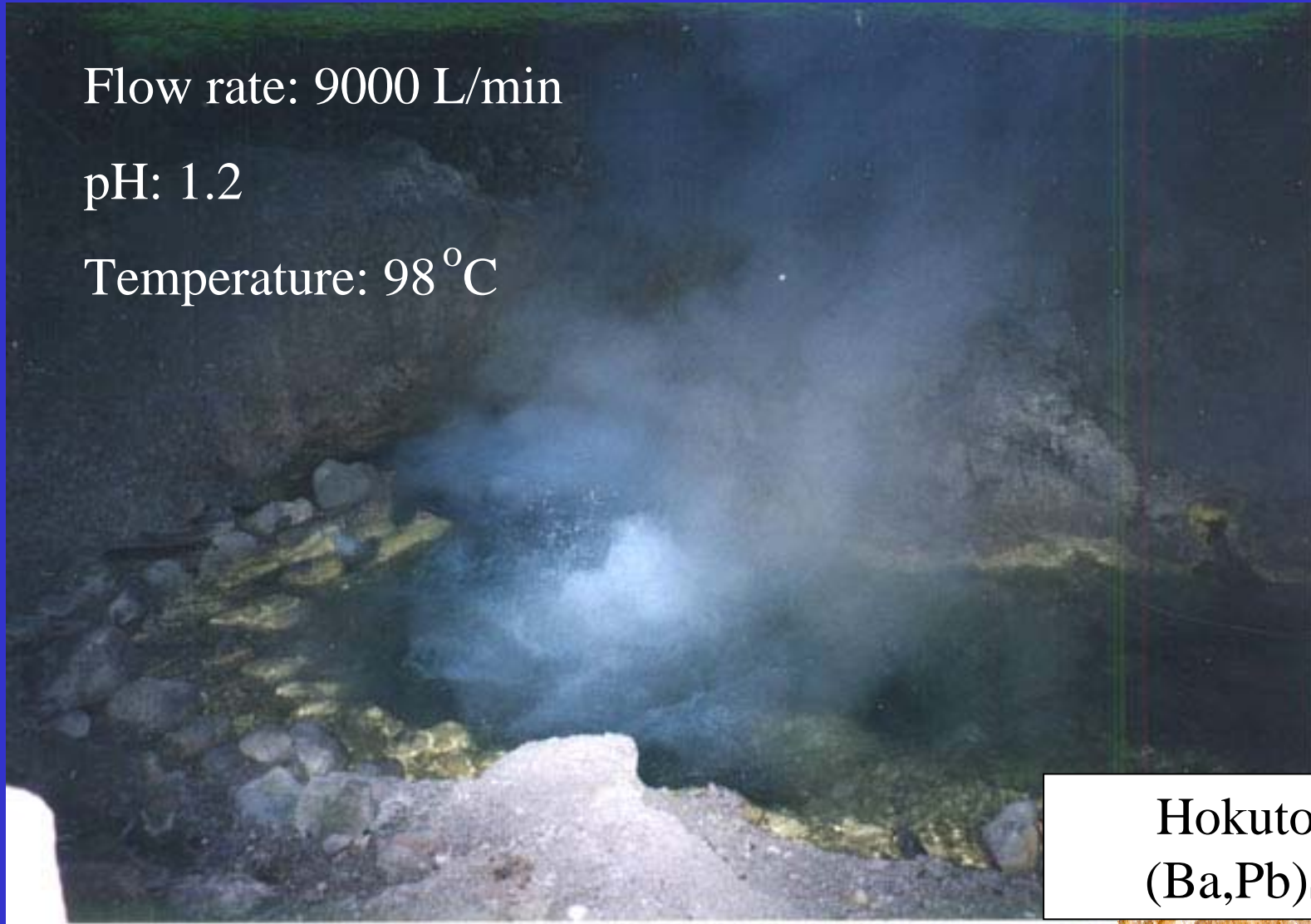




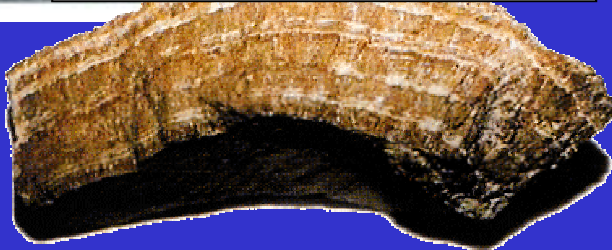
Flow rate: 9000 L/min

pH: 1.2

Temperature: 98 °C



Hokutolite
(Ba,Pb)SO₄





Rock-bath for medical treatment



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 naturopathic 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 attempt 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.

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

Yoshio OSHIMA, Thermalism in Japan (1988)

Web cite cited

http://www.biodic.go.jp/reports/2-2/aa098_001.html

<http://freett.com/pino55/tama-gazou1.html>

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

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

Acknowledgement

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Works cited

- Pictures and information from
- <http://www.csicop.org/skeptiseum/Alternative.html#Crystals>
- http://www.innerself.com/Health/springs_spas.htm
- <http://www.web.ms11.net/usadeepsouth/dirt.html>
- <http://www.fda.gov/bbs/topics/ANSWERS/ANS01040.html>
- http://phys4.harvard.edu/%7Ewilson/arsenic_project_good_uses.html

Also information from:

- American Public Health Association
- Food and Drug Administration