

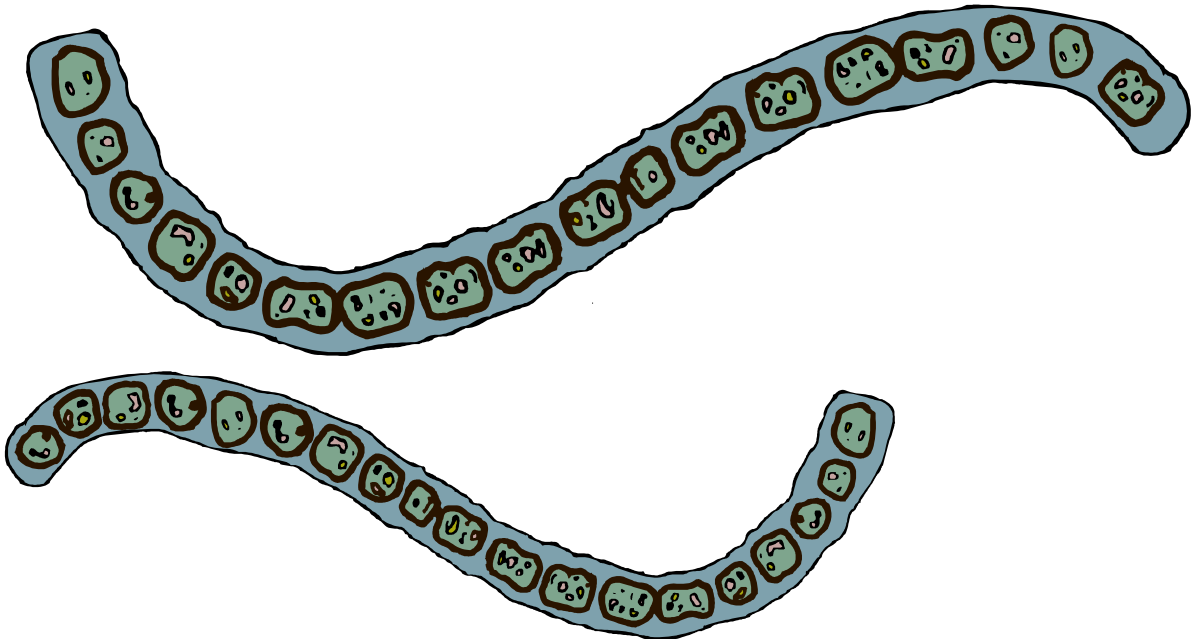
# CHAPTER 40



# DETOXIFICATION SECTION



# A Few Notes on Safe Solutions, Inc. Food-Grade or Fossil Shell Flour Diatomaceous Earth (DE)\*



This research information is for informational and educational purposes only. Please consult a health care professional regarding the applicability of any opinion or recommendations with respect to your symptoms or medical condition.

\*A personal thank you to Wally Tharp who provided the Author most of these notes, letters, writings and/or comments. Wally Tharp is the supplier of Safe Solutions, Inc. food-grade DE.

### **All Diatomaceous Earth (DE) is Not the Same.**

Though it is mined from the ground, diatomaceous earth (DE) is not an earth, but fossilized deposits of microscopic shells that are created by single one-celled plants called “diatoms”.

On land, the basic food for all land animals is grass. Those animals that do not eat grass, eat the animals that do eat grass. The silica content of all living organisms is linked with the diet. Silica is highest for the pure plant eaters and lowest for the pure meat eaters.

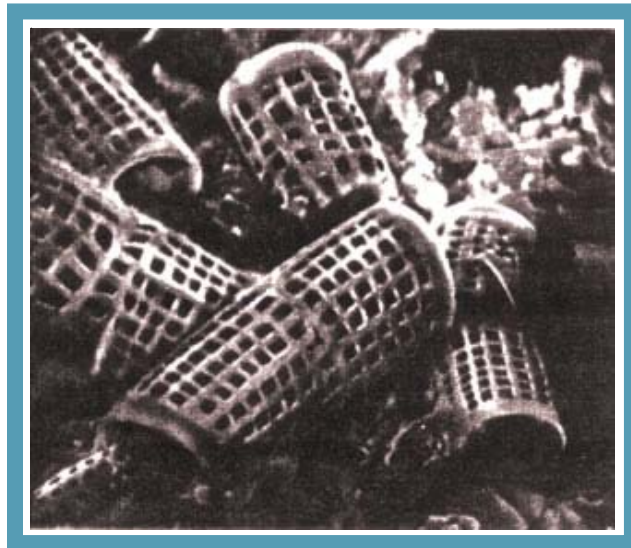
In all water, tiny one-celled plants or plankton live by the billions of billions of billions, and they are the basic food of the water dwelling animals. Even the great whales could not survive without the diatoms.

As these tiny creatures die, by the billions of billions of billions, their shells or exoskeletons drift to the bottom of the ocean or lake, building up large deposits. Each dead diatom exoskeleton now is a tiny piece of porous sand. Geologic changes put these deposits on dry land, making them accessible to mankind.

Because of water currents, most deposits are very impure, some even contain arsenic and can be very dangerous, but Safe Solutions, Inc. deposits come from a deposit so pure that it meets the standards required to be called “food grade”.

Many people tend to think that all diatomaceous earth is the same. Nothing could be further from the truth. There is a great diversity of DE deposits, just as there is a great diversity in all of G-d's creation.

Safe Solutions, Inc. carefully monitors the quality of its food-grade and/or FOSSIL SHELL FLOUR PRODUCTS for the protection of its customers and the health of their animals and the control of their pest problems!



Adapted from “[Ag](#)” Marketplace: What In The World Is Diatomaceous Earth? And, What Can It Do For The Livestock Producer? Farmer? Animal Owner?

By Janet “J.D.” Sands

Millions of years ago, in all the waters of the earth, microscopic one-celled plants called diatoms took the minerals from the waters and created protective shells for themselves. Diatoms once lived in quantities far beyond the mind's ability to conceive, and as they died their shells drifted to the bottom of the sea beds. In this manner, vast deposits of diatom shells were laid down. Through the history of man's existence, a wide variety of valuable uses have been found for what has come to be called “diatomaceous earth.” There are now more than 1,500 ways in which man benefits from this incredible material left by diatoms, Silicon Dioxide, along with a smattering of trace minerals.

There are more than 25,000 species of diatoms and only two primary types of diatomaceous earth deposits. Not all diatoms are aquatic; some exist in moist conditions, but since three-fourths of the earth is covered with oceans, most deposits are of the saltwater type. Just one liter of sea water may contain as many as ten million one-celled pieces of algae. There are deposits which also occur in fresh water lakes, and within this second type of deposit, the purity is exceptional.

Safe Solutions, Inc. Diatomaceous Earth (DE) or Grass of the Sea is so pure that the Food and Drug Administration has given it a "food-grade" designation. The governments of the United States and Canada recognize that fossil shell flour is safe to use in animal foods in an amount not to exceed 2% by weight of the total feed ration. When added at this percentage, fossil shell flour prevents "clumping" of feed particles by keeping them separate, so there is improved flowability, mixability and handling of the animal feed. This in turn, creates two big advantages to the animals who consume fossil shell flour in their recommended feed ration. First, acting as an anti-caking agent to prevent "clumping" of feed particles, the surface area of feed exposed to the digestive processes - both bacterial and enzymatic - is increased and therefore more feed is actually digested and utilized. Secondly, fossil shell flour contains a small amount of 14 trace minerals.

Thousands of animal owners and livestock breeders have discovered that adding fossil shell flour to their animals' rations has produced a number of incredible benefits.

While other insecticide poisons kill chemically as neurotoxins, the insect pests (over time) develop a resistance or an immunity to the chemicals, food-grade DE kills bugs physically and insects have not been known to develop immunity to its physical action. Food-grade DE is certain death to insects because it kills by actually puncturing the insect's exoskeleton, disrupting its soft waxy shell structure, chewing up its digestive organs and causing death in a short time by dehydration.

Some of the ways insects are destroyed by DE:

1. Laceration of the chitin in the bellows of the joint.
2. Severance of the muscles of the tracheole valve.
3. Perforation of the walls of the trachea and tracheoles.
4. Mandibular damage by abrasion.
5. Esophageal laceration.
6. Peritonitis due to perforations in the walls of the digestive system.
7. Severance of the constrictive muscles of the malpighian system.
8. Absorption of the wax, allowing dehydration.
9. Starvation of the larvae.
10. Plugs the spiracles.

The DE particle scrapes punctures into the body of the insect causing a loss of fluid. An insect does not have blood vessels as do higher forms of life. They have a shell that is semi-porous—more or less like unglazed porcelain. In order to keep their body fluids from evaporation through their shells, nature also puts a waxy coating on the outside. If you were to take a brand new shoe shine and put Safe Solutions, Inc. Diatomaceous Earth on one shoe and leave it for 20 minutes and blow it off, you would have no shine. The DE would have absorbed the wax. You have much the same situation with insects. Once the protective coating is gone, the insects slowly dehydrate. [National Geographic](#) tells about cockroaches that died in 12 hours after exposure. DE also stops up the breathing apparatus of insects. They ingest it and it lacerates them inside, and yet this same material, if we inhale it, really doesn't damage a person all that much.

The Author has described the use of Safe Solutions, Inc. food-grade DE to control insect and arachnid pest problems throughout this entire work and wants everyone to know that: It is imperative that only natural diatomaceous earth be used for insect control.

This noncrystalline silica (food-grade) is not a hazard as the human body apparently can dissolve it. "Silicosis refers to lung contamination and irritation by crystalline or free silica (SiO<sub>2</sub>). Crystalline describes the orientation of the SiO<sub>2</sub> molecules which occur in a fixed pattern in contrast to the nonperiodic, random molecular arrangement defined as amorphous. Exposure to free silica is an occupational hazard to workers." *Common Sense Pest Control Quarterly, volume III, number 1, Winter 1987.*

The World Health Organization cautions that DE with a crystalline (free) silica content over 3% is dangerous for ingestion by humans or animals. Safe Solutions, Inc. brand of food-grade DE has less than 1% free silica. Swimming pool DE ranges from 60% to 70% free silica and is considered to be carcinogenic. There are very few deposits of DE that meet these free silica minimum standards. Because inhaling any dust is not a good idea, even Safe Solutions, Inc. recommends the use of a simple dust mask. Customers have fed DE to their animals for a long time and are evidently satisfied that it does something positive for their animals. It would also be very important to know if the DE you plan on using was processed under safe and sanitary conditions. Safe Solutions, Inc. DE is all food-grade and handled as a food product.

There were two vets who said there is one worm called Strongyles that apparently diatomaceous earth does not kill, but it cleans out all the others. We have had treated beef cows go through slaughter. An affidavit was made to the effect that there were absolutely no internal parasites in those that had been fed food-grade DE.

The microscopic shells in Safe Solutions, Inc. diatomaceous earth (DE) are composed of silicon dioxide and around 14 trace minerals. Being formed under water, they will not dissolve in water. In fact, even in the stomach of animals or birds, surrounded with powerful digestive (acidic) juices, they pass all the way through the body almost complete. A very small amount is leached out. As it passes through the stomach and intestinal tract, a number of important things happen. These happenings occur as physical actions, not CHEMICAL, not NUTRITIONAL. JUST PHYSICAL! AND SAFE!

The shape of these shells and the size of the holes in the surface of these shells is very important. Many harmful things entering the body have a positive charge. Silica is a semi-conductive mineral which when warmed by body heat becomes negatively charged and gives off electrons. These negatively charged mineral ions and/or individual shells attract bad microbes, free radicals, positively charged waste and other harmful things. Acting as magnets, the negatively charged shells and/or ions attract and absorb positive things that are small enough to go through the holes. Add a sugar molecule and you can trap toxins into the porous food-grade DE particle which is then excreted safely out of the body.

Because of the strong charge, each shell can absorb a large number of positively charged substances, whether they be chemical or in the form of bacteria or viruses. They pass on through the stomach and intestine, taking these harmful substances out of the body.

In today's world, most all food (animal or human), all water and air contains harmful substances, which taken internally causes stress on the immune system, using energy that could go for the production of milk or meat. For example, "Dr. Johnson, a Canadian veterinarian, discovered that DE absorbs the bacteria causing "scours." Takes them out of the body and the animal is protected from unnecessary stress and possible death.

Passing through the digestive system, food-grade DE rubs against parasites and, being very abrasive, causes serious damage, causing the parasite to die and pass out of the animals with no negative side effects. The effect on the animal is nothing but beneficial.

Most living creatures are in contact with parasite eggs and toxic substances on a daily basis. Kill parasites today, yet you also pick up and consume their eggs at the same time. Subsequent and continuing parasitic damage is done and energy is lost until the next worming process.

Having Safe Solutions, Inc. fossil shell flour or food-grade DE in the diet every day tends to keep the animal free of parasites and toxic chemicals so it can get maximum benefits from the food and water it consumes. Vet bills tend to reduce around 75%.

#### **Beneficial effects of silica per Gerhard Leibold, N.D.**

- ☆ Stimulates cell metabolism and cell formation.
- ☆ Inhibits the aging process in tissues.
- ☆ Necessary for the structure and functioning of connective tissue.
- ☆ Strengthens and stimulates the immune system.
- ☆ Silica is important for the development of healthy nails and hair and regular intake can stop unnecessary hair loss.

- ☆ Strengthens and stimulates the vascular system; lowers blood pressure and improves the condition called arteriosclerosis.
- ☆ Increases elasticity and firmness of the blood vessels.
- ☆ Silica is indispensable for the elasticity of lung tissue and, therefore, is a basic therapy for lung and respiratory disorders.
- ☆ Has anti-inflammatory disinfecting, absorbing and odor binding effects.
- ☆ Some of the disorders that benefit from regular silica intake include: Disorders of the throat, nose, ears and teeth, disorders of the digestive and secretive organs, bone injuries and problems, skin problems and injuries including itching, rashes, abscesses, boils, acne, callouses, warts, eczemas, burns, frostbite, benign skin sores, insect bites and bed sores, female illnesses and as a base therapy for cancer treatment.\*

\*Cancer occurs mainly in middle and older ages at a time when the human body contains less silica. Silica especially influences the degenerated white blood cells of cancer patients, activates the regeneration of normal protein and increases the immune system against cancer. Silica helps support the healing process.

**ANALYSIS OF  
SAFE SOLUTIONS, INC.  
PURE FOOD-GRADE DIATOMACEOUS EARTH (DE)**

Aluminum (Al), %	0.65
Boron (B), %	0.0023
Calcium (Ca), %	0.40
% CaO (calc.from %Ca)	0.55
Cooper (Cu), %	0.0019
Iron (Fe), %	0.72
Magnesium (Mg), %	0.21
%MgO (calc. from %Mg)	0.34
Manganese (Mn), %	0.0052
Phosphorus (as P2O5), %	0.037
Potassium (K), %	0.16
Sodium (Na), %	0.28
Strontium (Sr), ppm	59.9
Sulfate Sulfur (S), %	0.062
Titanium (Ti), ppm	420
Vanadium (V), ppm	43.8
Zinc (Zn), %	0.0022
Chlorides	.074% or 740 ppm or .067% or 870 ppm
Silica (as SiO <sub>2</sub> ), %	79.9

Safe Solutions, Inc. fossil shell flour or food-grade pure diatomaceous earth is labeled as an anti-caking agent. It came from a very special deposit that is so pure it meets the specifications to be called "food-grade." Food-grade DE also makes animal feed "flow better."

**Diatomaceous Earth**

Diatomaceous Silica: Diatomite, D.E.

## DESCRIPTION

A white to gray or buff-colored powder consisting of processed siliceous skeletons of diatoms. It is insoluble in water, in acids (except hydrofluoric), and in dilute alkalis. The *natural* powder (gray to off-white) is air dried and classified by particle size; the calcined powder (pink to buff-colored) is air dried, classified, calcined at a high temperature (1500° to 1800° F), and again classified; and the *flux-calcined* powder (white) is air dried, classified, calcined in the presence of a suitable flux (generally soda ash or other alkaline salt), and classified.

## REQUIREMENTS

## Identification

When examined with a 100- to 200-power microscope, typical diatom shapes are observed.

Arsenic (as As) Not more than 10 ppm.

Lead Not more than 10 ppm.

Loss on Drying *Natural powders* not more than 10%;  
*calcined and flux-calcined powders*: not more than 3%.

Loss on Ignition *Natural powders*: not more than 7%, on the dried basis; *calcined and flux-calcined powders*: not more than 2%, on the dried basis.

Nonsiliceous Substances Not more than 25%, on the dried basis.

pH Passes test.

## TESTS

**Arsenic** Transfer 10.0 g of the sample into a 250-ml beaker, add 50 ml of 0.5 N hydrochloric acid, cover with a watch glass, and heat at 70° for 15 min. Cool, and decant through a Whatman No. 3 filter paper into a 100-ml volumetric flask. Wash the slurry with three 10-ml portions of hot water and the filter paper with 15 ml of hot water, dilute to volume with water, and mix. A 3.0-ml portion of this solution meets the requirements of the *Arsenic Test*, page 464.

**Lead** A 10.0-ml portion of the solution prepared in the *Arsenic Test* meets the requirements of the *Lead Limit Test*, page 518, using 10 µg of lead ion (Pb) in the control.

**Loss on Drying**, page 518 Dry at 105° for 2 h.

**Loss of Ignition** Weigh accurately about 1 g. and ignite to constant weight in a suitable tared crucible.

**Nonsiliceous Substances** Transfer about 200 mg. accurately weighed, into a tared platinum crucible, add 5 ml of hydrofluoric acid and 2 drops of sulfuric acid (1 in 2), and evaporate gently to dryness. Cool, add 5 ml of hydrofluoric acid, evaporate again to dryness, and then ignite to constant weight.

**pH**, page 531 Boil 10 g with 100 ml of water for 30 min. make up to 100 ml with water, and filter through a fine-porosity

sintered-glass funnel. The pH of the filtrate prepared with *natural* or *calcined* powders is between 5.0 and 10.0, and of that prepared with *flux-calcined* powders is between 8.0 and 11.0.

**Packaging and Storage** Store in well-closed containers.

**Functional Use in Foods** Filter aid in food-processing.

**international  
agricultural  
laboratories, inc.**

P. O. Box 1181, Orlando, Florida 32801, Telephone 305 423-4559

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September 27, 1967

Dear Mr. Clark:

**TITANIUM (di-oxide) TITANOX**

TITANIUM joins with manganese and sodium as well as three other elements not found in Basic perma-Guard fossil shell flour and keeps the coats of animals cleaner as well as giving the hair a waxy sheen.

**GALLIUM**

GALLIUM seems to increase the effectiveness in the rumen of joining into a single mol magnesium, potassium and sodium which strengthens the bone structure of horses, cattle and cats.

**VANADIUM**

VANADIUM acts as a catalyst and as such is probably a governor for calcium in the digestive tract of animals especially during pregnancy and immediately thereafter. I have found that wherein it is not present in dairy cattle they are more susceptible to Milk Fever.

**STRONTIUM**

STRONTIUM is a complex silicate when it is a brewsterite as found in Perma Guard. It also appears to act as a governor for sulphates in the digestive tract of cattle.

**SODIUM**

SODIUM is  $\text{NaSi}_4$  also acts as a cleaning agent when fed to animals similar to the chemical action titanium.

BORON is a germicide agent.

**CONCLUSION**

CONCLUSION. A of these elements are so enjoined into either a chelate or colloidal form until they appear to work in unison with each other rather than as individual elements. Thinking of them as individual elements is quite misleading. None of these elements found in Basic Perma Guard are considered poisonous.

Gallium, Titanium and Vanadium are in the 4f and 5f RARE EARTH groups. Work research now being done on rare earth are showing that they are truly important in the field of plant and animal nutrition.

1. Strong, Ralph K., Kingzett's Chem. Enc., D. Van Nostrand Co. Mc. New York, Eight Ed.
2. Hubbard, Henry D. Welch Publication, Periodic Chart of Atoms, Chicago, Ill.

Yours sincerely,

Carey A. Reams, DS  
Physicist

**FREE CHOICE FEEDING OF FOOD-GRADE DE**

**5% MIXED WITH YOUR FEED**

Cattle need trace minerals like fossil-shell flour.  
Increases herd appetite, health and production.  
Fossil-shell flour stimulates the basic metabolism.  
Increase protein digestion with fossil-shell flour.  
Satisfies and stops dirt licking and corral gnawing with fossil-shell flour.  
The percentage increase result of each fossil-shell flour feeding can be ascertained from a fertilizer protein analysis.

<b>Suggested feeding instructions:</b>	
Kittens	1/2 teaspoon
Cats	1 teaspoon
Dogs under 50 lbs.	2 teaspoons
Dogs over 50 lbs.	1 Tablespoon
Dogs over 100 lbs.	2 Tablespoons
Cattle	2% by weight of dry ration
Calves	4 grams in morning
Dairy cattle	2% by weight of dry ration
Chickens	5% in feed
Goats	1% in grain
Hogs	2% of weight in feed ration
Horses	1/2 - 1 cup in daily ration
Sheep	1% in ground grain

GEORGE ROMNEY, Governor

**DEPARTMENT OF AGRICULTURE**

LEWIS CASS BUILDING, LANSING, MICHIGAN 48913

B. DALL BALL, Director

October 31, 1967

Sirs:

Our animal pathologist has examined the vital organs and intestinal components submitted, both macroscopically and microscopically, and has found no visible evidence or organ

These components consisted of brain, thyroid, rib section, lung, heart, liver, true stomach, small intestine section, large intestine section, pancreas, kidney, bladder, and forestomach.

These organs were submitted under affidavit as being from a slaughtered dairy cow having free choice access to fossil shell flour for approximately five years.

Sincerely,

Robert L. Kirkpatrick  
Supervisor, D. And L.  
Laboratory Division

RLK: et

## Customer Comments re Feeding Food-grade DE to Their Animals:

Please check out Nick LaFleur's comments on West Nile Virus in the Mosquito Chapter in this book.

Completely safe and nontoxic

Controls fleas and ticks

Stimulates basic metabolism

Converts feed better

Reduces odor and moisture in barns and stalls

Results in better coat and/or hoof condition

Cost effective

Reduces annual vet bills

Controls worms and internal parasites without chemicals

Reduces overall animal stress

Dr. Phillip Schaible, while heading the Department of Poultry Sciences at Michigan State University, made a study of European literature regarding adding Diatomaceous Earth to dairy cows' feed and made the following report:

"Contains 15 trace minerals important to animal diets, DE mixes well with all feeds while guarding against insect damage. Prevents worms and keeps virus epidemics from developing. Saves albumen, destroys harmful acids, safeguards the stomach. Improves health and growth of young animals Causes better digestion, allowing animals to absorb a higher percentage of protein from its regular diet."

Dr. C.S. Hansen, D.V.M., with some 8,000 chickens, kept half on regular diet, added Fossil Shell Flour to the other group. The Fossil Shell Flour group immediately had a lower death rate, egg production went up, and egg breakage went way down. His profitability went way up.

Dr. H.D. Johnson, D.V.M., Saskatchewan Vet Clinic, Canada, worked with 2,000 calves for two years without a single case of scours, using Fossil Shell Flour. He says, "using Fossil Shell Flour, we have been able to eliminate vaccines and antibiotics."

Dr. M.F. Petty, D.V.M.: "The use of Fossil Shell Flour gave immediate elimination and control of worms, stopped pigs from rooting and chewing feeder boxes, reduced manure odor, greatly reduced fly population and increased feed efficiency. Really improved profitability."

Capitol South Syndicate by Dan Miller, manager: "Feeding Fossil Shell Flour to my show and race horses, stallions, mares, foals and horses in training, we have seen improvements in their hair coat and their attitude. Flies and parasites are less of a problem."

Leslie "Shorty" Thomas, Trainer, L Frank Roper Stables, Winter Garden, Florida: "I have been actively engaged in training some of the finest walking horses in the country for the past 15 years. I take pride in the appearance and health of the horses under my care, which have won many national awards against stiff competition. I am constantly on the alert for products I feel can improve their health and condition. I am grateful to have found Fossil Shell Flour and here is why: It stopped scours, noticeably reduced flies, increased appetites, better feed conversion, eliminated internal parasites and created a healthier appearance. I would definitely recommend this product to other horsemen."

Johnnie Firestone on sheep: "We were losing one sheep every three days from the fringe tape worm in the bile duct. We started feeding the animals Fossil Shell Flour, mixed with salt and cotton seed meal. Within two weeks the dying stopped. Since that time we have lost two sheep, but not from worms. To say that I am sold on Fossil Shell Flour is a rank understatement. I suggest to anyone, "just try it. It does not cost much!"

Michigan Department of Agriculture made a laboratory study of internal organs from a cow using Fossil Shell Flour five years and found no visible evidence of abnormalities.

University of Illinois, referring to tests run on dairy cattle fed 2% of Fossil Shell Flour in their rations, stated there was no apparent harmful effect and that there was no evidence of the DE in the milk.

Within a few days...they stopped licking the soil completely. After feeding it continuously, we found that the average production of milk and butterfat per cow was increased.

I have 30 head of beef cows, also 10 head of dairy cattle and feed most of the calves. I also farrow and feed out 450-500 head of hogs per year. Now, to share some of the end results, I have been pleased with:

1. Elimination of internal parasites - without reoccurrences
2. Fly Control
3. Odor Problem

4. Healthier Animals
5. Better Feed Efficiency
6. The Advantage of the 14 Natural Trace Minerals
7. Reduction of vet bills and death losses to almost zero

In warm weather I have found that by dusting the bedding, sows and their litters (in addition to feeding it) I have no fly problem and because of its high absorbency it is a big help in keeping the bedding dry. I feel this usage encourages the small pigs to begin eating the Fossil Flour sooner, too. It also takes care of ticks and lice. All in all, it gets the pigs off to a better start.

I have found if fed to adult dogs, puppies, etc. at the rate of one teaspoonful to small ones and a table-spoonful to the large ones, this will control hook worms very quickly. Hook worms disappeared following the first days of feeding...large round worms and bots were passed when fossil flour was fed to horses, but it has failed to control strongilic. Ticks were retarded when fossil flour was fed to dogs.

One reason for the increased milk production was simply better feed assimilation - the result of food-grade DE anti-caking properties. The second reason was improved fly control. Residual DE in the cow manure effectively killed fly larvae. Continued feeding meant increasingly effective fly control. If they can not breed they can't fly.

It is a known fact that Florida soil is lacking in minerals. Therefore, it is essential that a mineral supplement be added to the diet of all grazing animals. I have previously used various types of mineral feed additives with no visible results. Now I am more convinced than ever that the 14 trace minerals contained in fossil shell flour are more available to an animal, possibly through better assimilation with the digestive system. This fact has been proven to me by observing a definite improvement in the appearance and general health of my animals which are receiving a daily total of 5 ounces of fossil shell flour. Following is my summary of the most significant and consistent results achieved: Healthier-looking animal with a definite sheen to its coat; lasting absence of internal parasites; better feed conversion (weight gains were noticeable with no increase in feed; in some cases with a decrease in feed); reduction in odor (an indication that the animals are retaining more protein from their feed); fly control (no larva latch in the manure); cured scours (even in several cases where other medication had failed); improved appetites (horses which were "picky" eaters cleaned up their food more readily.)

Pigs/Hogs

1. Internal parasite control - Round worms (Ascarids) were observed in all pens being fed fossil flour on the third day following the beginning of test and for 3 - 4 days following. Parasite studies - Direct smear and flotation method showed no internal parasites at any time in the test group. The control group, even though previously dewormed with piperazine, has ascarids - low level and *M. hirvudinaceous* - low level.
2. Rooting and eating feeders - By the tenth day after beginning the test all hogs on fossil flour had stopped rooting and destroying the wooden feeders while the control group showed no change and continued to destroy feeders and fences at the same rate. They also continued to root in the holding pens prior to shipment.
3. Odor control - By the end of the third week the manure of the test group dried more quickly and was noticeably less offensive to the smell than that of the control group.
4. Fly control - The test didn't last long enough nor were the hogs separated far enough apart for an accurate estimation to be made concerning fly population; however, it was apparent at the end of about six weeks that there were not as many flies present in the parlor as there had been previously, and there was no weather variation or moisture variation to account for the decrease in population. The fly population did, however, decrease markedly and apparently lastingly.
5. Weight gain - No results.

Another possible advantage - When castrating 13 litters one morning, for the first time I found no ticks on the little pigs' bellies. The only diatomaceous earth that could have been in their bedding would have to be from their dung because I had not put any in it.

We had one sow that seemed to have breathing problems, making a sort of snorting noise. After two weeks it disappeared.

We had tried the past de-wormers and found that despite our best efforts, the goats managed to spit of most of it. We began feeding (food-grade) DE along with alfalfa pellets and sweet feed and observed that they gobbled it up as if it was sugar. They would lay in it (in the large deed pans) and otherwise roll in it and lick every last bit of it from the pan. During the next weeks we noticed the hair on the goats began to look slick and shiny, and the goats themselves were more satisfied with the same amount of

feed...I found a 2 x 4 in the barn crawling with chicken mites. Instead of trying to dust each of more than 50 hens with DE, I put about one-half a coffee mug of it in each of the nests (10 in all); 24 hours later there were no mites anywhere. Each laying season I put more DE in the nests. DE is the only "treatment" we've used on and in our animals since those first 2 bags we bought years ago.

Every type of animal or bird that has had these products added to its diet show many positive results, any one of which makes it profitable for an owner to include it in daily livestock and/or pet rations. This is very true with chickens, especially those in the chicken factories. Every day hundreds of dead chickens are hauled away to be buried. A dead chicken does not produce many eggs (or meat)! When fossil shell flour is added to its rations, the death rate drops dramatically. The very first weeks show a valuable increase in the number of eggs produced. Egg breakage decreases. The silicon makes the shells much harder. Anyone breaking an egg on the edge of a frying pan will be very aware of this.

The manure of the barn decreases, making it a much more pleasant place in which to work, and it is probably healthier for the chickens. This lowering of the odor is very likely due to the more complete digestion of the protein in the feed. The diatomaceous earth in the rations passes through the birds into the manure, making it impossible for fly larva to hatch. Making no other control efforts, the fly population should decrease around 90% within two weeks.

Litter Bugs are greatly reduced, but to make it even better, if the manure is dusted with DE once a week, they will be reduced almost to zero.

If any one of the above things are true, a chicken operation cannot afford to be without fossil shell flour!

No university has properly run the necessary efficacy tests needed to prove or disprove the above-mentioned claims. However, two schools have run a few health tests. For example, the University of Arkansas did a study to determine whether the addition of diatomaceous earth was harmful to chickens. Their conclusion was that it posed no threat.

### **Safe Solutions, Inc. Grain and Seed Storage**

Easy and safe to use, our products do not have to be removed before use. In fact, food-grade DE contains 14 trace minerals which, when incorporated into bread, yield no change in flavor or texture.

Controls insects in wheat, rice, sorghum, oats, rye, barley, corn and seeds of all kinds.

Controls rice weevils, lesser grain bobbers, flat grain beetles, red flour beetles, confused flour beetles, merchant grain beetles, saw-toothed grain beetles, granary weevils, larvae of the Indian meal moth, etc.

For commercial use, it is recommended that 7 - 10 lbs. of DE be used per 2000 lbs. of grain, but we find that many people are using less successfully.

For practical purposes, 1 lb. of PERMA-GUARD DE will protect 300 lbs. of grain or seeds. That means that 1 oz. will protect 18 lbs. of grain.

For more convenience for most uses, 1 lb. has 6 c. of DE. 1 c. will protect 50 lbs. of grain or seeds.

**MAKE CERTAIN YOUR STORAGE CONTAINERS ARE PROPER FOR THE JOB AND ARE CLEAN AND DRY.**

**USING A SMALLER CONTAINER WITH A LID, FILL ABOUT 1/3 FULL OF GRAIN, PUT IN SOME SAFE SOLUTIONS, INC. FOOD-GRADE DE, PUT THE LID ON AND SHAKE. (THIS WILL INSURE THAT EVERY KERNEL HAS A COATING). POUR THE MIXTURE IN YOUR STORAGE UNIT AND REPEAT THIS PROCEDURE UNTIL FINISHED.**

Any DE left over can be used in many ways, or shared with friends, neighbors or relatives, or used for other purposes. The shelf life is indefinite.

## FOOD-GRADE DE FOR HUMAN USE?

Safe Solutions, Inc. does not promote the sale of its food-grade DE and/or fossil shell flour for treating any ailment, either for animals or birds and especially not for the treatment of people.

All the way through our careers, our customers have always taught us far more than we ever taught them, and it is certainly true in using our DE for some internal benefit.

This always seems to happen after owners, using our products for their animals and seeing obvious benefits, and figuring there is not that much difference between animal and human metabolism, decide to try it for themselves even though our food-grade DE is not FDA approved as a medicine.

Over and over again, the people are so pleased with the results they want to tell us about it, and, of course, they tell their friends.

It is not just our customers. Health information keeps coming in from outside sources. A Canadian Doctor discovered that putting a little sugar with DE and giving it to people with e-coli poisoning will stop the poisoning problem immediately. His work was noted in the November, 1994 issue of Discover Magazine.

The Author does not worry about this, as the product is extremely safe and is rated food-grade. He would certainly refuse to eat a tablespoon of table salt, but he would not hesitate to take and eat a cupful of food-grade DE, but Safe Solutions, Inc. does not recommend its use as a medicine.

**Eur J Med Res. 1998 Apr 8;3(4):211-5.**

### **Diatomaceous earth lowers blood cholesterol concentrations.**

**Wachter H, Lechleitner M, Artner-Dworzak E, Hausen A, Jarosch E, Widner B, Patsch J, Pfeiffer K, Fuchs D.**

Institute of Medical Chemistry and Biochemistry, University of Innsbruck, Fritz Pregl Strasse 3, Innsbruck, A-6020, Austria.

In this study a potential influence of diatomaceous earth to lower blood cholesterol was investigated. During 12 weeks we monitored serum lipid concentrations in 19 healthy individuals with a history of moderate hypercholesterolemia (9 females, 10 males, aged 35 - 67 years). Individuals administered orally 250 mg diatomaceous earth three-times daily during an 8 weeks observation period. Serum concentrations of cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol and triglycerides levels were measured before study entry, every second week during the period of diatomaceous earth intake and 4 weeks after stop of intake. Compared to baseline (285.8 +/- 37.5 mg/dl = 7.40 +/- 0.97 mM) diatomaceous earth intake was associated with a significant reduction of serum cholesterol at any time point, reaching a minimum on week 6 (248.1 mg/dl = 6.43 mM, -13.2% from baseline; p<0.001). Also low-density lipoprotein cholesterol (week 4: p<0.05) and triglycerides levels decreased (week 2: p<0.05, week 4: p<0.01). Four weeks after intake of diatomaceous earth was stopped, serum cholesterol, low-density lipoprotein cholesterol and triglycerides still remained low and also the increase of high-density lipoprotein cholesterol became significant (p<0.05). Diatomaceous earth, a bioproduct, is capable of reducing blood cholesterol and positively influencing lipid metabolism in humans. Placebo-controlled studies will be necessary to confirm our findings.

Publication Types:

- Clinical Trial

PMID: 9533930 [PubMed - indexed for MEDLINE]Silica Savvy

# Silica Savvy

**Clear, smooth skin, healthy hair, strong nails—  
silica is known for its use in achieving all  
of these and more.**

**O**ne benefit of choosing a natural, nutritious lifestyle is the opportunity for a long, healthy life. Another is looking good. Feeding the body the nutrients it needs from within can help promote an outward glow of health, with clear skin and strong hair and nails signaling the body's balance. These things, as well as a variety of more serious conditions, can be aided with supplementation of the mineral silica.

Silica should not be confused with silicon and silicone. Silicone, explains material provided by New York, NY-based Abkit, Inc., is a man-made, artificial material. It is a combination of silicon, carbon and oxygen, and is used for breast implants, aircraft and automobile parts and other commercial applications. Silicon, on the other hand, is naturally occurring and the second most abundant element on Earth, next to oxygen.

Like silica, silicon also is noted for health-promoting benefits. According to material supplied by Los Angeles, CA-based Jarrow Formulas, silicon in its bioavailable form (orthosilicic acid) is an essential nutrient that benefits bones, connective tissue, joints, hair and capillaries. "As a rule," the material states, "the higher the concentration of silicon in skin, hair and nails, the healthier these tissues are."

Silica is a compound of silicon and oxygen. Frank Murray, author of *The Big Family Guide to All the Minerals*, explains the difference between various forms of silica. "Silica supplements often are water-soluble extracts of horsetail, while silica gel is derived from quartz crystals; that is, a solution of minute nondiffusible particles suspended in water." Another form of silica supplement is derived from purified algae, he says.

Silica is available in a number of foods, such as wheat, oats and barley. However, it often is depleted from foods due to processing, making supplementation necessary.

Silica supplementation has been shown to help the body in numerous ways. Material supplied by Eidon, based in San Diego, CA points out that silica has a variety of health and beauty care (HBC) benefits. It has demonstrated an ability to help the body deal with dry skin and associated conditions, brittle nails, hair thinning, dandruff and burns (including sunburn). In addition to these benefits, the company says, silica may help the body in its internal defense of joint and cartilage inflammation and deterioration, bone support, cardiovascular support, vertigo, tooth and gum loss and provide gastrointestinal support and immune system enhancement. Since silica works from within, people taking it for its beauty effects also may experience these other

benefits.

"Fresh, natural beauty comes from within," says Edward A. Lemmo, Ph.D. in *Silica*. It is reflected in the user's shiny hair, clear skin and strong nails. He says, "It's the kind of beauty that cannot be obtained through the artificial use of cosmetic creams, lotions or hair conditioners." Lemmo cites a 1993 study in which women with aged skin, thin hair and brittle nails were given 10 ml of silicic acid once per day for 90 days, as well as colloidal silicic acid applied to the face for 10 minutes daily. Significant improvement in the quality and appearance of the ladies' skin, hair and nails were demonstrated. Also, a double blind study of the effects of silica on acne and skin oil production showed that the group treated topically with silica improved significantly over the placebo group, Lemmo says.

"Truly, silica gel can care for the skin in a unique way like no other skin care," asserts Klaus Kaufmann, author of *Silica: The Amazing Gel*. He explains that it is a general tonic that increases strength and elasticity against a variety of negative influences. He adds that, unlike other skin care products, silica can be used internally or externally. "It has a double action on damaged skin by restoring skin vitality from within to without and without to within." Externally, he says, silica is effective for itching, rashes, abscesses, boils, acne, calluses, warts, eczema, corns, benign skin sores, insect bites and bed sores. Internally, he recommends it for hair loss, brittle nails, flabby skin, aging disorders and more.

*Over 50 Looking 30!* by Nina Anderson and Howard Peiper also recognizes the benefits of silica for the skin. Silica derived from horsetail, in combination with herbs such as aloe vera and chamomile and bonded with electrolytes, readily enters the bloodstream and penetrates the cells of the body. "This initiates a healing response that benefits the entire organism," the authors explain. They advise the use of silica for the prevention of adult acne and for cellulite.

Silica may not be the best known mineral, but it certainly is a very important one. Sharing these many benefits with consumers will help silica achieve the recognition it deserves. WF

#### References:

*The Big Family Guide to All the Minerals* by Frank Murray.  
*Over 50 Looking 30!* by Nina Anderson and Howard Peiper.  
*Silica* by Edward A. Lemmo, Ph.D.  
*Silica: The Amazing Gel* by Klaus Kaufmann.  
Material supplied by Abkit, Inc.  
Material supplied by Eidon.  
Material supplied by Jarrow Formulas.

**MATERIAL SAFETY DATA SHEET FOR SAFE SOLUTIONS, INC. FOOD-GRADE DE**

HEALTH 0  
FLAMMABILITY 0  
REACTIVITY 0  
PERSONAL PROTECTION: E

**I. IDENTIFICATION - PRODUCT NAME: SAFE SOLUTIONS, INC. FOSSIL SHELL FLOUR OR FOOD-GRADE DE and/or GRASS OF THE SEA DE**

CHEMICAL NAME:  
CHEMICAL FAMILY: SILICATES  
FORMULA:

**II INGREDIENTS**

MINERAL OR CHEMICAL NAME(S)	WEIGHT %	CAS #
AMORPHOUS SILICA – DIATOMACEOUS EARTH	95-100%	61790-53-2

**III PHYSICAL DATA**

BOILING POINT: N/A	FREEZING POINT: N/A
VAPOR PRESSURE: N/A	VAPOR DENSITY N/A
EVAPORATION RATE N/A	% VOLATILE NO
SPECIFIC GRAVITY C	
SOLUBILITY IN WATER	SLIGHTLY
APPEARANCE AND ODOR:	A SOFT EARTHY POWDER

**IV HEALTH HAZARD DATA**

FLASH POINT:	NONFLAMMABLE
LIMITS:	NONE
EXTINGUISHING MEDIA:	NONE
SPECIAL FIRE FIGHTING PROCEDURES:	NONE
UNUSUAL FIRE & EXPLOSION HAZAARD:	NONE
THRESHHOLD LIMIT VALUE:	10 MG/M3
TOTAL DUST:	NUISANCE DUST

**POSSIBLE EFFECTS OF A SINGLE OVEREXPOSURE:**

INHALATION:	ACUTE ACCIDENTAL EXPOSURE WOULD BE NON-SPECIFIC. SYMPTOMS MIGHT INCLUDE COUGHING, WHEEZING, DIFFICULT BREATHING AND UPPER RESPIRATORY TRACT IRRITATION.
SKIN CONTACT:	NO KNOWN CONCERN
EYE CONTACT:	MAY CAUSE TEMPORARY DISCOMFORT AND IRRITATION
INGESTION:	NO KNOWN HAZARD.

**POSSIBLE EFFECTS OF REPEATED OVEREXPOSURE**

CHRONIC OVEREXPOSURE MAY CAUSE PNEUMONOCONIOSIS (DUSTY LUNGS)  
NO KNOWN HAZARD

## **EMERGENCY AND FIRST AID PROCEDURES**

<b>INHALATION:</b>	REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN AND CALL A PHYSICIAN.
<b>SKIN CONTACT</b>	OF NO GENERAL CONCERN; SIMPLY WASH WITH SOAP AND WATER.
<b>EYE CONTACT:</b>	FOR ACUTE EXPOSURE, FLUSH WITH WATER. IF IRRITATION OR DISCOMFORT PERSISTS, CALL A PHYSICIAN.
<b>INGESTION:</b>	NO KNOWN HAZARD.
<b>NOTES TO PHYSICIAN:</b>	THERE ARE NO SPECIFIC ANTIDOTES TO ACUTE OVEREXPOSURE. TREATMENT SHOULD BE DIRECTED AT THE CONTROL OF THE SYMPTOMS.

## **VI. REACTIVITY DATA**

STABILITY:	INERT
INCOMPATIBILITY:	NONE
HAZARDOUS DECOMPOSITION PRODUCTS:	NONE
HAZARD POLYMERIZATION:	NONE
CONDITIONS TO AVOID:	NONE

## **VII. SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:	VACCUUM CLEAN OR WET-SWEEP SPILLAGE. WASTE DISPOSAL METHOD WASTE SHOULD BE DISPOSED OF IN CLOSED CONTAINERS TO PREVENT DUST.
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## **VIII. SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION:	APPROVED DUST RESPIRATORS FOR EXPOSURE TO POTENTIALLY HIGH DUST ENVIRONMENTS.
VENTILATION:	LOCAL EXHAUST VENTILATION RECOMMENDED
PROTECTIVE GLOVES:	NOT REQUIRED
EYE PROTECTION:	SAFETY GLASSES
OTHER PROTECTIVE EQUIPMENT:	NOT REQUIRED

## **IX. SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE AS WITH ALL POWDERS:	LIMIT THE CREATION AND INHALATION OF DUST. WET FLOORS MAY BECOME EXTREMELY SLIPPERY WHEN DIATOMACIOUS EARTH IS PRESENT.
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## **ADDITIONAL PRECAUTIONS**

### **EMERGENCY TELEPHONE NUMBERS**

**MEDICAL:** (801) 295-2025  
**TECHNICAL:** (801) 295-2025

**How to detoxify and improve your digestion and other helpful hints. — Adapted from David Pittman's 10/7/99 writings.**

When you start detoxifying you may get a reaction from the die-off of parasites, microbes, etc. you must remember two things: (1) drink lots of water to flush the body, and (2) always start out slowly with low doses of food-grade DE.

Start with 1 level tsp. in 8 oz. water before breakfast. Then take another 1 tsp. in water before going to bed. Warm distilled water is best, but any water will work. Gradually increase your dosage of food-grade DE up to 3 level T. per day. I sometimes forget in the morning and may add it in my oatmeal or juice later. Anyway, I try to consume 3 T. per day one way or another. Try to do this for 4 months. After this I recommend 1 level tsp. in your favorite drink at least once a day as maintenance.

I have read a lot of articles about the benefits of silica for humans. Older people and chronic diseased people are almost always low on silica. People just do not have enough silica in their diets! Believing this to be true, I try daily to drink 1 qt. food-grade DE water in addition to 3 level tsp. food-grade powder added to my food or drink. To make food-grade DE water, add ½ tsp. food-grade DE to 1 qt. distilled water and bring to a boil; then stir for about 3 minutes. You must use distilled water because it dissolves better. Do not boil the water in aluminum pans and do not microwave food-grade DE. Some silica may still settle out, but if that happens, just stir or shake it. The whole purpose is to dissolve the silica in distilled water so as to ncrease the bioavailability of silica for absorption into the blood stream. I then drink it like a hot tea or cool it and fill my water bottle with this solution. I try to drink it throughout the day and not all at once.

I call silica the mineral of light because it absorbs heat and stores light energy. Silica will absorb this energy until it becomes a negative charged ion; then it releases electrons and repeats this cycle over and over again. Numerous studies show how electrons neutralize free radicals and bacteria. My research also indicates silica is a critical mineral essential for the body's electrical system to function properly. Silica electrically stimulates collagen formation and chemically makes collagen strong and flexible.

Based on the history of this product, I recommend giving food-grade DE powder to all pets. Small animals can drink from unclean water from time to time, so I would add at least a teaspoon to their food on a continual basis. I use it as a mouthwash and add to my flour and grains as a preservative. Finally, I use it as a first aid powder for minor cuts and wounds on my children.

\*\*\*\*\*

The Author has found a way to microencapsulate and/or to keep DE (and many other substances) in virtually permanent suspension. At the time of this writing, The Auhor was still deciding on whether to include this methodology into his newest U.S.A. Patent Pending for its use in pest control.

**Caution: There are hundreds of DE mines in the USA but only a handful have food-grade DE.**

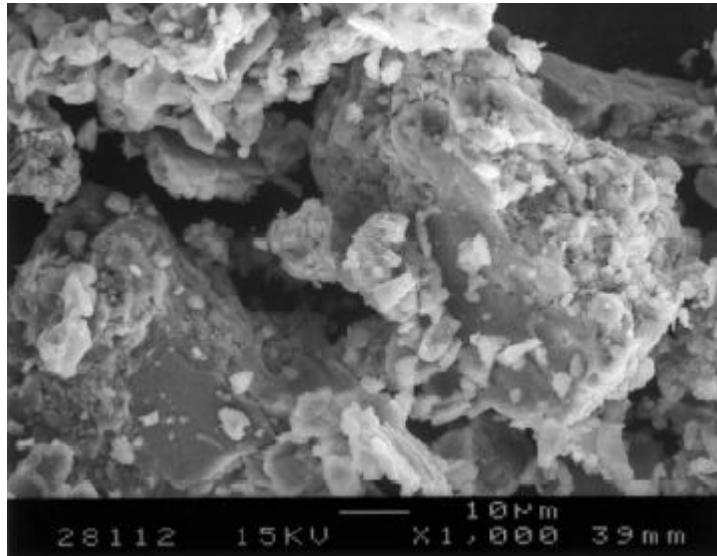
**This research information is for informational and educational purposes only. Please consult a health care professional regarding the applicability of any opinion or recommendations with respect to your symptoms or medical condition. No statement in this information should be construed as a claim for cure, treatment or prevention of any disease.**

**Detoxification Note: Taking castor oil will also help you detox because it stimulates bile flow and enhances the liver's ability to filter blood.**

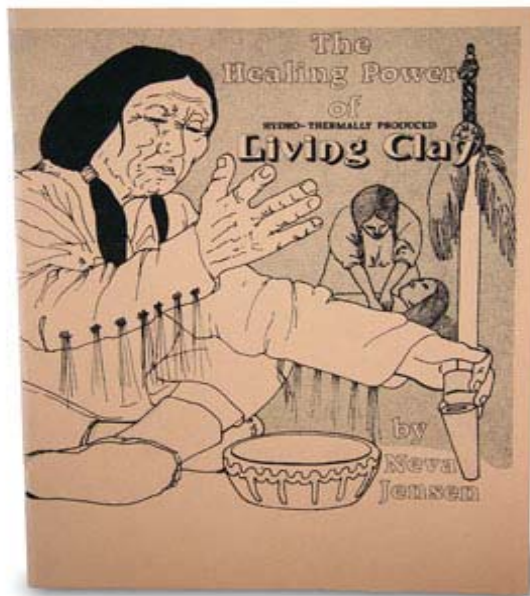
**You can order Safe Solutions, Inc. Food-grade DE direct from the Company:**

**Safe Solutions, Inc.  
2530 Hayes Street  
Marne, MI 49435-8781  
1-888-443-8738**

**<http://www.safesolutionsinc.com>**



## A Few Notes on Prescriptive Nutrients Bentonite Clay



\*A personal thank you to Perry A~ Smith, California Earth Minerals Corp. and Neva Jensen and all others who provided the Author with much of the following material.

Native cultures have long sought and used living clays for healing purposes. Clay minerals are silicate crystals that are so fine grained they are in reality microcrystals. Silica (a compound of silicon and oxygen) is one of the most abundant components in living clay. Silica makes our muscles firmer, our blood warmer and strengthens all of the inner and outer membranes of our vital organs. There are approximately 15 minerals and many more trace minerals (known as micronutrients) commonly found in living clays. Trace minerals activate our enzyme systems and the biological functions that underlie nearly every manifestation of our lives. There is a 1972 report from the U. S. Department of Agriculture which states, "Most of the health problems underlying the leading causes of death in the United States could be modified by improvement in diet. The highest death rate areas generally correspond to those where agriculturists have recognized the soil as being depleted for several years. This suggests a possible relationship between submarginal diets and health of succeeding generations." Living clays can be used as a dietary supplement." Living clays are not chemically treated in any way. There are many different deposits of bentonite clays found in several parts of the U. S. A. No material extracted from the earth has a greater variety of uses than clay. Applying living (cool or warm) clay on external body tissue has a calming, cleansing and healing effect. Inflammations, open wounds, pains, stings and bites and sores simply are repaired naturally. Toxicity was never evident when using living clay internally and/or externally. Living clays have an abundance of positively charged ions that are essential to all metabolic process of life.

### **Facts about Bentonite Clay**

#### **Information Provided by Perry A- Smith**

1. Applied in poultices and compresses, bentonite clay provides numerous benefits. It can speed up the healing process for sores and ulcers and aid in the rebuilding of healthy tissues and cells, and even of fractured bones and vertebrae.
2. In 'Our Earth Our Cure', Dextreit writes that clay stimulates the deficient organ and help the restoration of the failing function. Clay is a powerful agent of stimulation, transformation and transmission. Clay contains highly active ingredients, able to induce cellular rebuilding and to hasten all organic processes. He also says that clay acts with wisdom - it goes to the unhealthy spot. Used internally, whether absorbed orally, anally or vaginally, clay goes to the place where harm is, there it lodges, perhaps for several days, until finally it draws out the pus, black blood, etc. with its evacuation.
3. In the 'Clay Cure', Knishinsky writes "When clay is consumed, its vital force is released into the physical body and mingles with the vital energy of the body, creating a stronger, more powerful energy in the host. The natural magnetic action transmits a remarkable power to the organism and helps to rebuild vital potential through the liberation of latent energy. When the immune system does not function at its best, the clay stimulates the body's inner resources to awaken the stagnant energy. It supplies the body with the available magnetism to run well. Clay is said to propel the immune system to find a new healthy balance and strengthens the body to a point of higher resistance."
4. Taken orally, bentonite clay initiates a many-pronged effect. In cases of organic disorders, its intense activity eliminates and destroys unhealthy cells and activates the rebuilding of healthy ones. Besides the colloidal properties of clay, it acts as a cleansing agent eliminating all noxious substances. The same sedating, relaxing, absorbing and healing action is seen in treatment of the inflammation of the intestines as well as amoebic and other types of dysentery.
5. One of bentonite clay's peculiarities is based on its physical-chemical domination. From a thermodynamic point of view, we must admit that clay cannot be the sole source of energy of the phenomena it produces. Clay is effective through a dynamic presence far more significant than a mere consideration of the substances it contains. It's the alchemy of elements that enables it to act as a catalyst, rather than an agent in itself. This is because clay is a living substance. Clay is "alive."
6. Bentonite Clay Baths: Some people take about a cup of extra thick liquid bentonite and put it into their bath water. Others have used a full quart and more. It is highly effective in drawing out toxins, but too much, or too long exposure, will dry out the skin.
7. It has many other uses, many beauticians state bentonite clay has no equal as a facial conditioner. They

report that it's skin-tightening effect when used on the face is very strong and firming. We have been told that when the clay pulls the red blood cells to the skin surface, leaving your face temporarily red, it has done its job.

8. In addition to its other abilities, bentonite clay has been shown to be an anesthetic. Many users have reported almost immediate cessation of pain following its application in paste form to the areas.
9. Using bentonite clay for healing is a profound experience. Applying cooled or warmed clay locally on external body tissue has a cleansing, and healing effect. Inflammation and pain soon diminish with clay applications. Toxicity is never evident when using the living clay either internally or externally. The internal use of clay for ulcerated or irritated conditions of the stomach, bowels, colon or bladder can give noticeable relief. Over-acidity in the tissue of these organs can be corrected with the use of clay.
10. Bentonite clay works best when taken over a long period of time. That's because its actions are subtle. Like a snowball rolling down the hill, it starts off small and slow. As it continues to roll, it soon picks up momentum and goes faster. Clay does not offer instant cures for all ailments, but history shows it can encourage the body to put up a better fight when taken over a long period of time.
11. When bentonite clay is taken for indefinite periods of time, it has no addictive qualities. This is a big concern for many who begin eating the clay. The effects can be so positive that it scares them into thinking they might need it forever. However, one can quit eating clay at any time. There are no withdrawal symptoms, and you will never need to enter a withdrawal program.
12. Incomplete hydrolysis of the bentonite clay particle to the individual mineral sphere denies it the ability to take electrical charge. Therefore, the complete hydrolysis of clay is necessary for its use by the human cell. The biological functions of the human body require essential minerals in the ionic state. So essential are these constituents that without them life does not exist. From these specific, basic mineral spheres the vital trace minerals the evolve. The movement of life proceeds from the constant changing on one element into another.
13. The term active or "*living clay*" is born of research denoting ionic exchange capacities of given clay minerals. In the montmorillonite group of clay minerals called smectite, its micro crystals are extremely fine grained, irregular, and thin layered. The layers contain ions that are loosely bound and easily exchangeable, a characteristic which gives smectites the properties of absorption and adsorption.

This means that in bentonite clay found in the desert regions where temperature is high and water scarce, leaching is minor. The washing away of the ions, and chemical hydrolysis is almost nonexistent. These clays are richer in silica and alkaline earth minerals. In the hydro-thermal state the synthesis of new clay minerals increases. Ions of silicon, aluminum, iron, magnesium and potassium are concentrated. Evaporation of the water greatly increases the trace mineral content and leaves the ions negatively charged.

As these ions enter the human body in this form, they respond to gastric activity to become electrons. Adsorption takes place as dissolved matter is assimilated on the membrane surface. This begins the process of absorption as nourishment is changed into living tissue. This creates very favorable conditions for human consumption of *living bentonite clay* minerals.

14. The magnetic field [of the bentonite clay] has different qualities to it. When an electrical field is in action, there is a positive and negative effect. A negative ion field takes on more electrons, while a positive field gets rid of some. The negative ion field seems more compatible with human tissue than a positive one. Negative charges contained in negative ions seem to be associated with healing, with feelings of well-being and changes in physiology.
15. A German Scientist once described the bactericidal properties of clay: The curative properties of clay are founded in its special physical characteristics, above all in the distribution of its minute particles. Individual clay particles are smaller than many bacteria. If infected mucous membranes are more or less flooded with clay, the bacteria are completely surrounded by clay particles and are thus separated from their source of nourishment and become imbedded in the inorganic material. Growth and the survivability of the bacteria are thus halted almost instantaneously, and from this explained strikingly

speedy abatement of the symptoms of infection and/or symptoms of poisoning in acute infectious diseases of the alimentary canal.

— **Julius Stumpf**, *Bolus fur medizinische Anwenduno Darmstadt*, 1916, p. 19.

Bentonite Clay is one of the most effective natural intestinal detoxifying agents available and has been recognized as such for centuries by native peoples around the world. Whatever the name, liquid clay contains minerals that, once inside the gastrointestinal tract, are able to absorb toxins and deliver mineral nutrients to an impressive degree, says Knishinsky. Liquid clay is inert which means it passes through the body undigested.

Technically, the bentonite clay first adsorbs toxins (heavy metals, free radicals, pesticides), attracting them to its extensive surface area where they adhere like flies to sticky paper; then it absorbs the toxins, taking them in the way a sponge mops up a kitchen counter mess. Then the clay and toxins are removed with each bowel movement.

Bentonite is a natural clay of the smectile family. Its platelet structure makes bentonite clay a versatile material used in civil engineering, oil refining, paper mills, sewage treatment, fish ponds, foundries, detergents and as a clarifier and/or stabilizer in the fields of edible oils and beverages. Bentonite is available in two forms: calcium and sodium. Calcium bentonite does not swell or gel in water. Sodium bentonite swells and forms thixotropic gels in water. Calcium bentonite can absorb two or three times of its volume of water in contact, but sodium bentonite can absorb eight to ten times its volume of water in contact.

### **Therapeutic Bentonite Clay for Pets and Livestock**

Bentonite clay is one of the volcanic ashes. Bentonite clay is a mineral compound mined from the earth consisting of weathered volcanic ash and is one of the most flexible clays. Bentonite clay is one of the strongest drawing agents available and can adsorb up to 40 to 50 times its own weight in heavy metals, pesticide toxins and free radicals. It is not a drug or chemical composition made in a laboratory. It is a product of Mother Earth. Bentonite clay in ages past was blown into the sky by volcanic action, which sifted down to help impregnate the soil with 25 to 35 trace minerals. Bentonite, under a high-power microscope, is seen as extremely minute rectangular particles, similar in shape to a business card. When hydrated, it generates and maintains a very strong electromagnetic field, which allows it to attract and hold unwanted, non-nutritive substances such as pesticides and other toxins so that they can be eliminated from the body.

Calcium bentonite clay has been used successfully on cats and dogs for skin disorders such as mange, cuts and abrasions, removal of parasites and heavy metal poisoning and other toxins.

It is practical for both external applications and internal consumption. Add powdered or liquid calcium bentonite clay to water bowls or feed dishes. Mix a little hydrated clay (½ teaspoon to 1 tablespoon depending on the size of the pet) in its moist food.

Having a high alkaline reading of 9.7 it is good for balancing acidity in pets.

Calcium bentonite clay is a natural vermifuge and cats have been reported to pass worms within three days of taking the clay in their drinking water. Calcium bentonite clay is considered to be GRAS - Generally Recognized as Safe.

Pure calcium bentonite clay can be added to pet and livestock feeds to promote weight gain and eliminate parasites (vermifuge). Studies at leading universities have demonstrated the growth promoting properties of Calcium Bentonite Clay minerals when fed to cattle. Clay has also been shown to have beneficial effects on overall livestock health when fed to horses, pigs and chickens. Because Bentonite Clay is on the list of approved non-synthetic, non-organic additives, it can be mixed with organic feeds without affecting their organic status.

Many wild animals, and some people, develop 'pica' when ill, a craving to eat earth - particularly clay, which assuages diarrhea and binds to many plant poisons. Among the most famous clay-eaters are the parrots of the Amazon. Scarlet macaws, blue and gold macaws, and hosts of smaller birds perch together in their hundreds

to excavate the best clay layer along a riverbank. Parrots' regular diet is tree seeds, which the trees defend with toxic chemicals, and clay is an essential buffer to the toxins.

Horse breeders have used the clay on horse's legs for cuts. They reported the wounds stopped festering and the clay assisted the healing process in the faster formation of new healthy skin. The hydrated clay also draws out toxins and bacteria when used as a poultice on infections.

Excerpts from [The Healing Clay](#) by Michel Abehsera and [Earth Cures](#) by Raymond Dextreit, Michel Abehsera, Judith Abinum

There are many studies showing that bentonite clay as an additive in livestock feed reduces the toxic effects of aflatoxins (build-up of molds and bacteria in feeds) in pigs, chicken, cattle and horses.

### **Dirt as Medicine**

Why would animals want to lick clay? Bill Roundy is a retired rancher. He remembers a generation ago, when he lived in Utah, that he and other cattle ranchers, learned a valuable lesson by watching their cattle. Whenever a cow got sick and went off her food, the ranchers would turn her out to fend for herself, as they could not afford to throw good money after bad. But, they noticed that, time and time again, the cows would return after a few days, fully recovered, and ready to feed with the rest of the herd. It wasn't long before these ranchers discovered how the cows were recovering. The sickly cattle would take themselves across the desert to clay banks, and feed on them until their health returned. When the ranchers saw how easy and cheap was the solution, they transported clay to their sick cows - a practice still continued today. Free-ranging cattle dig into ancient clay sub soils to access clay and so have no need to be supplemented in this way. [Mahaney, WC Maximilliano, B Hancock, RGV Aufrieter, S and Perez, FL 1996. Geophagy of Holstein hybrid cattle in the northern Andes, Venezuela. Mountain Research and Development, 16 (2) pp 177-180.]

U.S. Army studies show that Bentonite may be a successful treatment for exposure to chemical warfare. One Army emergency livestock protocol calls for immediate administration of Bentonite internally to counter effects of radiation poisoning in livestock (food sources). [Eyton's Earth](#)

### **More Dirt - More Wool**

Recently, researchers at the University of New England in Australia claim to have made a surprising discovery. While searching for means to combat a serious stomach disorder common to Australian sheep, they found that "small quantities of a naturally occurring clay, called bentonite, mixed into a sheep's drinking water" not only improved the animal's digestion but increased wool growth, reports *The Australian*. One of the researchers, Professor Ron Leng, said that a daily dose of a half ounce of bentonite mixed into their drinking water had resulted in increase of up to about one tenth of an ounce a day in a sheep's growth. It is hoped that use of this mixture on sheep nationwide will bring increases in wool production worth millions of dollars.

— AWAKE! 6/22/88

## **Hydrated Bentonite Clay**

### ***A Priceless Gift from Mother Nature***

#### **Herbal "First Aid"**

According to Dr. Richard Anderson, one of the first items to include in an herbal "first aid kit" would be hydrated Bentonite. Bentonite is known for its highly absorptive properties and its ability to draw out and bind heavy metals, drugs and other toxins from the body. This clay has been used for thousands of years as both an internal and external purification aid. The Egyptians used it to preserve their famous mummies. The ancient Greeks and Romans used it to restore health. The great German Naturopaths of the last century hailed clay as one of nature's great remedies. Mahatma Ghandi advocated the use of clay for health and purification. Numerous so-called 'primitive' tribes have used clay for both internal and external purification. Today, Bentonite clay is increasingly used both internally and externally by those interested in natural remedies, and it is included on the FDA's famous "GRAS" list, which stands for "Generally Recognized as Safe." With increasing public knowl-

edge about minerals, some have expressed concern over the presence of small amounts of aluminum in bentonite clay. However, Dr. Anderson himself, and numerous others who have used Bentonite clay extensively with his cleanse program, have had hair analyses done which indicated that the body does not absorb aluminum from bentonite. Bentonite is one of the volcanic ashes. It is not a drug or chemical composition made in a laboratory. It is a product of Mother Earth. Bentonite in ages past was blown into the sky by volcanic action, which sifted down to help impregnate the soil with its 25 to 35 trace minerals. Bentonite, under a high-power microscope, is seen as extremely minute rectangular particles, similar in shape to a business card. When hydrated, it generates and maintains a very strong electromagnetic field, which allows it to attract and hold unwanted, non-nutritive substances such as pesticides and other toxins so that they can be eliminated from the body.

## Radiation

Dr. Jensen, N.D., D.C., Ph.D., suggests using bentonite to absorb radiation from the bones. Since so many of us are subject to various forms of radiation, whether from X-rays or television or computers, this would be something to consider. This could be extremely important for those who have undergone radiation treatment for cancer. Some people take about a cup of extra thick liquid bentonite and put it into their bath water.

**Others have used a full quart and more. It is highly effective in drawing out toxins. But too much, or too long exposure, will dry out the skin.**

## Swelling & Pain in Gums & Teeth

Some bentonite users report relief from swelling, pain and aching in the gums and teeth. Since these symptoms are manifestations of toxins or infections in the tissue surrounding the teeth and gums, it is easily apparent that bentonite's powerful absorbing qualities would provide relief for these areas. If you are suffering from pain or swelling in the teeth and gum area, it would be wise to take a psyllium shake several times a day to absorb any poisons being released **from the infected mouth into the bowel**. Dr. Anderson, himself, has done this many times for a tooth infection and attained complete relief from the pain and aching. **His tooth infections were caused by old root canals. When he finally had the root canals removed, the infections stopped forever.** In this situation it would also help to pack powdered bentonite directly onto the swollen, painful areas to draw the irritating toxins out. A combination of powdered bentonite and plantain (another powerful absorber) can be used in a square of cheesecloth or muslin, which is then dampened and placed over the irritated area of the gums. This seems to work best if you do this before bed and sleep with it under your lips.

## Skin Eruptions

Hydrated bentonite is invaluable for skin eruptions as well. Dr. Anderson once got an extremely severe case of poison oak, in every nook and cranny of his body, during a camping trip. When he got home, he put thick hydrated bentonite on every spot he saw or felt, and noticed immediate relief from the itchiness. However, the next morning after showering it all off, he saw that there were still some red spots, and the itchiness returned. Again, he applied hydrated bentonite, and again the itchiness left. This time, when he showered it all off, it was completely gone! **We also use this on yellow jacket bites. For some people, when bentonite is applied to the sting, it removes the pain within 10 seconds.**

Many have used a paste of hydrated bentonite as a facial mask for general skin enlivening and cleansing, as well as for specific skin eruptions. Whenever applied to a pimple or infected skin bump, the hydrated bentonite will simply draw out the toxic matter that is causing the eruption. This application should be repeated each night before retiring until the skin eruption has been completely eliminated.

## Diarrhea

In the MEDICAL ANNALS of the District of Columbia, Vol. 20, No. 6, June, 1961, under the title "The Value of Bentonite for Diarrhea," are the results of the clinical work performed by a team of medical doctors using hydrated bentonite in the treatment of diarrhea. The diarrhea was the result of virus infections, food allergies, spastic colitis and food poisoning. The results of the scientific investigation indicated that liquid bentonite provided substantial relief in 97% of the cases. The percent of relief indicated by the symptoms were: abdomi-

nal cramps - 80%; anorexia - 78%; malaise - 80%; headaches - 71%; nausea - 85%; and weakness - 100%. The article concluded:

“By virtue of its physical action, bentonite serves as an absorbent aid in detoxification of the intestinal canal.” Both U.S. Government Bureau of Mines Booklet #609 and a late edition of the Dispensary of the United States of America, an official compendium, give bentonite high praise:”

**“In addition to the growing number of external uses for bentonite, it has been reported to be of value as an intestinal evacuant when used in the form of a gel.”**

### **About Aluminum**

**Some people are concerned about the aluminum in bentonite. Yes, it does have aluminum. For aluminum is one of the most abundant minerals on the earth. However, if you recall the above paragraph where it states that bentonite has a negative electrical charge, you will realize that bentonite cannot be absorbed by the body. The epithelium cells of the gut are also negatively charged. Like the polar opposites of two magnets repelling one another, the cells of our bowels absolutely repel the bentonite from entering the inner sanctum of our bodies. This means that you never need to be concerned about taking psyllium shakes. Dr. Anderson has probably set the world’s record in the consuming of bentonite. Not only has he no signs of aluminum poisoning, but also hair analysis has never indicated any abnormal levels of aluminum in his body. And does he still use bentonite? Absolutely.**

### **About Bentonite Clay**

Since bentonite has such strong absorptive powers, some may be concerned about whether it might absorb necessary nutrients from the alimentary canal as well. Independent experiments designed to find out how much this absorption would adversely affect the growth and health of animals indicated no ill effects when the intake of bentonite was 25% of the total diet, but did adversely affect the health of the animals when the intake of bentonite was increased to 50% of the total diet. (Annals of the N.Y. Academy of Science, Vol. 57, pg. 678, May 10, 1954.) Even 25% of the total diet is a lot of bentonite!

It is important, however, **not to take any nutritional supplement at the same time** as the bentonite. Especially when used with psyllium, the bentonite will absorb anything of nutritional value such as herbs, friendly bacteria, and vitamins, as well as toxins, bad bacteria and parasites. Be sure to wait 1 hour after doing a bentonite shake before taking anything nutritional.

Scientific research has shown that bentonite’s absorptive action is due to five characteristics. First, it has a large and varied mineral content. Second, it has a negative electrical attraction for positively-charged particles. Third, its particles (being shaped like calling cards), have the wide surfaces negative-polarized and the edges positive-polarized, which give it an incredible negative pulling power. Fourth, the very minuteness of the particles of bentonite gives a large surface area in proportion to the volume used, thus enabling it to pick up many times its own weight in positively-charged particles. Fifth, to obtain maximum effectiveness in the human body, it must be put in a liquid colloidal-gel state.

Though bentonite has been used internally by the American Indians for hundreds of years to help detoxify the bowels, Dr. Anderson recommends that when using it internally, we always use it with psyllium, as a psyllium shake. **The reason for this is that some people fear that bentonite could get stuck in the gut. We do not know for certain if this has ever occurred with anyone, but just to be safe, use it with psyllium.** Dr. Anderson suggests this because psyllium is known to help prevent undesirable inorganic minerals from entering the system. Dr. Anderson also explains that he has consumed as much as ¼ cup of Hydrated Bentonite right out of the bottle many times. Why would he do this? Because he had eaten something that was contaminated. The bentonite eliminated the problem immediately.

## **Clay Bath Directions for Detoxifying Heavy Metal Poisoning**

### **Information Provided by Perry A~ Smith**

Use up to 2 cups of powdered bentonite clay (but not more than 2½ cups) into the bathtub and then run **very hot water** over the clay, as hot as it gets. Use a wire whisk to stir the clay around and to help it dissolve. When you've got about 3 inches of water in the tub and the clay is dissolved, start adding cooler water until the water reaches the desired temperature.

The bath should neither be too hot nor too cool, but should be nice and warm, as warm as is comfortable. Bathing time depends upon your condition, but can be anywhere from 10 to 20 minutes. **Please don't overdo it!** If you stay in too long you may have what is known as a cleansing reaction and experience fatigue, headaches, muscle soreness, etc.

Another option is to take about a cup of extra thick liquid bentonite clay and put it into the bath water. Others have used a full quart and more. It is highly effective in drawing out toxins. But too much, or too long exposure, will dry out the skin. If so, follow the bath by applying a body lotion.

In Energy to Heal by Wendell Hoffman and through his own research, Hoffman found that a pure high-grade bentonite clay used in a bath can actually **draw out toxic chemicals through the pores of the skin**. After many experiments, he concluded that optimum results are obtained by immersing oneself in a tub of very warm water mixed with a very pure bentonite clay for exactly 20 minutes! Not just any clay will do. It is crucial to use "clean clay".

Extreme amounts of bentonite clay used in a bath have been known to help the body detox from severe heavy metal poisoning ( one can tell, because if it works, the clay turns black ). Eyton's Earth. Some people may notice the clay turns dark and may even take on a tar like consistency. Use rubber gloves and scoop out as much clay as possible and then clean the bath tub. Usually 1 – 2 baths is sufficient to draw out the toxins.

Clay baths using 1 cup of powdered bentonite clay or 1 cup of thick liquid clay is good for soaking tired, sore muscles.

### **External Uses of Healing Clay**

#### **Topical Bentonite Clay Treatments: Clay Packs, Compresses**

Brush teeth	Bentonite clay acts as an astringent to gums, removes tartar, controls bleeding gums and pyorrhea.
Bone and Muscle Damage due to Traumatic Injury	Bentonite clay pack applied immediately after injury, applied ½ - 1 inch thick and covered, changed as needed (½ - 12 hrs.), duration to maximum tolerance.
Carpal Tunnel Syndrome Tendonitis	Bentonite clay wrap around entire area if possible, ¼ - ½ inch thick, covered, for 20 minutes to an hour initially, increased to overnight applications as tolerance permits, for 3 days to 3 weeks.
Treatment of Internal Organs	Bentonite clay compress (dressing saturated with hydrated clay) applied to cover the organ to 1 hour as tolerance permits— as needed with internal cleansing support. for 20 minutes per application to start, tolerance carefully monitored, extended to 1-hour applications as tolerable, progress to clay pack and 20-minute treatments, then to 1 hour as tolerance permits, as needed with internal cleansing support.
Chronic Headaches	Bentonite clay pack applied to the nape of the neck for twenty minutes, then applied to the forehead for 20 minutes (continue to alternate as needed).
Skin Conditions (acne, athletes foot,	Depending on the condition, bentonite clay compresses or packs can be used (any cystic condition requires dense packs applied for an extended amount of time)

eczema, pimples  
rashes, warts, yeast  
fungus, poison ivy,  
cold sores, canker  
sores, shingles, cuts,  
boils, staph around  
fingernails, more)

along with 1 teaspoon of powdered clay taken internally each day.

Rapid healing of  
injuries (bruises,  
sprains, burns, etc.)

Thick bentonite clay packs applied to sprains, bruises, breaks, etc. Thin clay strips, covered, or compresses applied to burns. For any injury that includes a break in the skin, never allow the clay to dry. Simply change out the dressing as needed.

Severe Bacterial  
Infections

Wounds cleaned thoroughly with liquid bentonite clay packs applied at least ½ inch thick, dressings changed as often as required due to drainage, never allow clay to dry on damaged tissues.

Skin rejuvenation  
and deep cleansing

1 to 12 cups of bentonite clay added to a hot bath; hydrated bentonite clay used as a normal soap; clay masks applied to the skin; clay formulations used in a massage treatment.

Radiation

Bentonite clay must be used internally and immediately. Clay baths repeated to tolerance with as much hydrated clay as the individual can tolerate (based on their stamina) for 20 minutes to one hour. Compresses or thick clay wraps, alternating treatment to key locations of the body (targeting the lymphatic system and primary organs, treatments based on tolerance).

Eye strain

Thick bentonite clay packs applied to both closed eyes, covered and left on from between 20 to 90 minutes.

Bite and Sting Relief

Calcium bentonite clay hydrated with water (applied as a poultice) will relieve stings and/or bites of fire ants, bees, wasps and hornets. Reapply as needed. Calcium bentonite clay hydrated with 10 ppm colloidal silver can be applied as a thick poultice to relieve brown recluse and other spider bites and to help stop necrosis.



It is highly recommended that all external treatments with healing (bentonite) clays be combined with a gentle internal cleansing program designed to support the body's elimination system and liver function.

Notice the different moisture levels through the clay, and the minute concentric circles visible on the clay surface. Although this wound was non-bleeding and fully derided before treatment, it is obvious that the incredible sorptive properties of the clay evacuated a great deal of organic matter from the wound.

This results in several things: The reduction of edema, the support of the immune/lymphatic system, and overall support for the healing process.

Surprising things can happen during such treatments. This particular treatment, since it was over the lower intestines, resulted in the elimination of a bowel obstruction or possibly even a cancerous growth.

From Eyton's Earth

**Internal Uses of Healing Clay**  
**Powders, Tablets, Gels and/or Hydrated Bentonite Clay**

Internal Treatments	Bentonite clay can be of help with colitis, diarrhea, hemorrhoids, stomach ulcers or any abnormal condition of the alimentary canal.
Surgery	The use of bentonite clay internally before and after surgery gives remarkable benefits.
Osteoporosis	Astronauts in the United States space program ingested bentonite clay tablets (rich in calcium) to reverse the effects of osteoporosis caused by zero gravity.

**Anecdotal Personal Case Histories Using Living Clay**

Bleeding, tender gums	Dissolved several clay tablets in the mouth several times a day. Gum abscess packed with clay cleared up in 4 days. Tooth abscess took 2 weeks.
Strep throat	Gargled with clay solution every 15 minutes. Relieved pain when held in the throat a few minutes.
Stomach ulcers	½ tsp. clay was taken just before eating. When acid was noticed, repeated use. This condition was controlled and corrected with daily use of 1 tsp. clay in water.
Nausea	Drank ½ tsp. clay in water on arising. Older people found it alleviated nausea caused by medication.
Rectal bleeding	Used 2 tsp. clay in cup of warm water; inserted with syringe. Pain and bleeding stopped.
Diarrhea in small children	Corrected condition with ¼ tsp. clay in applesauce or any baby food several times a day. Some added it to liquids in bottle. Mothers put some clay in foods when traveling and found children more contented and less susceptible to stomach upsets. Diarrhea common in older patients was controlled with several clay tablets with meals and at bedtime.
Fire ant/wasp stings	Covered them quickly with thick clay paste. No pain was experienced.
Athlete's foot	Dusted entire area; all signs gone in 2 days. Dust shoes to prevent infection and odors.
Cuts	Clay stopped bleeding and pain.
Acne	Severe acne was cleared in 4 months. The entire back was covered with clay pack once a day as well as the face. Left on for 30 minutes and removed. After healing, clay was continued until discoloration was gone.
Boils	Packed with wet clay and covered. Replace pack every 2 hours. Boils drained and cleared in 3 days.
Yeast infection	Used clay solution for douche. Immediately relieved itching and cleared infection with regular use for 2 weeks.
Burn from hot water	Covered with clay pack and ice. No blistering occurred. Sun burn will also respond. Cover pack with chipped ice as well.
Eczema of the scalp	Covered with moist clay overnight. Repeated until healed.

Hemorrhoids	Took ½ tsp. clay or 4 tablets 4 times a day. Relief the first day. Regular use of clay prevented reoccurrence. For pain, inject daily as in rectal bleeding.
Nursing mother - sore nipples	Spread smooth paste over nipple after nursing; used olive oil before nursing. When infant has yeast infections, clay protects the breast from the infection.
Diaper rash	Severe blistering soothed and healed by putting a smooth covering of clay paste on buttocks. Dusting with the clay at each diaper change prevented reoccurrence.
Blood lead level	Reduced from 7 to 2 in 6 months. Using 10 clay tabs a day. Mercury blood levels cut 50% in 3 months with 10 tabs of clay a day.
<b>Pets</b>	Clay eating is usually instinctively accepted by animals. Adding it to the daily food ration keeps a pet in good health. All forms of life benefit from clay use.
Fish	Add to aquariums to control algae or fungus. Put ailing fish in a bag containing clay and shake to coat them. Return to water quickly. Several treatments may be needed. Clay reduces stress in aquarium fish.
Dogs	Stool eating use clay in food, drinking water. Controls anal itching.
Cats	Add to litter box.
Horses, Cows, Pigs	Add to feed; gives stamina and prevents colic. Bonding agent in hay cubes and pellets.
Other Uses of Clay	Add clay to water of fresh cut flowers. Add clay to watering tanks to control algae. Dip roots of plants in clay water before transplanting. Decontamination of water. Filtering agent for cooking oils. Place on top of soil in potted plants to control insects. Removes and controls mildew on tile on bathrooms. Increases seed germination when added to soil.

**CAUTION: Do not use clays found near waste disposal dumps!**

### **Dietary Clay by Neva Jensen**

Of the clays used for human nutrition, the montmorillonite is the most common in nature. Because of the unusual properties of this clay, it has proven to be most recognized in research for its use in the human body.

Montmorillonite clay was originally named after the town of Montmorillon in France. These clays were commonly used by early cultures, both medicinally and nutritionally. Clay was put aboard vessels departing from French ports. It was used in the holds of ships to absorb odors and moisture. However, the sailors traditionally reserved supplies of these clays for dysentery, burns, boils, sore mouths, and other internal and external disorders. Its fame spread in each port with tales of its use.

Legends told of a ship adrift at sea. Drinking water had become badly contaminated and the sailors became sick when they drank it. One old "saltie" told them to put the clay in the water before they drank it. This made the water drinkable and no more sickness occurred. As a result of this tale, clay was put into all of the drinking water taken on at each port and the dreaded dysentery was conquered.

On early steamships, the men feeding the boilers dipped their hands and arms deep into a thick clay solution to form a protective coating from the heat of the furnace. Covering their faces with these smooth textured clays protected them also from burns. This practice spread to the deck hands to prevent sunburning. When the clay was removed, the skin was clear and healthy. Burns and wounds had healed as well.

Clay became an item of barter at seaports. Clays of certain textures and colors were valued far above others for human use. These early observations indicating the differences in clays, are now verifiable in research. The term active or "living clay" is born of research denoting ionic exchange capacities of given clay minerals. In the montmorillonite group of clay minerals, called smectite, its microcrystals are extremely finegrained, irregular, and thin layered. The layers contain ions that are loosely bound and easily exchangeable, a characteristic which gives smectites the properties of absorption and adsorption.

This means that in clay found in the desert region, where temperature is high and water scarce, leaching is minor. The washing away of the ions, and chemical hydrolysis is almost nonexistent. These clays are richer in silica and alkaline earth minerals. In the hydrothermal state the synthesis of new clay minerals increases. Ions of silicon, aluminum, iron, magnesium and potassium are concentrated. Evaporation of the water greatly increases the trace mineral content and leaves the ions negatively charged.

As these ions enter the human body in this form, they respond to gastric activity to become electrons. Adsorption takes place as dissolved matter is assimilated on the membrane surface. This begins the process of absorption as nourishment is changed into living tissue. This creates very favorable conditions for human consumption of *living* clay minerals.

### **Clay and Amino Acids**

Recent research has shown that a number of organic substances formed by a combination of two or more molecules can be bonded to the surface of clay minerals. A number of investigators think the adsorptive properties of certain clays may have played a crucial role in the origin of life. The hypothesis arises as a result of the effort to simulate the conditions under which amino acids may form proteins within the human body. Experiments showed simple amino acids formed into the longer chains called peptides on the surface of clay particles. It is thought that clay acts as a catalyst for the formation of long peptide chains, or proteins.

The hypothesis was tested experimentally in America and abroad. Scientists added one amino acid in solution to various clay minerals. Then they exposed the clay to temperature and moisture variations. The main findings were that more peptides were produced at various temperatures when clay was present than when it was absent, and that the production of peptides was a significant advantage in the presence of protein conversion. Protein conversion to amino acids in the human body can fail to proceed normally through the peptide chains without all of the necessary constituents, thus preventing its use entirely. This confirms the nutritional benefits of dietary clay.

On the basis of these findings the three investigators propose that temperature and moisture bring about a distribution and redistribution of amino acids on the surface of the clay particles that favors the amino acids' linkage into peptide chains. As moisture touches the surface of the clay mineral, the active site on the surface that speeds the formation of peptides from amino acids are cleared. When the moisture is absorbed, new sites become available for other amino acids to form new chains. This continuous function, completely dependent upon clay type minerals in proper configuration, is synonymous with life. — *Scientific American, April, 1979*

## Internal Uses of Healing Clays

### Bentonite Clay Used Orally



Using an uncontaminated green healing clay internally can be advantageous for general health. Traditionally, only small amounts of hydrated clay are required to achieve the following benefits:

- \* Detoxification of the digestive system (the sorptive action of clay pulls contaminants from the body)
- \* Bacterial, organic and non-organic toxicity
- \* Elimination of internal parasites (digestive tracts)
- \* Immune system support (clay used internally stimulates the body's elimination system and supports organ function)
- \* Fixes free oxygen in the blood stream (occurs once the liver has been restored to full function)
- \* Increases T-cell count
- \* Fights free radicals
- \* **Mercury poisoning!**
- \* Trace mineral supplement
- \* Liver detoxification
- \* Stomach aches and bacterial food poisoning
- \* Alkalizing agent in the body

### Internal Cleanse with Liquid Bentonite Clay

Bentonite clay's adsorptive and absorptive qualities may be the key to its multifaceted healing abilities. Knishinsky reports that drinking clay helped him eliminate painful ganglion cysts (tumors attached to joints and tendons, in his case, in his wrist) in two months, without surgery.

Knishinsky's research suggests that the regular intake of liquid bentonite clay (typically 1 to 3 tablespoons daily, in divided doses) can produce other benefits including parasite removal from the intestines, allergy and hay fever relief, and elimination of anemia and acne. For example, clay helps anemia because it contains both types of dietary iron (ferrous and ferric) in an easily assimilated form; it reduces discomfort from allergies by quickly neutralizing allergens that would otherwise produce allergic reactions; and it reduces heartburn and indigestion by absorbing excess stomach acids.

In 'Our Earth Our Cure', Dextreit writes that clay acts with wisdom - it goes to the unhealthy spot. Used internally, whether absorbed orally, anally or vaginally, clay goes to the place where harm is, there it lodges, perhaps for several days, until finally it draws out the pus, black blood, etc. with its evacuation. In the 'Clay Cure', Knishinsky writes that clay is part of his diet and he never skip a day without eating clay. He writes "When clay is consumed, its vital force is released into the physical body and mingles with the vital energy of the body, creating a stronger, more powerful energy in the host. The natural magnetic action transmits a remarkable power to the organism and helps to rebuild vital potential through the liberation of latent energy. When the immune system does not function at its best, the clay stimulates the body's inner resources to awaken the stagnant energy. It supplies the body with the available magnetism to run well. Clay is said to propel the immune system to find a new healthy balance and strengthens the body to a point of higher resistance."

### Primitive Uses of Clay

Dietary studies of descendants of the Incas of long ago, reveal clay eating as a common practice. When their ancestral mountain empire was ravaged, the last of the Inca's rulers escaped deep into the Andean mountains. They took with them supplies of clay, which were valued even above the treasures of the empire. They were

transported by human carriers to the secret city.

The ransom for prisoners was often paid for by edible clays rather than silver, in that same period. Studies of some Indian people who are most surely descendants of the ancient Inca, reveal they existed largely on a vegetable diet. These vegetables were dipped in an aqueous suspension of clay. This dietetic procedure of very ancient origin is universal among these Indians today.

Dr. Weston Price, a researcher studying primitive races of the high Andes, Central Africa, and also the Aborigines of Australia, asked for the privilege of seeing what the natives carried in their knapsacks. Without exception, each one contained a ball of clay, a little of which would be dissolved in water. Their morsels of food would be dipped in their mixture before being eaten. This practice is carried on today and is undoubtedly one reason the people of these cultures experience physical stamina and endurance.

As the explorers came to the New World, they observed the American Indian using various clays. Some of these uses were: the face mask of a proud warrior, the painted body of a ceremonial dancer, or a cool clay pack on an exhausted messenger. All contained special clays usually gathered locally. However, those for eating were highly treasured and to secure a supply, the natives often traveled long distances. The use of clay was introduced to the pioneers through the skills of the native Indian women, who on occasion were taken as wives by the white men. However, the gathering of the clay had traditionally been done by the men of the tribe, thus substitutions began to occur in the white villages. Slowly the effectiveness of this healing art was lost.

Clay was used in sacred ceremony by the American native. In these rituals, they reverently acknowledged the intimacy they felt with mother earth and all nature. In deep reverence they partook of the sacred clays, believing the clay and water that flowed from the breast of mother earth was to nurture their spirits, as they believed the flow of a mother's milk was given to feed the spirit of the infant.

By Indian tradition, the tribal father sought vision to guide his people. While in solemn ceremony, he might perceive spirits petitioning birth into his clan. Lengthy preparation including clay ceremonies would then follow. Tribesmen would leave the village together for several weeks to go through purification.

The tribesman's knowledge of plant life and clays used to predetermine male offspring was held in reverent secrecy. Observation of the moon as well as instinct directed the time for their return and the completion of conception ceremonies. The participating women prepared for the sacred rites at the moon lodge.

Upon the birth of their infants they would return to the lodge for further ceremony. As the moon rose in her full majesty, sacred clays were placed upon the infant as a symbol of protection from lurking spirits.

Should a maiden of the tribe be violated by a vagabond, she would go to the village outskirts in solitude to heal her spirit and restore her virginity. She used foods and clays daily that had been blessed by the spiritual father, as she shamelessly sought her purification.

Sweat lodges were a common practice of most tribes. Some sweats lasted a few hours at the day's end. Other sweats were held deep in the heart of a mountain in caves and could last several days. Clays were traditionally used at both. The lengthy sweats were attended only by men and involved the extensive use of clay. Skilled medicine men of the tribe presided at these sites as the tribal fathers awaited spiritual vision.

Seasonal migration of the Indians would take them to sites of warm clay pools. The complete submersion of their bodies in clay held significant ceremonial purpose. It also served to cleanse and heal their bodies. As it was tribal custom never to be without the edible clays, supplies were dried to be carried on the homeward journey.

The use of clay by the American Indian was held in each tribe's tradition; it was shared only among their tribesmen. The seeking of clay took them to specific places, especially where the bubbling mud had brought sedimentary deposits to the surface in active or extinct hydrothermal activity. On rare occasions, clay would be pastel blue, green, or pink. However, most were grey or reddish in color.

This was due to extensive mineral concentrations, especially iron left by the continuous evaporation of water in the bubbling mud. The hydrolysis and fragmentation of clay minerals in the heat and steam of a hydrothermally active site, is much more complete than in the sedimentation stage. The clay minerals may otherwise be only mildly transformed in various other ways.

Climatic effects do give rise to different types of clay minerals. Modern scientific research enables us to determine the geographic zone wherein the initiation of the clay minerals evolution began and what benefits it may have to the human body. — *Nutrition and Physical Degeneration*, Weston A. Price, M.S. D.D.S.

### **Perry A- Smith Recommends Taking Bentonite Clay over Time**

Bentonite clay works best when taken over a long period of time. That's because its actions are subtle. Like a snowball rolling down the hill, it starts off small and slow. As it continues to roll, it soon picks up momentum and goes faster. Clay does not offer instant cures for all ailments, but history shows it can encourage the body to put up a better fight when taken over a long period of time.

When bentonite clay is taken for indefinite periods of time, it has no addictive qualities. This is a big concern for many who begin eating the clay. The effects can be so positive that it scares them into thinking they might need it forever. However, one can quit eating clay at any time. There are no withdrawal symptoms, and you will never need to enter a withdrawal program.

Many people ask if bentonite clay is something they have to take for the rest of their life. The answer to the question, of course, is they don't have to; there is no risk in discontinuing its use. But, why not take something that is good and will help clean out your body? Especially in today's highly polluted world, the liver and kidneys are so overworked they never have a chance to rest. Taking a spoonful of earth minerals every day helps them to work better and keeps the mind and body functioning in tip-top condition. To remain healthy, eat clay for a long time.

Knishinsky's research suggests that the regular intake of liquid clay (typically 1 to 3 tablespoons daily, in divided doses) can produce other benefits including parasite removal from the intestines, allergy and hay fever relief, and elimination of anemia and acne. For example, clay helps anemia because it contains both types of dietary iron (ferrous and ferric) in an easily assimilated form; it reduces discomfort from allergies by quickly neutralizing allergens that would otherwise produce allergic reactions; and it reduces heartburn and indigestion by absorbing excess stomach acids.

In 'Our Earth Our Cure', Dextreit writes that clay acts with wisdom - it goes to the unhealthy spot. Used internally, whether absorbed orally, anally or vaginally, clay goes to the place where harm is, there it lodges, perhaps for several days, until finally it draws out the pus, black blood, etc. with its evacuation. In the 'Clay Cure', Knishinsky writes that clay is part of his diet and he never skip a day without eating clay. He writes "When clay is consumed, its vital force is released into the physical body and mingles with the vital energy of the body, creating a stronger, more powerful energy in the host. The natural magnetic action transmits a remarkable power to the organism and helps to rebuild vital potential through the liberation of latent energy. When the immune system does not function at its best, the clay stimulates the body's inner resources to awaken the stagnant energy. It supplies the body with the available magnetism to run well. Clay is said to propel the immune system to find a new healthy balance and strengthens the body to a point of higher resistance."

### **Technical Theory**

Students of life sciences look to biochemistry to understand how the human body maintains its functions. Studies show that trace minerals are the constituents found most necessary to every cell and its corresponding enzyme systems. Though they are essential for all cell functions, trace minerals are required in very small amounts. They become electrically charged particles known as ions and may be found in groups or singly. As an ion takes and electrical charge of plus one or minus one, it begins to spin either to the right or to the left. This creates not only an energy field, but also a signal or resonance. When an elementary particle of nature takes a charge of plus or minus one, it becomes an electron.

The phenomenon of electron spin-resonance depends upon the fact that an electron has a magnetic move-

ment. If an electron is placed in a magnetic field, its energy is proportional to the strength of the field. Single electrons which show spin-resonance or the ability to take a charge, are quite common in the rare earth clay elements. Considering the resonant frequency to the resonant field may not seem significant to the unformed. However, it is this principle of signal and response that guides needed nutrients to a given site.

Experiments done at UCLA measure and record the body cycles. Various organs of the body cycle at different ratio.\* Each organ must have within its boundaries that which receives and maintains its specific energy. The signal and response is an intelligence that gets the needed nutrient properties to the site of need at the cellular level and facilitates its use. Using the hydrothermally-altered clay minerals that are unravels the once unknowns. — *Science, March 16, 1962*

## Analysis of the Elements in Desert Clay

### TERRAMIN

#### CERTIFICATE OF ANALYSIS

Report: XRAL LABORATORIES, ONTARIO, CANADA Date: 12/19/00 LISTED IN PERCENTAGES AND PARTS PER MILLION/BILLION.

Calcium	Ca	4.69%	Iron	Fe	4.35%	Magnesium	Mg	2.88%
Phosphorus	P	15%	Potassium	K	2.8%	Silicon	Si	55.3%
Sodium	Na	1.13%	Sulphur	S	.05%	Titanium	Ti.	67%
Aluminum Hydroxide	Al2O3	18.3%	Manganese	Mn	.04%	Antimony	Sb.	9ppm
Arsenic	As	5ppm	Barium	Ba	4661 ppm	Beryllium	Be	2.4ppm
Bismuth	Bi	5ppm	Boron	B	108ppm	Bromine	Br	6ppm
Cadmium	Cd	5ppm	Cerium	Ce	79ppm	Cesium	Cs	12ppm
Chromium	Cr	100ppm	Cobalt	Co	28ppm	Copper	Cu	34.8ppm
Erbium	Er	3ppm	Dysprosium	Dy	5ppm	Eropium	Eu	1.1 ppm
Gadolinium	Gd	21 ppm	Gallium	Ga	5.8ppm	Germanium	Ge	10ppm
Gold	Au	5ppm	Hafnium	Hf	4ppm	Holmium	Ho	1 ppm
Lanthanum	La	45ppm	Lead	Pb	7ppm	Lutetium	Lu	.39ppm
Molybdenum	Mo	3ppm	Neodymium	Nd	.42ppm	Nickel	Ni	51 ppm
Niobium	Nb	17ppm	Palladium	Pd	11ppm	Platinum	Pt	11ppb
Praseodymium	Pr	9ppm	Rubidium	Rb	129ppm	Samarium	Sm	6.8ppm
Scandium	Sc	16ppm	Selenium	Se	3ppm	Silver	Ag	.2ppm
Strontium	Sr	205ppm	Tantalum	Ta	2ppm	Terbium	Tb	1.3ppm
Tin	Sn	5ppm	Thorium	Th	15ppm	Thulium	Tm	.4ppm
Tungsten	W	3ppm	Uranium	U	5.5ppm	Vanadium	V	127ppm
Ytterbium	Yb	2.8ppm	Yttrium	Y	34ppm	Zinc	Zn	97.3ppm
Zirconium	Zr	143ppm						

## Texas A. & M. University Experiment No. 3

The following experiment No. 3 was designed to compare Texas and Western bentonites with two available clay products.

As in previous experiments, the birds receiving the clay or bentonite diets gained more body weight and laid larger eggs. Those receiving the Cal-MIN and the Western bentonite also laid more eggs than the controls. Feed efficiency was improved for the Cal-MIN diets and slightly improved for the 2% Western bentonite group. The data clearly demonstrates that as the level of clay in the diet was increased, the percentage of water in the droppings decreased. The percentage figures do not show an extremely large reduction but even small reductions are quite apparent in the appearance of the droppings. Why these clay products give an increase in body weight should be more fully explored. Perhaps they could be used in broiler diets with added fat to further improve growth and feed efficiency. Reduction in the moisture content of the droppings might improve both litter condition and incidence of breast blisters. — *J. H. Quesenberry, Texas A. & M. University, College Station, Texas, Experiment No. 3, Page 7.*

### Research on Desert Clay

Controlled studies by Benjamin H. Ershoff, **Ph.D.**, were submitted to **N.A.S.A.** Manned Spacecraft Center on Physiologic Effects of Dietary Clay Supplements, contain unquestionable results. Clays used were obtained from a deposit near Brawley, CA. The samples contained no detectable plant organic matter or quartz sand.

Studies were conducted on the effects of clay supplementation on the weight increment and microscopic appearance of the long bones of immature male rats, hamsters, mice and miniature pigs. They were fed a low calcium, low protein, low fat, non-heat-processed, wheat flour-containing ration. Findings indicate that the clay supplementation at levels of 1%, 2% and 4% in the above diet caused a highly significant increment in body weight and prevented the occurrence of pathological changes which were observed in the long bones of immature rats, hamsters and mice fed the unsupplemented diet.

Effects were proportional to the level of clay supplement fed. The protective effect of the clay supplement was also observed on the microscopic and radiological appearance of the long bones of miniature pigs, although in this species no growth-promoting effect was noted. Clay supplementation at the above levels of feeding was also active in promoting growth and preventing pathological changes in the long bones of rats fed (a) a low calcium, low protein, low fat rye flour-containing ration (b) a highly purified calcium-deficient ration containing casein as the source of dietary protein, and (c) a highly purified, calcium-deficient ration containing methionine-supplemented soy protein as the source of dietary protein. Findings indicate that the protective effects of the clay supplement when fed with the wheat flour and rye flour-containing rations were due in large part to some factor or factors OTHER THAN its calcium content. The beneficial effects of clay supplementation when fed with the purified casein containing, soy protein containing rations, however, were due primarily to its serving as a source of dietary calcium. Evidence was obtained that the clay supplement contained some factor or factors other than calcium, which promoted improved calcium utilization and/or bone formation. A number of clays were tested and found to differ significantly in growth-promoting activity.

Of possible pertinence to the above is the report by Cooper that "Keepers in the Baltimore Zoo routinely supply to the kangaroos three to four pounds of red clay per week as a dietary supplement. In discussing this with the administrative and veterinary staff of the zoo they said it is common knowledge among zoo keepers that kangaroos in captivity are liable to develop lesions in the mouth which are more or less comparable to canine black tongue. When this condition in the kangaroo is discovered very early, it can be treated successfully by the administration of the B-complex (untreated, it is rapidly fatal) but it can be avoided entirely by supplying red clay to the animals regularly."

*Physiologic Effects of Dietary Clay Supplements, Investigator: Benjamin H. Ershoff, Ph.D., Institution: Institute for Biological Research, 5345 W. 102nd Street, Los Angeles, CA. Submitted to NASA Manned Spacecraft Center, General Research Procurement Office, 2101 Webster-Sezbrook Road, Houston, TX, July 19, 1965*

## CAUTIONS Healing Crisis

As with all true natural cures, the road to better health may begin with a healing crisis. As you move toward better health with natural healing programs and better nutrition, healing begins to occur. As part of the healing process the body will begin to discard toxic residues which have built up in your body over the years. The healing process usually does not occur without repercussions. During the initial phase of healing, as your body begins to clean house, (detoxify) and your vital energy begins to repair and rebuild internal organs, you may experience headache, uneasiness, flu like symptoms and fatigue. This is called a healing crisis.

You may feel worse before you feel better. As you continue to improve, you may begin a process called retracing. For example, if you used to get skin rashes, the rashes may reappear or get worse for a period of time as your body eliminates toxins through the skin. You may also experience an initial increase in urination, or you may feel more nervous. In actuality, you are not getting worse, you are actually getting better. Eventually you will reach a plateau of better health. During the healing crisis, it is important to not suppress these temporary symptoms with drugs or the healing process may become interrupted.

### Taking Bentonite Clay with Other Substances

It is important, however, **not to take any nutritional supplement at the same time** as the bentonite clay. Especially when used with psyllium, the bentonite clay will absorb anything of nutritional value such as herbs, friendly bacteria, and vitamins, as well as toxins, bad bacteria and parasites. Be sure to wait 1 hour after doing a bentonite shake before taking anything nutritional.

Scientific research has shown that bentonite's absorptive action is due to five characteristics. First, it has a large and varied mineral content. Second, it has a negative electrical attraction for positively-charged particles. Third, its particles (being shaped like calling cards), have the wide surfaces negative-polarized and the edges positive-polarized, which give it an incredible negative pulling power. Fourth, the very minuteness of the particles of bentonite gives a large surface area in proportion to the volume used, thus enabling it to pick up many times its own weight in positively-charged particles. Fifth, to obtain maximum effectiveness in the human body, it must be put in a liquid colloidal-gel state.

Eyton's Earth recommends taking the clay at night so it can work unopposed with other things eaten during the day.

### Suspected Bentonite Toxicosis in a Cat from Ingestion of Clay Cat Litter

by

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**ABSTRACT.** A 2½-y-old spayed female cat was presented for lethargy and weakness. The cat was hypokalemic (3.1 mEq K/L) and severely anemic (60% PVC, 1.3 g hemoglobin/dL). The cat was known to ingest bentonite-containing cat litter. It recovered with treatment of iv fluids, electrolytes and whole blood transfusion and was discharged. Two months later the cat was presented again with signs similar to those seen previously. This occurred 1 mo after the owner resumed the use of bentonite-containing cat litter. The signs were remarkably similar to those reported in humans from the chronic ingestion of bentonite clays. Bentonite toxicosis is suggested by the coexistence of hypokalemia hypochromic

## **anemia in cats presented with lethargy and muscle weakness.**

Toxicosis from exposure to products such as pesticides are relatively common in small animals. The highly toxic nature of these substances is quickly clinically apparent. Occasionally, products traditionally thought to be nontoxic produce toxicosis. We report a cat with hypokalemia and macrocytic hypochromic anemia consistent with iron-deficiency anemia that appears to have become ill from the chronic ingestion of a bentonite-containing cat litter.

### **CASE REPORT**

A 2½-y-old spayed female domestic short-hair cat was presented for lethargy. The owners reported the cat had been hiding the previous 2 d during which time it had not eaten. On the evening prior to hospitalization the cat appeared depressed and ataxic. It weighed 3.5 kg, and physical examination revealed a systolic grade II/IV murmur, pale mucous membranes, decreased capillary refill time and approximately 5% dehydration. The cat was known to chronically ingest cat litter containing 99% bentonite (TIDY CAT, Lowe's Incorporated, South Bend, IN), and radiography revealed small masses of radiopaque material throughout the colon. Based on history and clinical appearance, an iv infusion of 5% dextrose containing an additional 100 ml of 50% dextrose, 5 mg dexamethasone and 1 ml vitamin B solution/1000 mL was begun at a rate of 7.14 mL/kg/h. The cat also received 50 mL of whole blood. By that afternoon the cat was eating solid food and urinating normally.

The following day the cat was active, alert and eating. Its hydration status had improved, but no stool had been passed so an oral laxative (LAXATONE, Evsco Pharmaceuticals, Vineland, NJ) was administered. A serum chemistry profile from the previous day revealed 3.1 mEq K/L (normal 4.0-6.0 Eq/L), 145 mEq Na/L (147-156 mEq/L), 3.3 mEq P/L (4.5-8.1), 46 mg BUN/dL (14-32 mg/dL), 9.7 g total protein/dL (4.3-7.5 g/dL) and 6.7 g total globulin/dL (2.1-4.3 g/dL). A complete cell count revealed 6.0% PVC (30-45%), 1.3 g hemoglobin/dL (10-15 g/dL), 680,000 RBC (5-10 x 10<sup>6</sup>), 81 MVC (39-55), 25.4 MCHC (30-36) and a 4% reticulocyte count (0-1%). Feline immunodeficiency virus and feline leukemia virus antigen serologies were negative. The iv fluid regimen was changed to Lactated Ringers' with 100 mL 50% dextrose and 5 mg prednisolone/1000 mL, and the cat was prophylactically given 50 mg oral amoxicillin q 12 h. Because the cat's condition was markedly improved, additional potassium was not administered.

On the third hospital day, the cat's appetite remained excellent and a large amount of stool containing cat litter was passed. Fluids, iv and oral medications were continued with the addition of oral multiple vitamins. The cat was discharged on day 3 on 50 mg oral amoxicillin q 12 h and 5 mg prednisolone + multiple vitamins q 24 h. It was recommended that the owners use non—bentonite—containing litter for the cat.

Three days following discharge the cat's mucous membrane color was improved and no heart murmur was heard. Interestingly, the owner reported that the cat attempted to eat the non-bentonite-containing cat litter (EVERCLEAN ES CAT LITTER, First Brands Company, Danbury, CT).

Two months later, the cat was again presented exhibiting clinical signs similar to those seen previously. The owner indicated they had returned to using the bentonite-containing cat litter approximately 1 mo earlier. On abdominal palpation, the cat's colon was full and hard. Cat litter ingestion was suspected. The owner declined treatment and the cat was euthanized. Post mortem examination was denied.

### **DISCUSSION**

The chronic ingestion of bentonite-containing cat litter by this cat appeared associated with hypokalemia, lethargy and muscle weakness, dehydration and heart murmur in addition to macrocytic hypochromic anemia. Clinical signs quickly resolved with administration of fluids and whole blood and removal from the cat litter.

Poisoning from the chronic ingestion of bentonite clay has been reported in humans (1-3). Signs of toxicosis included myalgias (not appreciated in this cat), muscle weakness and lethargy. Serum chemistries of affected humans consistently revealed hypokalemia, ECG changes consistent with hypokalemia, and hemograms that showed iron deficiency resulting in macrocytic hypochromic anemia (1-2). The neurologic signs in humans quickly resolved when serum potassium was increased to normal levels (1-2) and the anemia resolved with

oral iron supplementation (1,4). In vitro experiments have confirmed that bentonite clays adsorb potassium (1-3), and it has been speculated that the presence of bentonite in the gut may inhibit the absorption of dietary iron (5).

While it is not known with certainty that ingestion of bentonite clay was responsible for the hypokalemia and anemia seen in this cat, the clinical similarities between humans poisoned by ingesting clay bentonite and this cat are striking. In addition, the cat became ill a second time with similar clinical signs after the ingestion of bentonite-containing cat litter resumed. This suggests that ingestion of bentonite clay-based cat litter may have been responsible for both illness episodes in this cat. Given the common use of bentonite clay litters for cats, veterinarians should consider bentonite toxicity when a cat is presented for lethargy, weakness and coexisting hypokalemia and anemia.

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**Finally, we always recommend that if you or your animals are going to ingest bentonite clay that you always use the most pure product you can and always take it with psyllium or flax seed.**

## Cal-MIN Tests

The first test of Cal-MIN (red clay) was made in August, 1949. The crop selected was bush peas. Peas could not be grown in the past. About 40 per cent of the seed would germinate and the crop was so inferior, it was not worth picking. The soil was heavy black adobe. Test plots were selected and varying increments of CalMIN (red clay) used. The results were as follows:

Cal-MIN (red clay) (Tons per Acre)	Germination (Days)	Per Cent (%) Germination
None	11	40
½	8	55
1	8	60
1½	7	75
2	7	80
3	6	92
5	4	95
6	4	95
8	4	95
10	4	95

It will be noted that marked increases were made up to five tons per acre. That was evidently the saturation point.

The two ton plot gave normal yield. The yield from the 5, 6, 8, and 10 ton plots were 400 per cent greater (by weight shelled) than the two ton plot.

The sugar content was analyzed by an accredited laboratory and showed a large increase, up to four tons per acre. The 5, 6, 8 and 10 ton plots had a constant sugar ratio but slightly lower than the 4 ton plot.

The 10 ton plot was undoubtedly a great excess of CalMIN but no harmful effects were noted. The excess, in my opinion, remained inactive but available for future crops.

### Summary

The above results indicate what the average farmer may reasonably expect. The overall problem is one for the expert, the scientist, the biochemist.

Minor elements contained in Cal-MIN (red clay) consist of: aluminum, potassium, iron, magnesium, calcium, titanium, manganese, chromium, copper, nickel, cobalt, boron, zirconium, vanadium, and gallium. All of these elements, with the exception of gallium, are essential for life. The importance of vanadium, for example, has only been known to science in the past few years. The functions of gallium are not known today. Perhaps tomorrow, they will discover its importance.

There is much research work that must be done by accredited scientific agencies such as agricultural colleges. These findings show only an indication or trend and this is very encouraging.

### Cattle- Poultry by Mendel

Cal-MIN clay has numberless calcium ions that have not been replaced by hydrogen ions due to arid conditions. This makes it alkaline, not acid as are clays in humid climates where this hydrogen calcium ion exchange has already taken place. Because of the arid source of our clay these calcium ions are exchangeable; they are like empty taxis ready for immediate ion exchange with water, nutrients and other minerals. The calcium ions in the plate-like molecular structure of our clay carry a negative charge which attracts the positive charge of water, mineral, and nutrients.

The wastes of bacterial digestion on which livestock thrive are also attracted, some are absorbed out but more of them are retained; hence better utilization of feed. When these calcium ions are placed in the acid environment of the digestive system, this ion exchange occurs and the nutrients, water and minerals are attracted. Calcium that is available is released and absorbed and waste material carried out by adsorbent action of the insoluble elements in our clay.

The practical result of this is greater bacterial activity, which provides greater absorption and utilization of nutrients. Bacterial activity is stimulated by this ion exchange. Water is drawn from animal tissues and the "boiling activity" of the bacteria is greater and faster, creating more of the bacterial digestive wastes on which the animal thrives. More water and feed are consumed and the animal gains weight faster with better feed efficiency. **"When you keep the bacteria happy the animal can't help but be happy, too."** All this bacterial activity is carried on at an accelerated rate with less internal heat and stress. There is more efficient use of water and nutrients, with less strain, and this is why the animals can do better with the clay than they can do without it, especially under conditions of extreme heat.

None of this activity is chemical. It is physical, electrical, and is due to the molecular structure of the clay. This explains the difference of performance in various clay samples that are practically the same in chemical analysis. The differences are physical-not chemical.

In poultry the hydration theory is less active than in cattle because the digestive system is more simple than in ruminants, and less efficient. Our clay is important in poultry-more because of the ion exchange releasing a "flood" of available calcium which is speedily absorbed because of its greater availability of calcium which, in our clay, is already in ion form.

**This research information is for informational and educational purposes only. Please consult a health care professional for medical treatment and/or regarding the applicability of any opinion or recommendations with respect to your symptoms or medical condition. No statement in this information should be construed as a claim for cure, treatment or prevention of any disease or sickness.**

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## **The Amazing Safe Solutions Body and Foot Pain Removal and Detoxifying Pads**

### **Some Toxic Facts**

Many people do not even consider that when their body is contaminated with toxins, this toxic contamination can create a significant number of health symptoms. These symptoms can include breathing problems, pain, constipation, stomach bloat, poor digestion, gas, fatigue, weight gain, excessive mucus, poor concentration, headaches, poor skin, poor memory, depression, body odor, bad breath and even death. Our bodies are daily being exposed to an incredible amount of toxins now found to be routinely contaminating our food, water air and environment. It is estimated that we now have 500 to 1,000 chemicals in our bodies that were simply not found in our grandparents. Our bodies' natural detoxification systems simply cannot manage to excrete them all, and these toxins are then allowed to accumulate in our bodies in harmful quantities or they are converted into even more toxic substances that can interfere with virtually all of our life processes. The invention of the amazing pain removing/detoxifying pad has created much interest and excitement in the Japanese medical industry, receiving high recommendations from medical experts. These Safe Solutions detoxifying pads help assist the body achieve its optimum state of health by improving blood circulation, removing toxins, increasing metabolism, activating blood cells, providing relief for joint pains, enhancing quality of sleep and expelling bodily fluids.

### **Lymphatic Fluid (Body Toxin)**

The lymph system is the "waste disposal system" within the body. It acts as the body's internal defense system. The lymph system rids the body of toxins, bacteria, cell debris, excess water and proteins. Without this important system we would die within twenty-four hours. The lymphatic system is similar to the blood system and has just as many vessels - but they contain lymph, which is clear and cannot be seen (unless a suitable dye is injected). The lymphatic system differs from the blood system in that the blood continually circulates through each part of the body while the lymph just drains from each part. The lymphatic system plays a vital role in the body by regulating the immune system. When the lymphatic system becomes blocked, lymphatic fluid builds up and stagnates causing the entire system to become toxic. "The Safe Solutions Pad" also helps assist in the natural extraction of lymphatic fluids from the body and also assists in clearing blockages, eliminates metabolic wastes and toxins from the body, transports nutrients to cells and increases metabolic efficiency, all adding to the reduction of excess fluid and assisting weight reduction. It also appears to have a calming effect on the nervous system and helps relieve stress and tension. Frequent use of these wonderful Safe Solutions Pads is also a very effective beauty treatment for the face, helping to improve the appearance of the skin and reducing puffiness. It helps rejuvenate collagen fibers and assists in slowing the aging process.

### **"The Detox/Pain Removing Pad" from Safe Solutions**

The exact secret behind how and why the Safe Solutions healing/toxin-absorbing pad works is unclear. One theory suggests that the body contains an invisible life force, or subtle energy, similar to the concept of qi in traditional Chinese medicine. When this energy is blocked or restricted, illness can result.

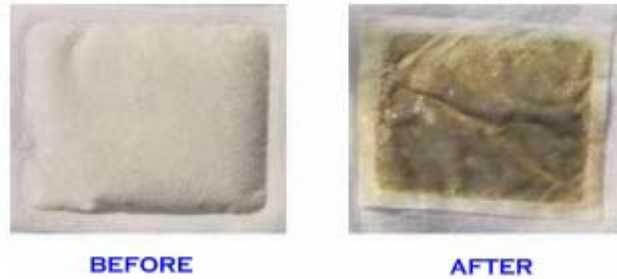
The feet have long been regarded as a "keyboard" to channel, control, and release the subtle energy patterns. It is thought that stimulating some of the more than 7,000 nerve endings on the foot can unblock and increase the flow of this vital energy to various parts of the body and thus promote natural healing.

According to Chinese medical knowledge, our human body has over 360 acupuncture points, with more than 60 found on the soles of our feet. These acupuncture points are known as the second heart because they are the reflective zones of our major organs. They are also the favorite homes for toxins. When our blood circulates to the soles of our feet, "The Safe Solutions Pads" extract the toxins and contaminated red blood cells from these various acupuncture points.

After many years of research inspired by the longevity and resilience of forest trees, it was discovered in Japan that certain aged tree extracts have the unique property of absorbing bodily toxins. Further research and the addition of other natural active ingredients produced the Safe Solutions Toxin-Adsorbing Pads. They are safe to use and not only aid in detoxification but have many holistic healing effects.

These Safe Solutions Pads are used by sticking them (shiny side out) onto the soles of the feet just before

bedtime. After 4 hours, results are immediately seen and felt. The Safe Solutions Pads turn from a dry white pad to a damp, brownish-gray pad on which you can clearly see the pain-causing toxins extracted from your body. The darker a Safe Solutions pad becomes, the larger the amount of toxins adsorbed. The user will feel energetic and relaxed and pains and aches related to bodily toxins are greatly eased. It is a great help to those suffering from arthritis, gout, and rheumatism!



### Health Benefits of “The Safe Solutions Pad”

The primary benefit of “The Safe Solutions Pad” is detoxification. As toxins are naturally extracted from the body, one experiences improved blood circulation, easing of muscle and joint pains, and a more relaxed and restful sleep. Four (4) hours after applying “The Pad”, the blood circulates to the previously cold foot and the temperature of the foot rises allowing one to sleep more restfully. You may also apply these Safe Solutions pads at the following sites:



### List of the Natural Ingredients in “The Safe Solutions Pad”:

- \* Wood and Bamboo Vinegar (Help extract wastes from body.)
- \* Tourmaline (Promotes healing and far-infrared energy.)
- \* Chitin and Chitosan (The most well-known weight-loss product known for isolating fatty tissue and dispelling it out of the body safely.)
- \* Eucalyptus (A powerful antiseptic that also increases cardiac action.)
- \* Loquat Leaf (Known as a “Healer Of All Diseases”) Dokudamin or Houttuynia Cordata (Provides drainage to infections, detoxifies and expels bacteria, lymphatic fluid, and bacteria.)
- \* Dextrin/Starch/Vegetable Fiber (Helps bind extracted bodily fluids)
- \* Vitamin C (Assists in absorbing the toxins from the body.)
- \* Cayenne (Contains a pain-relieving ingredient call capsaicin.)
- \* Mugwort (Valued as a nervine and emmenagogue, it also has diuretic and diaphoretic action.)

### Some Safe Solutions Holistic Healing Effects:

Besides detoxifying the body, “The Pads” help the body achieve its optimum state of health by improving blood circulation, increasing metabolism, activating blood cells, providing relief of joint pains, enhancing quality sleep and expelling unhealthy body fluids. There are many anecdotal reports of pain removal, and the healing of rheumatism, kidney problems, painful and swollen legs, insomnia and headaches.

The key to healthy living lies in having a clean bloodstream and adipose tissue. Contaminated blood is not favorable for good health. The best way to cleanse your bloodstream and adipose tissue is to detoxify your body. Remember you are routinely being contaminated so you should routinely help detoxify your body. **There simply is no easier and simpler way to help assist your body to detox than by routinely using Safe Solutions Pads.**

The Author has used these amazing pads to remove the swelling and discloration of his lower legs.

**This research information is for informational and educational purposes only. Please consult a health care professional for medical treatment and/or regarding the applicability of any opinion or recommendations with respect to your symptoms or medical condition. No statement in this information should be construed as a claim for cure, treatment or prevention of any disease or sickness.**

“The thing that never ceases to amaze me is that most “health professionals” insist that you need to put “something” more into your system to feel “better” when the truth is you need to take “something” out of your system to really feel BETTER. To safely and effectively cleanse or detox the body is what I am now working on and researching, but the best answer always is not to become contaminated in the first place.” — Stephen L. Tvedten

“The Amazing Safe Solutions Detox/Pain Removal Pad” is currently certified by the FDA (U.S. Food and Drug Administration, Center for Devices and Radiological Health). The Registration Number is: 3004588376 with an Active Status and 2004 is the Date of Registration Status.

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**Not Nice To Toxins® from Prescriptive Nutrients** - A Dietary Supplement that contains carefully selected and time proven ingredients to help stimulate the body's natural ability to detoxify itself and purge out internal parasites. Another excellent product utilizing "The Science of Natural Health" concepts of Prescriptive Nutrients. *These statements have not been reviewed by the FDA. This product is not intended to treat, diagnose or prevent disease.*

NOT NICE TO TOXINS® is just the beginning... to restore the essential nutrients that the body will lose during cleansing... be sure to eat organically and drink plenty of water and take good vitamins and minerals.

**Detoxifying 3 - 4 times a year** helps eliminate various parasites and/or toxins and mucus, reducing allergies, cholesterol, cellulite, obesity, skin problems and arthritis. It increases energy and mental clarity, eliminates weight-loss inhibiting toxins. Decreases sugar, caffeine, nicotine, alcohol and other cravings.

**Not Nice to Toxins®** offers you a complete cleanse. The synergistic herb formula helps purify the lymphatic system, blood stream, colon and major organs, improves nutrition absorption, resistance to disease and overall health.

**Not Nice to Toxins** is a unique blend of herbs that assists the body in the elimination of toxic metals, parasites, pesticides, toxic metals and other chemical toxins.

**EDTA 100mg:** (Ethylene diamine tetra-acetic acid) is a man-made amino acid chelating agent with a particular affinity for toxic metals such as lead, mercury, cadmium and aluminum. Should EDTA meet up with such toxic substances, the material is sequestered, then secreted in body wastes.

**Red Clover 100mg:** It is an anti-inflammatory agent and also, as an expectorant, helps remove excess mucus from the lungs.

**Milk Thistle 100mg:** It is believed that silymarin prompts the manufacture of new, healthy liver cells without encouraging the growth of any malignant liver tissue that may be present. Silymarin, it is thought, also serves as an antioxidant, protecting liver cells from damage by free radicals, which are harmful by-products of many bodily processes including cellular metabolism

**Black Walnut (Juglans nigra) 25mg:** constipation, fungal and parasitic infections and mouth sores. It is believed to relieve toxic blood conditions.

**African Bird Pepper 100mg:** (Strong bowel stimulant; helps stop bleeding)

**Dandelion (Taraxacum officinale) 25mg:** natural diuretic while also supplying potassium, a nutrient often lost through diuretic use. The plant is rich in vitamins A and C — antioxidants that are believed to help prevent cancer.

**Hyssop (Hyssopus officinalis) 25mg:** used as an expectorant, digestive aid, sedative and muscle relaxant.

**Garlic (Allium sativum) 25mg:** strengthens the cardiovascular system, by reducing cholesterol and lowering blood pressure and intestinal and digestive disorders

**Ginger (Zingiber officinale) 25mg:** improves digestion, soothes the abdomen and relieves excess gas.

**Sarsaparilla 25mg:** supports the body by purifying the blood, cleansing the colon and urinary tract, treating various skin problems, and lowering blood pressure.

**Wormwood 25mg:** powerful parasite exterminator.

**NOT NICE TO TOXINS®** is just the beginning... to restore the essential nutrients that the body will lose during cleansing... be sure to eat organically and to drink plenty of water and take good vitamins and minerals.

**These statements have not been reviewed by the FDA. This product is not intended to treat, diagnose or prevent disease.**