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# Cesium Chloride vs Cancer

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## The High pH Therapy for Cancer
### Tests on Mice and Humans

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Mass spectrographic and isotope studies have shown that potassium, rubidium, and especially cesium are most efficiently taken up by cancer cells. This uptake was enhanced by Vitamins A and C as well as salts of zinc and selenium. The quantity of cesium taken up was sufficient to raise the cell to the 8 pH range. Where cell mitosis ceases and the life of the cell is short. Tests on mice fed cesium and rubidium showed marked shrinkage in the tumor masses within 2 weeks. In addition, the mice showed none of the side effects of cancer. Tests have been carried out on over 30 humans. In each case the tumor masses disappeared. Also all pains and effects associated with cancer disappeared within 12 to 36 hr; the more chemotherapy and morphine the patient had taken, the longer the withdrawal period. Studies of the food intake in areas where the incidences of cancer are very low showed that it met the requirements for the high pH therapy.

Cancer therapy.....Cesium.....High pH.....Pain.....Potassium.....Rubidium.....Tumor.....Vitamins

The High pH Therapy for cancer was arrived at from an extensive series of physical experiments. These involved the isotope effect across membranes of many types, normal plant and animal, embryonic, cancer, and synthetic. It also involved mass spectrographic analyses of membranes and cells, as well as fluorescence and phosphorescence decay studies of many types of cells and parts thereof. It is the thesis of this paper that the results obtained throw a direct light upon the mechanism of carcinogenesis, and also indicate a therapy. Tests on both mice and humans substantiate this theoretical approach [1-8].

**BACKGROUND**

The isotope effect throws a very direct light on the mechanism of carcinogenesis. In this study it was shown that the $^{39}K/41_K$ ratio in ocean water down to 6000 ft was 14,20000 [9-11].

In normal matured cells, both plant and animal, the ratio varied from 14.25 to 14.21. Embryonic and cancer cells all gave a ratio of 14.35. In the case of all synthetic cells across which there was a potential gradient, the ratio was 14.35. From these values it will be seen that the ratio in normal living cells indicates that as many isotopes leave the cell as enter.

In the case of potassium for embryonic and cancer cells as well as synthetic type cells with all types of membranes even including liquid mercury films the observed isotope ratio was given by equation 1.

$$(^{39}K/\ 41_K)\ o = (^{39}K/41_K)n\ (41 + m\ /\ 39 + m)\ ^1/_2 \quad (1)$$

where ***n*** refers to the normal ratio, ***o*** to the observed ratio, and ***m*** is the associated mass for the ions.

All cations in solution are associated. The attached mass for $Cs^+$ is 3 molecules of water, for $Rb^+$ it is 5 molecules, for $K^+$ is 7 molecules. For cations below potassium in the Electromotive Series all ions are highly associated. This is to be expected from their position in the Hoffmeister Series. In the case of $Ca^{++}$ the association is 30 molecules, while $Na^+$ is 16. Equation (1) holds for all cations tested from $H^+$to $U^+$. The value of *m* however will vary when polar molecules are present in the solution. For example, $K^+$ can also attach glucose. In contrast, $Ca^{++}$ can attach a wide variety of molecules; it is this cation that transports peroxides into the cell, as well as metabolic products out of the cell.

The results given in equation (1) are most significant in that they show that transport is dependent entirely upon the frequency with which the ions strike the membrane surface. It is not a matter of capillary action, but one on which the ion and its associated mass pass directly through the bonding space between molecules which comprise the membrane. That the associated molecules are not lost in this transport is due to the fact that the attraction between the molecules and the ion is far greater than their attraction by the material of the membrane.

In the case of potassium an exact similarity exists between embryonic and cancer cells. The isotope ratio indicates that the $K^+$ ions are taken up by the most efficient process possible. The same held true for $Cs^+$ and $Rb^+$.

In contrast to the above, a vast difference exists for cations below potassium in the EMS. In the case of embryonic cells all cations tested obeyed equation (1). In the case of cancer cells cations below potassium were taken up sparingly, if at all. For example the amount of calcium in cancer cells is only about one percent of that in normal cells [18].

The above isotope effect for potassium which transports glucose into the cell, and for calcium which transports oxygen are most significant with respect to Cancer. They mean that glucose can readily enter cancer cells but that oxygen cannot enter. This accounts for the anaerobic state of cancer cells pointed out by Warburg as early as 1925 [26].

The mechanism responsible for the similarity in the isotope effect for potassium and rubidium in cancer and embryonic cells and for their marked difference in case of calcium was investigated in some detail using mass spectrographic analyses, and also fluorescence and phosphorescence decay patterns.

The phosphorescence decay patterns were found to be peculiar to and specific for all cell types or parts thereof [12-15]. It should be mentioned that the decay spectra is due entirely to the light emitted from the energized double bonds. All double bonds are capable of being raised to the energized state. While the fluorescence spectra and the phosphorescence decay patterns are both specific for each double bond they can be influenced by adjacent strong polar radicals. Again, both can be completely depressed by molecules absorbed over the surface; thus morphine, as well as attached polycyclic type molecules, will completely depress the excitation of the P=O radicals which characterize all cell membrane surfaces.

It was observed that the membranes tested gave a phosphorescence decay pattern due almost entirely to the P=O radicals which are composed of phospholipids. These radicals are specifically oriented over each type of membrane. This is most significant from the point of view of membrane action, since the P=O radicals are moderately strong electron donors in the ground state and strong to powerful donors in the energized state. This is due to the fact that the ionization potentials, 1st to 5th, are appreciably higher for the 0 than the P atom. This means that the 4 bonding electron orbitals will be displaced nearer the 0 atom thus surrounding this atom with a pronounced negative field. The P atom is thus positive in nature.

The above results are most important with respect to membrane action. They show that the strong electron acceptors $Cs^+$, $Rb^+$, and $K^+$ can be attracted into the membrane so that they will enter the negative potential gradient which exists across all living membranes. In contrast to these cations, the

highly associated cations farther down in the EMS are not sufficiently strong electron acceptors to be drawn into this gradient except when the P=O radicals are in the energized state. This means that $K^+$ cations which transport glucose into the cell can readily enter cancer cells, but that $Ca^{++}$ ions which transport oxygen into the cell cannot enter. In the normal cell the glucose, upon entering the cell, reacts with the oxygen in the cell and is burned to carbon dioxide and water with the liberation of heat. This heat in turn is absorbed on the membrane surface and raises the P=O radicals to an energized state which permits them to attach more $Ca^{++}$ ions. Thus it will be seen that the amount of oxygen entering the cell is determined by oxidation within the cell, primarily that of glucose. This action is responsible for the pH control mechanism of the cell which maintains a value near 7.35.

The reactivity of the double bond has been studied in some detail using both light absorption and electron impact. It was found that energy states of the order of those produced by metabolic processes were not reactive. In contrast, high energy states such as those that are induced by radioactivity. are very reactive. Intermediate energy states in the ultra violet range were not reactive. Intermediate energy states in the ultra violet range were not reactive by electron impact, but slightly with light quanta. Here however the reactivity increased with a high power of the energy intensity per unit area [16]. This suggests that the reactivity may be due to the multiple absorption of light quanta, thus raising the energy of the bond to the sum of the quanta absorbed (see Table 1).

TABLE 1

THE RELATIONSHIP BETWEEN REACTIVITY, DOUBLE BOND REACTIVITY, INTERMEDIATE ENERGY STATES, WAVE LENGTH AND RADIATION

| Volts Ve=h ×1.235×10⁵ | Wave Length Å | Radiation | Reactivity |
|---|---|---|---|
| $10^{-4}$ | 1 cm | Rotation Spectra | |
| $10^{-3}$ | $10^7$ Å | Infra Red | Zero |
| $10^{-2}$ | $10^6$ Å | | |
| $10^{-1}$ | $10^5$ Å | Solar | Zero |
| 1 | $10^4$ Å | Ultra Violet | |
| 10 | $10^3$ Å | | Low |
| $10^2$ | $10^2$ Å | | High |
| $10^3$ | 10 Å | X-Rays | |
| $10^4$ | 1 Å | | High |
| $10^5$ | 0.1 Å | Gamma | |
| $10^6$ | 0.01 Å | | |

THE MECHANISM OF CARCINOGENESIS

The experimental information presented in the previous section involving the isotope effect, mass spectrographic analyses, and fluorescence and phosphorescence decay, combined with the pH data supplied by Von Ardenne [23-25], makes it possible to define the mechanism involved in carcinogenesis. This mechanism is very different from the accepted one of carcinogens entering the cell and becoming attached to the DNA. This mechanism will not explain any of the experimental data outlined briefly herein.

The proposed mechanism can be outlined in four steps.

***Step 1***

The attachment of carcinogenic type molecules to the membrane surface. This involves two factors: (a) the presence of carcinogenic-type molecules primarily of the polycyclic type, and (b) an energized state of the membrane, which may result from prolonged irritation. When these molecules are attached

to the membrane glucose can still enter the cell, but oxygen cannot. The cell thus becomes anaerobic.

***Step 2***

In the absence of oxygen, the glucose undergoes fermentation to lactic acid. The cell pH then drops to 7 and finally down to 6.5.

***Step 3***

In the acid medium the DNA loses its positive and negative radical sequence. In addition, the amino acids entering the cell are changed. As a consequence, the RNA is changed and the cell completely loses its control mechanism. Chromosomal aberrations may occur.

***Step 4***

In the acid medium the various cell enzymes are completely changed. Von Ardenne has shown that lysosomal enzymes are changed into very toxic compounds. These toxins kill the cells in the main body of the tumor mass. A tumor therefore consists of a thin layer of rapidly growing cells surrounding the dead mass [3]. The acid toxins leak out from the tumor mass and poison the host. They thus give rise to the pains generally associated with cancer. They can also act as carcinogens.

**HIGH AND LOW pH THERAPIES**

Only two therapies will be mentioned here. Both are apparently effective. These are the Low pH therapy devised by Von Ardenne *et al*. [23-25] and the High pH therapy developed by the writer.

***The Low pH Therapy***

In this therapy devised by Von Ardenne, glucose is injected into the blood stream. As a consequence, the cancer cell pH will drop eventually to the 5.5 range. The patient is then placed in a furnace heated to 104 degrees Fahrenheit for a matter of hr [23-25]. The older the patient, the fewer the number of hours. The patient is allowed to breathe cold air. Diathermy is also applied over the tumor area which, in the absence of a blood supply, will cause the temperature of the mass to rise to something over 106 degrees Fahrenheit. At these high temperatures and in the acid medium, the life of cancer cells is very short. The only drawback to the therapy is that a case of severe toxemia may result from the out-leakage of the acid toxins within the tumor masses [23-25].

***The High pH Therapy***

The ready uptake of cesium and rubidium by the cancer cells lead the writer to the High pH therapy. This consists of feeding the patient close to 6 g of CsCl or RbCl per day in conjunction with the administration of ascorbic and retionic acids, Vitamins C and A, which being weak acids, upon absorption by the tumor cells will enhance the negative potential gradient across the membrane, and also zinc and selenium salts which, when absorbed on the membrane surface, will act as broad and moderately strong electron donors. Both types of compounds have been shown in mice to drastically enhance the pickup for cesium and rubidium ions.

The toxic dose for CsCl is 135 g. The administration of 6 g per day therefore has no toxic effects. It is sufficient however to give rise to the pH in the cancer cells, bringing them up in a few days to the 8 or above where the life of the cell is short. In addition, the presence of Cs and Rb salts in the body fluids neutralizes the acid toxins leaking out of the tumor mass and renders them nontoxic.

TESTS OF THE HIGH pH THERAPY ON MICE AND HUMANS

The therapy has been tested and the results will be discussed briefly below.

***Tests on Mice***

The High pH therapy was first tested at American University in Washington, DC using mice. In these tests, 2 mm cubes of mammary tumors were implanted in the abdomens of mice and allowed to grow for 8 days. The mice were then

divided into two groups. Both groups were continued on mouse chow, but the test group was given 1.11 g of rubidium carbonate by mouth per day in aqueous solution. After 13 more days the controls were starting to die so all mice were sacrificed and the tumors removed and weighed. The tumors in the test animals weighed only one eleventh of those in the controls. In addition, the test animals were showing none of the adverse effects of having cancer [3].

Results similar to those mentioned above were obtained at Platteville, WI using CsCl. More recently, Platteville has studied intraperitoneal injection of cesium carbonate for mice with abdominal tumor implants with 97% curative effect.

Tests using intraperitoneal injections of CsCl were carried out by Messiha *et al*. [21]. The results were most successful and showed a drastic shrinkage in the tumor masses.

### *Tests on Man*

Many tests on humans have been carried out by H. Nieper in Hannover, Germany and by H. Sartori in Washington, DC as well as by a number of other physicians. On the whole, the results have been very satisfactory. It has been observed that all pains associated with cancer disappear within 12 to 24 hr, except in a very few cases where there was a morphine withdrawal problem that required a few more hours. In these tests 2 g doses of CsCl were administered three times per day after eating. In most cases 5 to 10 g of Vitamin C and 100,000 units of Vitamin A, along with 50 to 100 mg of zinc, were also administered. Both Nieper and Sartori were also administering nitrilosides in the form of laetrile. There are good reasons to believe that the laetrile may be more effective than the vitamins in enhancing the pickup of cesium by the cells.

In addition to the loss of pains, the physical results are a rapid shrinkage of the tumor masses. The material comprising the tumors is secreted as uric acid in the urine; the uric acid content of the urine increases many fold. About 50% of the patients were pronounced terminal, and were not able to work. Of these, a majority have gone back to work.

Two side effects have been observed in some of the patients. These are first nausea, and the second diarrhea. Both depend upon the general condition of the digestive tract. Nieper feels that nausea can be prevented by administering the cesium in a solution of sorbitol. The diarrhea may, to some extent, be affected by the Vitamin C.

Only one case history will be presented here. A woman with 2 hard tumor masses 8 to 10 cm in diameter, one on her thyroid and one on her chest, was given 3 to 6 months to live. She had been subjected to chemotherapy, but was discontinued because it weakened her. She was taking laetrile on her own. She was given a 50 g bottle of CsCl and was told to take 4 g per day. She reported her case a year later. Being very frightened she took the entire 50 g in one week. At the end of that time the tumor masses were very soft, so she obtained another 50 g of CsCl and took it in another week. By the end of that time she could not find the tumors, and two years later there was no sign of their return.

## LOW INCIDENCE CANCER AREAS

There are a number of areas where the incidences of cancer are very low. Unfortunately, the food composition in these areas has never been analyzed. At the 1978 Stockholm Conference on Food and Cancer it was concluded that there is definitely a connection between the two, but since the relationship was not understood, no conclusions could be drawn [22]. The food intake has been studied by the author as far as possible from the high pH point of view. The results found will be discussed for a number of low incidence areas.

### *The Hopi Indians of Arizona*

The incidence of cancer among the Hopi Indians is 1 in 1000 as compared to 1 in 4 for the USA as a whole. Fortunately their food has been analyzed from the standpoint of nutritional values [17]. In this study it was shown that the Hopi food runs higher in all the essential minerals than conventional foods. It is very high in potassium and exceptionally high in rubidium. Since the soil is volcanic it must also be very rich in cesium. These Indians live primarily on desert grown calico corn products.

Instead of using baking soda they use the ash of chamisa leaves, a desert grown plant. The analyses of this ash showed it to be very rich in rubidium. The Indians also eat many fruits, especially apricots, per day. They always eat the kernels. The results indicate clearly that the Hopi food meets the requirements for the High pH therapy.

***The Pueblo Indians of Arizona***

Some 20 years ago the incidence of cancer among the Pueblo Indians was the same as that for the Hopi Indians, since their food was essentially the same. But unlike the Hopi, these Indians have accrued certain items from outside their environment, hence supermarkets were installed in the area. Today the incidence of cancer among the Pueblos is 1 in 4, the same as the U.S. It is reported that there is a regular epidemic of cancer among them. It must be emphasized here that the high incidence of cancer is not due to what is in the supermarket foods, hut rather to what is not in it. It is essentially lacking rubidium and cesium and low in potassium.

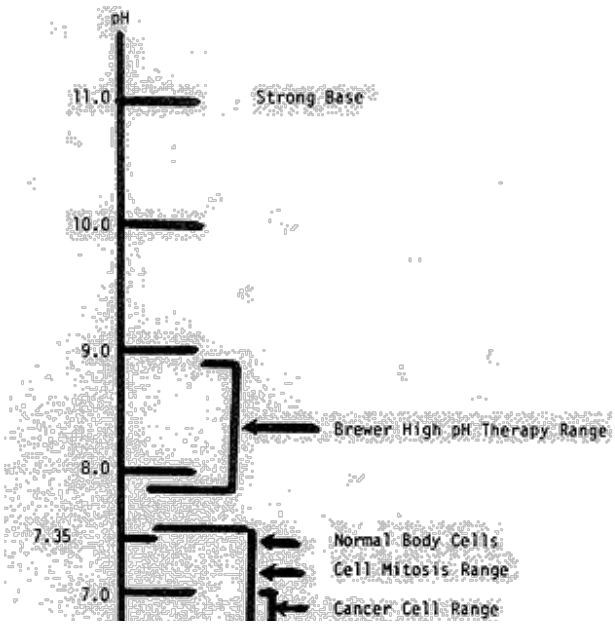
***The Hunza of North Pakistan***

Cancer is essentially unknown among the Hunza, but unfortunately their food has never been analyzed. Talks with Hunza themselves and with Hindu professors who have spent some time in the area, have thrown sufficient light upon the food intake to show that it meets the requirements of the High pH therapy. They are essentially vegetarians, and are great fruit eaters, eating ordinarily 40 apricots per day; they always eat the kernels, either directly or as a meal. They drink at least 4 liters of mineral spring waters which abound in the area. Fortunately this water has been analyzed and found to be very rich in cesium. Since the soil is volcanic in nature, it must be concluded that it will be rich in Cs and Rb, as well as K.

***Central and South America***

The Indians who live in Central America and on the highland of Peru and Equador have very low incidences of cancer. The soil in these areas is volcanic. Fruit from the areas has been obtained and analyzed for rubidium and cesium and found to run very high in both elements. Cases have been reliably reported where people with advance inoperable cancer have gone to live with these Indians, and found that all tumor masses disappear within a very few months. Clearly the food there meets the high pH requirements.

In conclusion, the High pH therapy, as has been pointed out, was arrived at from physical experiments carried out on cancer and normal cells. It has been tested and found effective on cancers in both mice and humans. There can be no question that Cs and Rb salts, when present in the adjacent fluids, the pH of cancer cells will rise to the point where the life of the cell is short, and that they will also neutralize the acid toxins formed in the tumor mass and render them nontoxic.



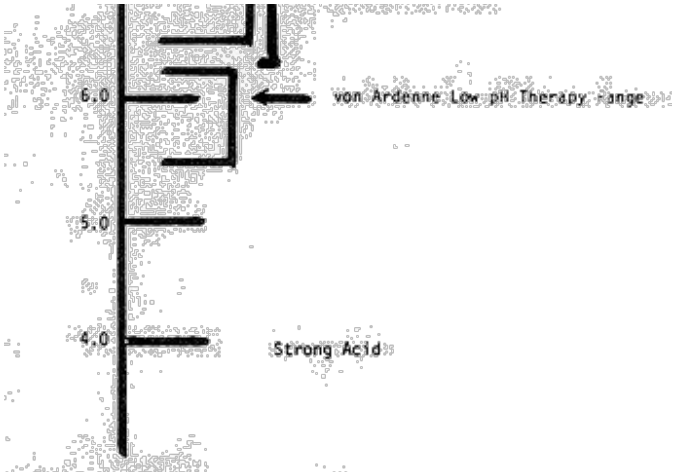


FIG. 1. The relationship between pH of cancer cells and cancer progression: the high and low pH therapies.

***Cesium Dosage and Side Effects***

Several problems have arisen in the therapy which require further study. One of these is to determine the minimal dosage of CsCl that will kill cancer cells. Would cesium carbonate be better? Related to this are the effectiveness of intravenous injections, and, in certain cases, intraperitoneal injections. Both have been found to be effective in mice, but they have not yet been tested on humans.

The minimal dosage for curative action has not been determined. It has been observed by several physicians that the administration of 0.5 g per day of CsCl will actually enhance the rate of tumor growth. This is to be expected, since this low amount is sufficient only to raise the cell pH into the high mitosis range (see Chart 1). The data so far reveal that any quantity of 3.0 g or above will be effective.

A side effect which occurs in some cases, especially those who have had stomach ulcers, is nausea. This is far smaller for 3.0 g per day than for 6 to 10 g. The nausea can be minimized by administering cesium salt in a sorbitol solution as mentioned earlier. Further studies are necessary.

A limited number of patients have experienced diarrhea. Since cesium is a nerve stimulant [19], this can be expected. The effect is enhanced by taking large doses of Vitamin C, but it apparently is lowered by laetrile.

A further study is being made to determine the amount of cesium, rubidium or possible potassium in the diet that is sufficient to prevent cancer. Some data is available on the food composition in areas of the world where cancer is very low, but it is difficult to quantify, since the amount eaten varies greatly between individuals.

The effectiveness of potassium salts is yet to be determined. Tests to date have not been made on leukemia patients.

**CESIUM BIOLOGICAL USES**

In addition to the cancer therapy outlined in this paper, a [19] U.S. Patent has been issued on the use of cesium chloride as a nerve stimulant. Cesium salts are very effective in regulating heart arrhythmia. In areas of the world where cesium in the food intake is high, it has been noted that longevity of well over 100 years is not at all uncommon. Based on experimental data available [21] Cs salts may be useful in the treatment of manic-depressives.

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**ADDENDA**

In later writing, Dr. Brewer wrote: "The goal of the high pH therapy is the transport of large quantities of $Cs^+$ $Rb^+$ and glucose-free $K^+$ across the membranes of cancer cells. During high pH therapy, Dr. H.

Nieper, M.D., observed a loss of potassium which should be replaced." Two booklets discussing Dr. Brewer's final theories about cesium are available from the Brewer Science Library: "High pH Cancer Therapy with Cesium," and "Cancer Its Nature and a Proposed Treatment," both by A. Keith Brewer, Ph.D.

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**http://www.cancer-coverup.com/fighters/cesium-science.htm**

# *Cancer Cover-Up*

***by***

***Kathleen Deoul***

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**Excerpt:**

## Cesium Science

Almost 75 years ago, Otto Warburg was awarded two Nobel prizes for his theories that cancer is caused by impaired cell respiration due to a lack of oxygen at the cellular level. According to Warburg, damaged cell respiration causes fermentation, resulting in hyper-acidity at the cellular level.

In 1984 Keith Brewer, PhD (Physics) translated Warburg's theories into a practical, cost efficient treatment protocol for cancer. Brewer successfully treated 30 patients with various cancers, using Cesium, nature's most alkaline mineral.

**The results of Brewer's work -- all 30 survived.**

In 1996 Neal Deoul provided financing that enabled T-UP Inc. to become a primary distributor of Cesium and concentrated aloe vera. Hundreds of cancer patients experienced remarkable results using Cesium and T-UP aloe vera in their battles against cancer ...

Over seventy-five years ago Dr. Otto Warburg published a Nobel Prize winning paper describing the environment of the cancer cell. A normal cell undergoes an adverse change when it can no longer take up oxygen to convert glucose into energy by oxidation. In the absence of oxygen the cell reverts to a primitive nutritional program to sustain itself, converting glucose, by fermentation. The lactic acid produced by fermentation lowers the cell pH (acid/alkaline balance) and destroys the ability of DNA and RNA to control cell division… the cancer cells begin to multiply unchecked. The lactic acid simultaneously causes intense local pain and destroys cell enzymes. Therefore, cancer appears as a rapidly growing outer cell mass with a core of dead cells.

Cesium, a naturally occurring alkaline element has been shown to affect the cancer cell two ways. First, Cesium limits the cellular uptake of the nutrient glucose… starving the cancer cell and diminishing fermentation. Second, Cesium raises the cell pH to the range of 8.0 neutralizing the weak lactic acid and stopping pain within 12 to 24 hours. A pH range of 8.0 is a deadly environment for the cancer cell… the cancer cell dies within a few days and is absorbed and eliminated by the body.

**The science of High pH therapy (drastically changing the acid/alkaline balance of the cell):**

By the late 1970's mass spectrographic and isotope studies had shown that tumor cells exhibit a preference for the uptake of certain alkaline minerals; Potassium, Rubidium, and especially Cesium.

Further, specific antioxidants i.e. vitamin C, and Zinc were shown to enhance the uptake of these alkaline minerals by the cancer cell.

A normal cell is surrounded by a membrane, which selectively allows materials to flow in and out. Oxygen and nutrients, such as glucose, flow in and the waste products of cellular chemistry flow out. The cells are protected by the immune system; a well functioning immune system is the best defense against the formation of cancer cells. When environmental toxins (carcinogens) overwhelm the immune system the entire program is compromised. The cell membrane is affected first, losing its ability to exchange oxygen (respiration); the cell then reverts to a primitive survival mechanism - fermentation. The newly formed (anaerobic) cancer cell cannot be repaired (fermentation is not reversible) the cell is now out of control and must be destroyed as rapidly as possible.

Note that in areas of the world where there is a high Cesium content in the soil cancer is virtually unknown: Hopi Indians of Arizona, the Hunza of North Pakistan, and the Indians of Central and South America. This observation suggests the possibility of a vitamin, mineral, antioxidant formula containing Cesium in an amount equal to that found in the soil of cancer free habitats. This vitamin could be a powerful new tool to help slow down and even reverse the present cancer epidemic.

Some possible side effects noted during Cesium therapy:

Numbness within the triangle describing the mouth and the tip of the nose.
Nausea and/or flu like discomfort.

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**USP # 3641242**
**USE OF CESIUM AS A STIMULANT IN MAMMALS**

( 1972-02-08 )
Howard L. MASCO
Applicant: ATLAS CHEM IND
Classification: - international: A61K33/24; A61K33/24; (IPC1-7): A61K27/00 - European: A61K33/24

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**http://v3.espacenet.com/textdoc?DB=EPODOC&IDX=EP0398149&F=0**

**Recovery of Cesium Chloride from Pollucite Ore.**
**EP0398149**

1990-11-22
Inventor: PILLAI G CHITHAMBARATHANU (US); PISARCYZK KENNETH S (US)
Applicant: CARUS CORP (US)
Classification: - international: C01D17/00; C22B59/00; C01D17/00; C22B59/00; (IPC1-7): C01D17/00; C22B26/10 - European: C01D17/00; C22B59/00
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Abstract --- The invention relates to a process for recovering purified cesium chloride from a cesium aluminum silicate ore in which the ore is digested with aqueous hydrochloric acid and the silica solids removed to obtain an aqueous acidic digest solution of metal chlorides consisting principally of cesium chloride and aluminum chloride together with other metal chlorides, wherein the improvement comprises: (a) evaporating the water from said digest solution to obtain a solid phase mixture of metal chlorides, including cesium chloride and hydrated aluminum chloride; (b) heating said solid phase mixture at a temperature effective for converting the hydrated aluminum chloride to aluminum oxide without decomposing the cesium chloride; (c) extracting the resulting solids with water to obtain an aqueous extract of cesium chloride; and (d) separating the residual solids containing the aluminum oxide to produce a purified extract of cesium chloride.

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http://v3.espacenet.com/textdoc?DB=EPODOC&IDX=JP3060426&F=0

# PRODUCTION OF HIGH-PURITY CESIUM CHLORIDE
# JP3060426

1991-03-15
Inventor: ASANO SATOSHI
Applicant: SUMITOMO METAL MINING CO
Classification: - international: C01D17/00; C01D17/00; (IPC1-7): C01D17/00

Abstract --- PURPOSE:To prevent formation and admixture of Rb salt without generating toxic gas at a time of reaction and to easily obtain high-purity CsCl by utilizing H2O2 as an oxidizing agent and utilizing hydrazinium salt as a reducing agent respectively and treating a hydrochloric acid-based soln. contg. Cs ions. CONSTITUTION:I2 powder equivalent to Cs is added to a 5-9 N hydrochloric acid-based soln. contg. Cs<+> such as Cs2CO3. Thereafter aqueous hydrogen peroxide having >=30wt.% concn. of 1-1.7 equivalent to I2 is added. The soln. is agitated until I2 is extinguished while the temp. of the soln. is maintained at 30-40 deg.C. After CsICl2 is formed, the soln. is heated to rise the temp. and deposited crystal is dissolved. This soln. is left to cool and CsICl2 is deposited, separated and recovered. Then separated and recovered CsICl2 is mixed with the required amount of water. Hydrazinium salt is added while agitating the soln. until CsICl2 disappears and both I2 and CsCl soln. are produced. I2 is separated and the obtained CsCl soln. is heated and concentrated and thereafter left to cool. Further after adding acetone, this CsCl soln. is left to cool and deposited high- purity CsCl is separated and recovered.

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http://www.nutrition2000info.com/cesium.html

## Benefits of Cesium

Cesium is extremely Alkaline
Cesium is readily accepted into cancer cells
Cesium is toxic to cancer cells
Cesium both halts and neutralizes lactic acid
Lactic acid causes pain and is a source of energy/fuel for cancer
Cesium disrupts the ionic balance of cancer cells membrane
Cesium has been used for heart arrhythmia
Cesium is used as a nerve stimulant
Cesium has little adverse effect on normal cells

Each bottle has 32 ounces which provides the recommended dose of 3 grams per day for 30 days of liquid cesium also included in the 32 oz bottle is the recommended dosage of potassium a day and DMSO

*Liquid Ionic Cesium* --- this form of Cesium has been shown to be very effective at killing cancer cells. Our Liquid Ionic Cesium Plus has Rubidium for the most effective tumor fighting compound available anywhere.

## Product Description

You may take the Cesium/potassium/Dmso orally or topically. Should you experience diahrea, take it topically until your digestive tract is fully normalized. Oral (by mouth) is the preferred method unless the tumors are near the surface of the skin. For tumors on or near the skin, applying the cesium/potassium/DMSO on the skin over the tumor would be most effective since it would maximize the dose directly on the tumor. Also, since the goal is to increase oxygen transport, it would be desirable to take MSM with the cesium/potassium/DMSO. MSM is the oxidized form of DMSO and dissolving it into the DMSO would increase the immediate transport of oxygen to the tumor. Take topically if you develop gastric issues such as diahrrea.

*Oral Instructions* --- Start with 1 to 2 ounces of fresh squeezed citrus juice, add 2 tablespoons of

organic apple cider vinegar and add 1 tablespoon of the cesium/potassium combo. The cesium and potassium are very alkali and you must have the citrus juice and the apple cider vinegar to neutralize the Ph in the stomach. It is also advised that you take a supplement containing betaine hydrochloride.

*Topical Instructions* --- Rub 1 tablespoon directly into the top of feet, wrist and the neck are all good locations to apply. Rub in thoroughly.

Every cell in the body is like a little battery. To successfully bring nourishment in, and take poisons out, it has to be fully charged. In a cancerous cell, the charge (called cell voltage) drops from 90 millivolts to less than 40 millivolts. When the cell voltage gets to the very bottom, only 5 substances can pass in or out of the cell. They are water, sugar, potassium, cesium and rubidium.

Potassium transports glucose into cells for metabolism while calcium transports oxygen. The amount of calcium in cancer cells is only about one percent of that in normal cells. This means that glucose can readily enter cancer cells but that oxygen cannot. This accounts for the anaerobic state of cancer cells pointed out by Warburg as early as 1925. Due to the lack of oxygen in a cancer cell, the only means of metabolism for it is the anaerobic phase of the Krebs cycle. This is very inefficient and calls for lots of glucose, as very little of the potential energy of the glucose is actually converted to energy (ATP), most of the glucose gets converted to lactic acid. Thus cancer has a voracious appetite for glucose and does not have enough energy to function as does a healthy cell which is capable of extracting nearly all of the potential energy from not only glucose but protein and fats as well.

Every cell (normal & cancer) depends on "Sodium-Potassium (Na-K) Pumps" embedded in the cell wall to maintain the required ionic balance/distribution across the cell wall as well as shuttle blood glucose into the cell for metabolism. The pumps work to get potassium ions into the cell and sodium ions out, creating a condition where the concentration of potassium is high in the cell and low outside and the reverse is true of sodium, which is kept low in the cell and is high outside.

A disruption of this delicate ionic balance across the cell wall will kill the cell. As one example, some bacteria kill cells by drilling holes in the membrane and inserting a tube that allows free diffusion of ions in both directions. This disrupts the sodium-potassium concentration separation to the point of killing the cell. Cesium, like sodium and potassium, is a Group 1 element as listed in the periodic table. Because cesium is closely related to potassium, it too can enter into a cancer cell by the same mechanism as potassium does. It readily substitutes for potassium in the biochemical processes. As the cesium ions accumulate in the cell they cancel the potential gradient across the cell wall that is required to energize the sodium-glucose co-transport into the cell. This could happen quite quickly requiring only a modest concentration of cesium in the cell. This rapid arresting of the cancer growth is consistent with the common reports that once cesium treatment is initiated, the first thing that happens is all the pain goes away. If this is all true, it would seem that treatment of cancer with cesium, to quickly arrest growth and then gradually kill the cells, is an almost perfect approach. It would be consistent with some of the amazing reports of late stage cancer being arrested in a matter of days.

As the cell continues to ingest both cesium and potassium, the effects to the cancer cell are toxic. Not only is the ionic balance disrupted, but the cesium will exit the cancer cell very slowly and it is so alkali that it is toxic to the cancer cell. One of the first effects of the Cesium is the cancer cell is very quickly starved of glucose. The cell stops growing and will eventually be unable to function. Since the cesium exits the cell only very slowly, this effect lasts long after the cesium treatment has ceased. In time, the starved cancer cells then die off.

The Bohr Effect is a property of hemoglobin first described by the Danish physiologist Christian Bohr in 1904. Because of the Bohr effect, an increase in blood carbon dioxide level, a decrease in pH or increased temperature causes hemoglobin to bind to oxygen with less affinity.

The Bohr effect utilizes carbon dioxide to displace oxygen. No carbon oxide, no oxygen displacement from the hemoglobin. Normal cells produce carbon dioxide but cancer cells don?t. It happens that lactic acid also affects the blood?s oxygen affinity, though not as strongly as carbon dioxide. However, lactic acid doesn?t vaporize as the blood passes through the lungs, so its effect on the lungs? ability to oxygenate the blood is the opposite of the easily exchangeable carbon dioxide?s. Besides dissociating

oxygen from hemoglobin, lactate also displaces carbon dioxide from its (carbamino) binding sites on hemoglobin.

In the presence of cancer then we find low to non existent levels of carbon dioxide but high levels of lactic acid. The lactic acid doesn?t just displace oxygen but carbon dioxide as well. The displaced carbon dioxide once dumped at the tumor site only servers to make the site more acidic. To make matters worse, when the lactic acid laden blood gets to the lungs it stays in the blood and the hemoglobin can?t get a fresh supply of oxygen. Without adequate oxygen, not only does the cancer have ideal conditions but the rest of the body suffers from hypoxia or low oxygen. Cesium raises the cancer cell pH enough to effectively neutralize the weak lactic acid.

Many tests on humans have been carried out by H. Nieper in Hannover, Germany and by H. Sartori in Washington, DC as well as by a number of other physicians. On the whole, the results have been very satisfactory. It has been observed that all pains associated with cancer disappear within 12 to 24 hr, except in a very few cases where there was a morphine withdrawal problem that required a few more hours. In these tests 2 g doses of CsCl were administered three times per day after eating. In most cases 5 to 10 g of Vitamin C and 100,000 units of Vitamin A, along with 50 to 100 mg of zinc, were also administered. Both Nieper and Sartori were also administering nitrilosides in the form of laetrile. There are good reasons to believe that the laetrile may be more effective than the vitamins in enhancing the pickup of cesium by the cells.

In addition to the loss of pains, the physical results are a rapid shrinkage of the tumor masses. The material comprising the tumors is secreted as uric acid in the urine; the uric acid content of the urine increases many fold. About 50% of the patients were pronounced terminal, and were not able to work. Of these, a majority have gone back to work.

Luckily, healthy cells are not affected by cesium because they use much less glucose than cancer, normal aerobic cells thrive in higher alkaline environments and their cell voltage allows them to balance themselves.

In addition to the cancer therapy, a U.S. Patent has been issued on the use of cesium as a nerve stimulant and Cesium is very effective in regulating heart arrhythmia. In areas of the world where cesium in the food intake is high, it has been noted that longevity of well over 100 years is not at all uncommon. Based on experimental data available Cesium may also be useful in the treatment of manic-depressives.

Cesium chloride taken for cancer will cause plasma potassium depletion. Therefore, it becomes necessary to supplement with potassium. There should be ample potassium in the Cesium/Potassium/DMSO Combo offered by NUTRITION 2000 when the cancer diet is followed. It is a good idea and recommended that you monitor blood levels of potassium and strive to keep the potassium in the upper normal range. You will not have a problem with excess levels of potassium if you are not suffering from acute kidney failure.

MSM is simply the oxidized state of DMSO and the two form an equilibrium in the blood that shifts towards MSM in the lungs, a more oxidizing environment, and shifts towards DMSO in the body cells, a more reducing environment. In the process oxygen is delivered to the cells. The process is continually repeated providing a continuous flow of oxygen to the cells that is independent of hemoglobin. In order for cancer to grow, it must have an environment void of oxygen. Another reason for adding DMSO is that it will allow the topical use of cesium should there be any GI distress when the cesium is taken orally.

NUTRITION 2000 offers liquid ionic cesium with potassium and DMSO. It is also advised to add high dose vitamin C (5,000 to 10,000 mg?s per day), Alpha Lipoic acid, MSM, selenium and vitamin E (full array of tocopherols not just alpha) to the Cesium/Potassium/DMSO combination. Please do not take cesium without talking with one of our consultants. Cesium is powerful and must be taken under supervision.

**In Depth Review of Cesium**

**Cesium for Cancer**

Cesium Chloride, a crystalline salt has been used successfully for cancer for many years now. Cesium Chloride works by raising the cancer cell's Ph to a highly alkaline state. Although many anti-cancer diets also produce an alkaline state, they simply cannot do so as quickly or as fully as Cesium Chloride can.

**Killing cancer cells with high Ph therapy**

**PH range**

<--Cell death-><-----Mitosis--------><---------Cell death------->

----------6.5----------7.35---------7.5---------

Cells, whether cancerous or normal can only live and reproduce (undergo mitosis) in a Ph range of between 6.5 and 7.5. A healthy cell has a Ph of 7.35 while a cancer cell is more acidic. Cesium Chloride when taken orally will raise the Ph of cancer cells, but not that of normal cells. When the Ph of a cell goes above 7.5 it dies and if it goes above 8.0 it will die in a matter of hours.

**What can enter a cancer Cell**

Every cell in the body is like a little battery. To successfully bring nourishment in, and take poisons out, it has to be fully charged. In a cancerous cell, the charge (called cell voltage) drops from 90 millivolts to less than 40 millivolts. When the cell voltage gets to the very bottom, only 5 substances can pass in or out of the cell. They are water, sugar, potassium, cesium and rubidium. Oxygen cannot enter into a cancer cell. So you see, even if there is a lot of oxygen in the blood, it won't get into the cell. Cesium, because of its electrical properties can still enter the cancerous cell. When it does so, because of its extreme alkalinity, the cell dies. Luckily, healthy cells are not affected by cesium because their cell voltage allows them to balance themselves. The only side effect is a loss of potassium which can be remedies with eating a few bananas or potatoes.

It is interesting to note that cancer is virtually unknown among the Hopi Indians of Arizona and the Hunza of Northern Pakistan, so long as they stay in the same environment. This strongly suggests that something they are consuming is protecting them from cancer. The Hopi water is rich in Rubidium and potassium. The Hunza water is rich in Cesium and potassium, making both of the water supplies rich with very caustically (alkaline) active metals.

In his publication, Cesium therapy in cancer patients, Dr. Sartori describes the 2 week treatment of 50 last stage, metastasized, terminal cancer patients (13 comatose), with Cesium chloride salts. All were expected to die within weeks, with the survival rate being less than one in ten million. After 2 weeks, 13 died with autopsies showing no presence of cancer. After 12 months, 12 more had died, but 25, an astounding 50% survived.

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## Cesium Therapy in Cancer patients

**H.E. Sartori**

Certain foods contain biologically active compounds and/or ingredients, i.e., vitamins inorganic salts, organic compounds; essential fatty acids, minerals, and chelating agents which may either precipitate or prevent cancer development. The relationship between dietary consumption and cancer development is not clear and further investigation continues. Noteworthy is the report on the presence of high levels of cesium [Cs] and rubidium [Rb] in food along with availability of various supportive compounds as vitamins A and C, along with zinc and selenium in diet of populations residing in areas with low incidence of cancer e.g., the Hopi Indian territory in Arizona, the Hunza area in North Pakistan, and the volcanic regions of Brazil. The diet of these populations is similar to the nutritive requirements for the high Ph cancer therapy developed by Brewer subsequent series of physical experiments with cancer cells. In these tests the presence of Cs+ or Rb+ in the adjacent fluids of the

tumor cell is believed to raise the Ph of the cancer cell where mitosis will cease resulting in reduction of life span of the cancer cell. The introduction of such alkaline Ph by these alkali salts may also neutralize the acidic and toxic material within the cancer cell. This report combines the use of CsCl with various supportive agents. Which have been hypothesized both to enhance the entry of Cs+ into the cancer cell and to stimulate the immune response, in the treatment of various cancers.

**Method**

Treatment was performed on 50 patients during the last three years at Life Sciences Universal Medical Clinics in Rockville MD and in Washington D.C. All patients were terminal subjects with generalized metastatic disease. Forty-seven of the 50 patient?s studies had received maximal modalities of treatment, i.e., surgery, radiation, and various chemotherapy, before metabolic Cs-treatment was initiated. Three patients were comatose and 14 of the patients were considered terminal due to previous treatments outcome and cancer complications. The type of cancer of the patients studied and their number is detailed in table 1.

The Cs-treatment was given in conjunction of other supportive compounds under diet control in addition to the utilization of specific compounds to produce adequate circulation and oxygenation. According to individual cases CsCl was given at daily dosages of 6 to 9 grams in 3 equally divided doses, with vitamin A-emulsion (100,000 to 300,000 U), vitamin C (4 to 30 grams), zinc (80 to 100 mg) selenium (600 to 1,200 mcg) and amygdalin (1,500 mg) in addition to other supplementations according to the specific needs of the patient. The diet consisted mainly of whole grains, vegetables, linolenic acid rich oils (linseed, walnut, soy, wheat germ) and other supplemental food. To increase efficiency of the treatment and improve the circulation and oxygenation, the patients received the chelating agent EDTA, dimethylsulfoxide (DMSO) and also a combination of vitamins, K and Mg salts.

**Results**

Table 1 summarizes the results of the Cs-treatment of 50 cancer patients studied over 3 years. They had generalized metastatic disease, except for 3 patients. Initial death occurrences fir the initial 2 week treatment was in the same order and magnitude of these recorded for the 12 month period. The percent of survival of breast, colon, prostate, pancreas, and lung cancer accounted to approximately, 50% recovery which was higher than that noted for liver cancer and the lymphoma patients treated. An overall 50% recovery from cancer by the Cs-therapy was determined in the 50 patients treated. Data from the autopsy made indicated the absence of tumors in patient dying within 14 days of the Cs-treatment. One of the most striking effects of the treatment was the disappearance of pain in all patients within 1 to 3 days after initiation of the Cs-therapy.

These studies were performed under my direction, initiated in April, 1981. Twenty-eight patients were initially treated with CsCl between April, 1981 to October, 1982. They were subjected to various cancer therapies, e.g., surgery, radiation, and chemotherapy, and were considered terminal cases with metastatic disease except for 3 patients who were not previously treated. Three patients were comatose at the time of the Cs treatment. Thirteen patients died within less than 2 weeks of treatment. Each patient showed a reduction in tumor mass by the Cs-treatment. Of the breast cancer patients, the most impressive effect was seen n a female patient who was comatose at the beginning of the Cs-treatment and was considered a terminal case. The Cs-therapy, with other ingredients used, was immediately instituted by nasogastric route because there was no cooperation from the patient. The daily CsCl dose given amounted to 30 grams, 10 grams given 3 times daily. The patient was able to leave after 5 days of treatment. However the patient's fall on the floor resulted in complications, i.e., fracture of the neck, and death. The autopsy revealed that the cancer metastasis had essentially eaten away her hip bone causing this tragic accident. The autopsy performed also showed the presence of very little cancer tissue.

The next most frequent cancer treated was of unknown primary. Treatment of 8 cases showed a death rate of 2 within 14 days of treatment and an additional 2 deaths within 12 months while 4 of the patients are still living. In one case, an autopsy was made in a patient after one week of Cs-treatment and showed a complete disappearance of the cancer. There were 7 cases of colon cancer patients who

were treated with CsCl. Two of these patients died within 14 days, one of the patients had previous massive chemotherapy, and little time was available to restore her metabolic condition. The previous existing infiltration of the abdominal wall disappeared. However, no consent was given for an autopsy.

In one lymphoma case the patient displayed an unusually large abdomen which was hard and he weighed approximately 250 pounds. The massively enlarged abdomen began to decline in volume, i.e., a loss of approximately 120 pounds of body weight was noted after 3 months of the Cs- therapy. The spleen which was originally maximally enlarged and reaching into the pelvis was reduced to almost normal size. The liver position was down to about the level of the umbilicus and was also reduced to normal size in 3 months. The patient is still living after 3 years after his discharge. Unfortunately, there is no follow-p on this patient and he is being maintained on chemotherapy.

**Discussion**

The results presented demonstrate the rate of efficacy of CsCl in cancer therapy. The total 50 cancer cases studied show an impressive 50% survival rate. This confirms the work of Messiha reported in these proceedings showing that the higher the dose it is, the more effective it seems to be. The autopsy obtained from the patient whose death was attributed to traumatic fracture of the neck, indicated that cancer had been initially further advanced resulting in bone destruction. However, the absence of cancer after the massive CsCl dose used in this case is demonstrable of the Cs-therapy. It appears that both dosages, i.e., as much as 30 grams/day and route of drug administration, i.e., nasogastric pathway, might have contributed to the patient?s rapid recovery. It should be noted, however, that CsCl dose regimens should no exceed 20 to 40 grams due to side effects, mainly nausea, and diarrhea. The author?s personal experience with CsCl after an acute dose of 40 prams CsCl indicate that extensive nausea and parethesia around the mouth are the major side effects. This is probably due to K depletion. The usual dose used in the clinic ranges from 2 to 3 grams given by mouth 3 times daily. At a later time, at which time there is no indication of cancer presence, the CsCl dosage will be reduced to a preventative dose between .5 and 1 gram a day.

The lymphoma case presented shows that CsCl efficiently reduced massive enlargements of spleen and liver as well as maximal ascites, causing an abdominal configuration of a tight, hard hemisphere, to almost normalize after 3 months of therapy. This period of time was required to eliminate such a massive volume resulting in the reduction of the body weight noted.

The clinical efficacy of CsCl high pH metabolic therapy is best demonstrated by a recent case of primary liver cancer (not included in the 50 cases reported in this study). The patient was a 39 year old female teacher who was terminal. She was brought on a stretcher on April 25, 1984 with a large liver tumor extending approximately 3 cm below the umbilical level. The treatment was then immediately instituted. This consisted of administration of CsCl, Beta-carotene, Vitamin C, Zn, Se, Mn, Cr, and K salts by the oral route in addition to concomitant massive IV doses of ascorbate, K, Mg, Zn, Cn, Mn, Cr salts, B complex vitamins, folic acid, DMSO and heparin. After 5 consecutive treatment regimens EDTA was introduced to the therapy and the minerals present in the solution were discontinued. On May 10, 1984, the patient was discharged, returned home walking without assistance and displaying a smile on her face. The liver tumor had shrunk to 5 cm above the umbilicus. The determination of alphafetoprotein (AFP), a specific marker for liver cancer, rare embronal cancer and teratomas, decreased from the unusually high value of 39,000 units, compared to normal levels of 13 units, measured before initiation of Cs-therapy, to 5000 units obtained on the last day of treatment.

The mechanism of action of Cs in cancer has been little studied. Both Cs+ and Rb+ can specifically enter the cancer cells and embryonic cells, but not normal adult cells have been demonstrated by Brewer. The cancer cells contain high amounts of hydrogen ions rendering them acidic and they also contain high Na+ levels than found in normal cells. If Cs+ or Rb+ can enter the cancer cells then the pH increases from as low as 5.5 to over pH 7.0. At a pH of 7.6 the cancer cell division will stop, at a pH of 8.0 to 8.5 the lifespan of it is considerably shortened (only hours). In one case, the author has observed the shrinkage of metastases of breast cancer after one hour of Cs-treatment. Two days later wrinkles of the skin appeared where the tumor was present. In another case of a colon cancer with

massive metastasis, of massive infiltration of the abdominal wall, liver and other tissues, seemed to have been reduced within 24 hours and continuing rapidly until the demise of the patient on the 14th day of the Cs-treatment.

The uric acid levels measured at the onset of treatment was approximately 3.5 units which were increased to over 20 units, suggesting massive breakdowns of DNA, which produces the uric acid output. Therefore, destruction of nuclear acids, as reflected by a significant rise in the uric acid, may be used as a predictive measurement for treatment outcome. The failure of uric acid elevation may be indicative of lack of destruction of cancer cells. This has proven to be a very consistent finding in our clinic.

There are certain factors which may enhance the Cs-therapy. The Cs-penetration into the cancer cells can be increased by the following three methods: The first approach resides in broadening the electron donor capacity of the cancer cell membrane by the application of cyanide, an electron donor radical as found in nitriles (amygdalin, Laetrile, mandelonitrite, prunasin, ficin, cassivin), by selenium oxide, an electron donor radical, or by the use of DMSO. The second approach enhances the potential gradient across the cancer cell membrane by the utilization of weak acids like ascorbic acid (Vitamin C) and retinoic acid (Vitamin A). The third method attempts to improve the circulation to the tumor and facilitate the destruction of cross-linkages in the mucoid and fibrinous substances around the cancer cell. This can be achieved by chelation therapy, i.e., the use of EDTA as has been shown by Blumer who reported on the reduction of cancer incidence by 90% by chelating patients (an average of 15 chelations in 8 years). This approach also reduced cardiovascular disease by 50%. Other chelating agents can also be used. Moreover, the use of beta-carotene will lead to decomposition of blocking mucoid proteins mediated by electrical charges; also, heparin, which acts through electrical charges, will inactivate the immune repelling and immune binding capacities of the blocking mucoid proteins. These approaches will hinder cancer growth and they are virtually atoxic.

**The High pH Therapy**

The ready uptake of cesium and rubidium by the cancer cells lead the writer to the High pH therapy. This consists of feeding the patient close to 6 g of CsCl or RbCl per day in conjunction with the administration of ascorbic and retionic acids, Vitamins C and A, which being weak acids, upon absorption by the tumor cells will enhance the negative potential gradient across the membrane, and also zinc and selenium salts which, when absorbed on the membrane surface, will act as broad and moderately strong electron donors. Both types of compounds have been shown in mice to drastically enhance the pickup for cesium and rubidium ions.

The toxic dose for CsCl is 135 g. The administration of 6 g per day therefore has no toxic effects. It is sufficient however to give rise to the pH in the cancer cells, bringing them up in a few days to the 8 or above where the life of the cell is short. In addition, the presence of Cs and Rb salts in the body fluids neutralizes the acid toxins leaking out of the tumor mass and renders them nontoxic.

Many tests on humans have been carried out by H. Nieper in Hannover, Germany and by H. Sartori in Washington, DC as well as by a number of other physicians. On the whole, the results have been very satisfactory. It has been observed that all pains associated with cancer disappear within 12 to 24 hr, except in a very few cases where there was a morphine withdrawal problem that required a few more hours. In these tests 2 g doses of CsCl were administered three times per day after eating. In most cases 5 to 10 g of Vitamin C and 100,000 units of Vitamin A, along with 50 to 100 mg of zinc, were also administered. Both Nieper and Sartori were also administering nitrilosides in the form of laetrile. There are good reasons to believe that the laetrile may be more effective than the vitamins in enhancing the pickup of cesium by the cells.

In addition to the loss of pains, the physical results are a rapid shrinkage of the tumor masses. The material comprising the tumors is secreted as uric acid in the urine; the uric acid content of the urine increases many fold. About 50% of the patients were pronounced terminal, and were not able to work. Of these, a majority have gone back to work.

Two side effects have been observed in some of the patients. These are first nausea, and the second diarrhea. Both depend upon the general condition of the digestive tract. Nieper feels that nausea can

be prevented by administering the cesium in a solution of sorbitol. The diarrhea may, to some extent, be affected by the Vitamin C.

Only one case history will be presented here. A woman with 2 hard tumor masses 8 to 10 cm in diameter, one on her thyroid and one on her chest, was given 3 to 6 months to live. She had been subjected to chemotherapy, but was discontinued because it weakened her. She was taking laetrile on her own. She was given a 50 g bottle of CsCl and was told to take 4 g per day. She reported her case a year later. Being very frightened she took the entire 50 g in one week. At the end of that time the tumor masses were very soft, so she obtained another 50 g of CsCl and took it in another week. By the end of that time she could not find the tumors, and two years later there was no sign of their return.

Cesium chloride and a high pH diet cause potassium depletion. Therefore, it becomes necessary to supplemented with potassium. Most potassium supplements supply 100 mg of potassium. One banana supplies 500 mg of potassium.

Proponents of cesium chloride suggest a dosage of 1-6 g/day. Most patients take 3 g a day always with food. Here is the schedule that Neal Deoul used:

Breakfast:
Cesium chloride (1 gram)
Vitamin C (1000 milligrams)
Zinc (25 - 30 milligrams)
one potassium capsule as prescribed by a physician

Lunch:
Vitamin C (1000 milligrams)

Dinner:
Cesium chloride (1 gram)
Vitamin C (1000 milligrams)

Before bed after eating 2 slices of bread:
Cesium chloride (1 gram)
Vitamin C (1000 milligrams)

The minimal dosage for curative action has not been determined. It has been observed by several physicians that the administration of .5 g per day of CsCl will actually enhance the rate of tumor growth. This is to be expected, since this low amount is sufficient only to raise the cell pH into the high mitosis range. The data so far reveal that any quantity of 3.0 g or above will be effective.

People who change their eating habits greatly increase the effectiveness of the supplements they take.

**Side Effects**

In a small number of people, Cesium Chloride has been linked with ventricular tachycardia, a rapid and irregular heartbeat that can lead to sudden cardiac death.

A side effect which occurs in some cases, especially those who have had stomach ulcers, is nausea. This side effect occurs far less often with the 3.0 g per day dose than for 6.0 g dose which is recommended by some of the more aggressive therapists.

Cesium chloride and a high pH diet cause potassium depletion. Therefore, it becomes necessary to supplemented with potassium. Most potassium supplements supply 100 mg of potassium. One banana supplies 500 mg of potassium. We offer a liquid containing cesium chloride with potassium in a balanced formula. Cesium chloride stays in the body for a couple of months after discinuation of use. For that reason a person should continue potassium supplementation for a couple of months after discinuation of cesium chloride.

**The Toxin Approach:**

The second approach employs the use of toxins that do kill the cancer cells by a toxic effect. There are many examples of this. However, in my analysis of the mechanism of ionic cesium (cesium chloride), combined with increased potassium (potassium chloride) intake, I was extremely surprised to discover the real mechanism by which it operates and identify how truly profound it is. I concluded the mechanism presented to date on the internet was totally wrong and serously obsured the true potential of this appraoch. My present conclusion is that it stands out from all other such toxin approaches as being almost the perfect solution.

Briefly, the cesium ions are taken into the cell via the sodium-potassium pump, substituting for potassium, and are trapped there. Not only are the cesium ions trapped, but they also block the exit of the potassium ions by blocking the potassium channel proteins in the cell walls. The accumulation of cesium and potassium ions in the cell negates the voltage potential across the cell membrane. This voltage potential is required to energize the sodium-glucose co-transport system that feeds the cell. The cell thus starves. There would also be an accumulation of ions in the cell which will cause the cells to swell, due to osmotic pressure, and possibly burst.

This is true for all cells. Why are cancer cells impacted far faster/greater than normal cells? The sodium-potassium pump, energized by ATP, pumps two potassium ions into the cell while pumping three sodium ions out. This creates a charge imbalance that would stop the pump unless there was another path by which the sodium ions reenter. That happens via the sodium-glucose co-transport system in the cell membrane. Thus, the rate that the sodium-potassium operates is dictated by the glucose requirement of the cell. Cancer cells, which are anaerobic, require 20 times more glucose than normal cells to obtain the same amount of energy. Therefore, their sodium-potassium pumps operate 20 times faster than normal cells. Thus, they will pump cesium into their cells 20 times faster than normal cells, and will experience starvation (and bursting) 20 times faster.

Since not only are the cesium ions trapped, but also potassium ions, this will result in a serious lowering of potassium in the blood which must be compensated for, which is easy to do. If it isn't, the lowering of the potassium level in the blood could cause death. I should mention that "Salt Substitute" available in every grocery store is potassium chloride and is a good, convenient source of potassium.

The trick is to establish a protocol where the cancer cells enter starvation and stop the treatment before the normal cells follow. Cesium eventually exits the cells, but very slowly. Thus, once the cancer cells have entered starvation, treatment can stop and the cancer cells will continue to starve for an extended period of time.

An additional feature of this approach is that the cancer cells are abruptly deprived of glucose, abruptly arresting their progression, but not necessarily resulting in an abrupt die-off. One might expect this to be more gradual than other cancer treatments. Thus there is a lower risk of experiencing severe toxic effects due to rapid cell die-off of cells common to other treatment approaches.

As broadly reported on the internet, cesium chloride has been used successfully to treat cancer. My contribution is to discover its correct mechanism, described above. This should not only enhance its scientific credibility, but help researchers and treatment clinics optimize its use.

Otto Warburg found that all cancer cells are anaerobic, and both of these approaches work on the anaerobic nature of cancer cells. Logically, the combination of the two should be effective for all forms of cancer. Will it be enough? Only time will tell if this dream will come true.

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**http://www.kornax.com/Merchant2/merchant.mvc?Screen=CTGY&Store_Code=KE&Category_Code=CRP&gclid=CJOAxsKhq5YCFQgRFQodISL0yw**

Cesium 96,000 mg/Plus Ionic High Grade Concentrate w/Rubidium 960 mg/L-32 oz.$84.99
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**http://alternativecancer.us/cesiumchloride.htm**

**Pharmacology**

Cesium, a naturally occurring alkaline element has been shown to change the cancer cell in two ways:

Cesium limits the cellular uptake of glucose, which starves the cancer cell and reduces fermentation.

It raises the cell pH to approximately 8.0. This neutralizes the weak lactic acid and stops pain within 12 to 24 hours. A pH range of 8.0 is a deadly environment for the cancer cell, which dies within a few days and is absorbed and eliminated by the body.

**A Different Theory**

Another theory regarding the operation of cesium chloride is that it selectively targets tumor cells because many or most types are anaerobic. Anaerobic cells need times more glucose than normal cells. In order to get more glucose into the cancer cells, the sodium-potassium (Na-K) pumps on the cell wall must run 20 times faster, pumping more sodium out and more potassium in. Cesium acts like potassium so the Na-K pump brings lots of it into the cells. However once in the cell, cesium cannot get out, because it blocks the potassium channels through which potassium usually leaves. Cesium buildup then kills the cell by uncertain mechanisms. From "Proposed Common Cause and Cure for All Forms of Cancer" by David Gregg Ph.D.

**Effectiveness**

There is no information that suggests that Cesium chloride is less effective on one type of cancer than another.

**A Fifty patient Study with Cesium Chloride Plus Other Supplements**

Cesium chloride treatment combined with other alternative treatments was performed on 50 patients at Life Science Universal Medical Center Clinics in Rockville, MD and in Washington, DC. From April 1981 to February 1984, 50 cancer patients were treated with Cesium chloride and given a special diet. All of the patients were terminal with generalized metastatic disease. 47 of the 50 patients had received maximum surgery, radiation, and chemotherapy before the metabolic regime was started. 3 patients were comatose. 14 patients were unresponsive from previous treatment attempts and their cancer complications.

The diet during treatment consisted mainly of whole grains, vegetables, linoleic acid rich oils (linseed, walnut, soy, wheat germ) and other supplemental food. According to individual cases Cesium chloride was given at daily dosages of 6 to 9 g (this is now considered unnecessarily high). in three equally divided doses. Also given to all the patients:

Vitamin A-emulsion (100,000 to 300,000 U)
Vitamin C (4 to 30g)
Zinc (80 to 100 mg)
Chelating agent EDTA
Dimethylsulfoxide (DMSO)

Selenium (600 to 1,200 mcg)
Laetrile (1500 mg)
Vitamin K
Mg salts
Other supplements according to specific patient needs .

As you can see, all these additonal treatments and supplements could have had just as much effect as the Cesium chloride making this study less than conclusive. Vitamin A and C are significant cancer treatments. However, it should be pointed out that 1500 mg of Laetrile is very little, the recommend theraputic does is 6,000 mg (intravenous).

Each patient showed a reduction in the tumor mass even after only forty-eight hours. Of the 17 comatose and moribund patients, 12 died from complications of their cancers but especially the consequences of chemotherapy and radiation. One comatose breast cancer patient recovered so rapidly that after five days she attempted to leave her bed. When stepping out of her bed, she feel and broke a cervical vertebra which led to her demise within another eight days (a metastasis had destroyed her femur and caused her fall).

Of a series of the first 50 patients with a variety of terminal cancers, as of July 1, 1984 the survival time of the 25 survivors, all of them expected to die not later than 2 weeks to 3 months after the treatment was started, is it at least 8 months and up to 3 years and 3 months. One of the most striking effects of the treatment was the disappearance of pain in all patients within one to three days after initiating Cs-therapy. The results demonstrate the rate of effectiveness of CsCl in cancer therapy.

**Studies**

Besides the 50 patient study at Life Science Universal Medical Center described in the Effectiveness" section above, the following is a summary of "The high pH therapy for cancer tests on mice and humans." PHARMACOL BIOCHEM BEHAV 21: Suppl. 1, 1-5. 1984, by A. K. Brewer, was found:

Mass spectrographic and isotope studies have shown that potassium, rubidium, and especially cesium are most efficiently taken up by cancer cells. This uptake was enhanced by Vitamins A and C as well as salts of zinc and selenium. The quantity of cesium taken up was sufficient to raise the cell to the 8 pH range. Where cell mitosis ceases and the life of the cell is short. Tests on mice fed cesium and rubidium showed marked shrinkage in the tumor masses within 2 weeks. In addition, the mice showed none of the side effects of cancer.

**Conclusiveness of Papers**

The non-peer reviewed articles make a strong case for the effectiveness of cesium chloride. However, when studies are not critically reviewed, they can be critically flawed.
Standalone Ability

Cesium chloride gets a low rating for standalone ability because it must be taken with potassium. Also, studies that used cesium chloride combined it with other supplements, see the "Effectiveness" section. Potassium depletion is not a serious problem because it is easy to replace potassium. Actually, most cesium chloride supplements contain large amounts of potassium.

**Ease of Use and Dosage**

Cesium chloride supplements are available in pill form in a wide range of doses.

Cesium chloride and a high pH diet causes potassium depletion. Therefore, it becomes necessary to supplemented with potassium. Most potassium supplements supply 100 mg of potassium. One banana supplies 500 mg of potassium...

The minimal dosage for curative action has not been determined. It has been observed by several physicians that the administration of .5 g per day of CsCL will actually enhance the rate of tumor growth. This is to be expected, since this low amount is sufficient only to raise the cell pH into the high mitosis range. The data so far reveal that any quantity of 3.0 g or above will be effective.

People who change their eating habits greatly increase the effectiveness of the supplements they take.

**Side Effects**

In a small number of people, Cesium Chloride has been linked with ventricular tachycardia, a rapid and irregular heartbeat that can lead to sudden cardiac death.

A side effect which occurs in some cases, especially those who have had stomach ulcers, is nausea. This side effect occurs far less often with the 3.0 g per day dose than for 6.0 g dose which is recommended by some of the more aggressive therapists.

Cesium chloride and a high pH diet causes potassium depletion. Therefore, it becomes necessary to supplemented with potassium. Most potassium supplements supply 100 mg of potassium. One banana supplies 500 mg of potassium. Essense-of-life offers a liquid containing cesium chloride with potassium in a ballanced formular. Cesium chloride stays in the body for a couple of months after discinuation of use. For that reason a person should contiune postassium supplementation for a couple of months after discintuation of cesium chloride. Essense-of-life (see the "Manufacturers" section) includes comprenseive instructions along these lines with each order of cesium chloride.

**From the ACS**

Cesium chloride is not considered toxic. However, the acute and chronic toxicity of this substance is not fully known. Consuming large amounts of cesium could result in nausea and diarrhea. Based on results of animal studies, women who are pregnant or breast-feeding should avoid taking cesium chloride supplements.

**Compatibility**

There is no known conflict between cesium chloride and other medications or supplements. However, there are no known studies to determine compatibility.

**Cost per Month**

Cesium chloride costs $70 for a one month supply if taking 3 grams per day.

**Testimonials and Belief**

Testimonials can be a very powerful tool to help in the healing process because they can boost your belief in a treatment. However, reading testimonies is a poor method of making a treatment selection. An alternative cancer treatment with only a 5% success rate can still obtain many genuine and impressive testimonials. A selected group of positive testimonials cannot compare to a published study were all of the qualified case histories are presented, the failures as well as the successes.

For the above reason, it is not a good idea to use testimonials to help you select a cancer treatment. Save testimonials for the role that they perform the best, bolstering belief after treatments have been selected. Using an Alternative Cancer Treatment Test kit is a much better method of making the treatment decision.

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**http://www.newswithviews.com/Howenstine/james14.htm**

**USE OF CESIUM CHLORIDE TO CURE MALIGNANCIES**

**By Dr. James Howenstine, MD.**
**June 29, 2004**
**NewsWithViews.com**

Nobel Prize Laureate, Dr. Otto Warburg, discovered that when he lowered the oxygen levels of tissues by 35 % for 48 hours normal cells were converted into irreversible cancer cells. Cancer patients have low levels of oxygen in their blood usually around 60 compared to normal values of about 100 by pulse oximetry. The common therapies used to treat cancer (chemotherapy and radiation) both cause drastic falls in the body's oxygen levels. Tissues that are acidotic contain low levels of oxygen whereas tissues that are alkalotic have high levels of oxygen.

In a normal cell glucose and oxygen easily enter the cell and waste products are promptly eliminated from the cell. The cell ph remains in the normal range of 7.35. When the outer lining membranes of the cell are chronically irritated by toxic substances (exposure to carcinogens) this membrane functions abnormally by failing to permit oxygen to enter the cell while glucose is still able to enter the cell.

Potassium ions are responsible for the ability of glucose to enter the cell. Potassium enters cancer cells in a normal manner so glucose still enters the cancer cell. Cancer cells have only 1%[1] of the calcium content found in normal healthy cells. The calcium, magnesium and sodium ions, which are responsible for the intake of oxygen into the cell, can not enter the cancer cell but the potassium ion still enters these cells. Thus we have cancer cells containing glucose but no oxygen.

When oxygen fails to enter the cell the cell's ability to control it's ph is lost and the cell becomes quite acidic. This is caused by the appearance of abnormal metabolism (anerobic glycolysis) in which glucose is converted (fermentation) into two particles of lactic acid. This production of lactic acid promptly lowers the ph within the cell to 6.5 or lower. The lactic acid damages the template for proper DNA formation. Messenger RNA is also changed so the ability of the cell to control its growth is lacking. Rapid and uncontrolled cancer cell growth and division occurs. Vitamin C and zinc are able to enhance the uptake of cesium, rubidium, and potassium into cancer cells.

**Why The Current Cancer Surveillance And Therapy Programs Have Failed**

During our lives we all kill millions of cancer cells unless our immune systems become injured. When a clinician is able to diagnose a cancer of the lung by chest xray, breast cancer by mammogram, or colon cancer by colonoscopy etc. it has already been in the body for 6 to 8 years and has had ample time to spread to other parts of the body. This is the reason that the massive program to get annual mammograms in women is a complete failure. The survival rate from breast cancer is the same for women who have never had a mammogram as for those who obtain annual mammograms (large population studies from Canada and Denmark discovered this).

Cancer treatment programs are based on the false concept that chemotherapy will kill more tumor cells than healthy cells and thus lead to recovery. The very cells (bone marrow) that enable a human to recover from cancer are damaged by chemotherapy. How could a therapy known to cause cancer (radiation) be able to improve long term survival for very many cancer victims? The statistics show that no more people are surviving now than 25 years ago. Both chemotherapy and radiation injure the immune system which is vital for surviving cancer.

The cancer cartel has no interest in curing cancer because chemotherapy drugs are an enormously profitable product for the pharmaceutical industry. An important clue proving that there is no sincere interest in curing cancer is provided by the fact that only .5% (one half of one percent) of the dollars spent on cancer research is spent on research directed at stopping the spread[2] of cancer (metastases). When a cancer fails to spread the patient can live many comfortable years in an uneventful manner.

**Factors Influencing The Development Of Malignant Diseases**

All persons are normally killing millions of cancer cells unless their immune system becomes injured. There are at least 6 things that can injure the immune system:

*Nutritional Deficiencies* (examples) --- Inadequate reserves of vitamin C and E can increase the morbidity experienced in surgical ICUs after massive trauma. Lack of selenium increases the risk of developing malignancies, infections and heart disease.

*Infection* --- Serious infections can deplete phagocytes, cause coagulation problems, nutritional deficiencies, impaired circulation etc.

*Exposure to Radiation* --- Injury to DNA and bone marrow may follow radiation leading to malignant changes in cells and greater opportunity for infections to occur.

*Toxins* --- Exposure to unhealthy dietary transfats, heavy metals, pesticides, herbicides, chemicals,

fluoride etc. injures the immune system's ability to mobilize a prompt effective response. The lack of dietary essential omega 3 fatty acids is an important cause for immune injury for 90% of U.S. citizens.

*Stress* --- When prolonged stress occurs the body steadily releases cortisone that causes suppression of the immune system, death of nerve cells, failure to kill abnormal cells, and risk of infection may increase...

*Aging* --- There is diminished ability to activate the immune system as we age. This contributes to the occurrence of malignancies and infections in the elderly.

**Have There Been Any Cures For Cancer?**

All health care practitioners who have developed a cure for cancer from Dr. Coley's toxins in 1900 through Dr. Stanislaw Burzinsky's antineoplaston currently have been greeted with vicious opposition, lies in the media if the media even admits the product exists, inability to get information published in mainline journals where physicians could read it, and frequently there is continuing harassment from lawsuits threatening loss of medical licensure. There have been at least a dozen safe cures for cancer down through the past century of health care that have come and gone without the general public's awareness that they even existed. The cancer industry is so powerful that television, newspapers, and medical journals subsidized by revenue from pharmaceutical advertisements are generally unwilling to admit that these cures have ever existed. Often fabricated articles are published disparaging the safety and effectiveness of the cure thus frightening the general public away from some natural therapy that could make them well. It is quite difficult for lay people to realize who is giving them the truth..

**Using Alkali Therapy To Cure Cancer**

Parts of the world that have high levels of strong alkaline minerals in their water have a very low incidence of cancer. The Hopi Indians have water that contains rubidium and potassium while the Hunzas of Northern Pakistan have water high in cesium and potassium. The Hopis and Hunzas do not develop cancer unless they move away from their homeland. Of considerable interest both the Hopis and Hunzas eat apricot kernels on a regular basis (laetrile).

Effective therapies that cure cancer have come and gone frequently since 1900. Alkali therapy for cancer was developed in that era. It worked quite well for cancer but was forgotten when only a few practitioners heard about it and were willing to face the opposition that the medical establishment directs toward anyone not using conventional methods of therapy. The use of strong alkali provided a permanent cure[3] for many patients.

The most alkaline minerals (cesium, rubidium, potassium) are able to enter cancer cells. Their strong alkalinity, particularly that of cesium, causes the ph within the cell to rise to values of 8 or higher because they affect ph more than the weak acid (lactic acid) within the cancer cell. In the very alkaline state cancer cells can survive for only a few days or less depending on the degree of alkalinity present in the cancer cell. If many cancer cells die simultaneously the body's ability to process and eliminate the breakdown products of massive cellular death may be overwhelmed causing a "detoxification reaction". The primary organ involved in detoxification by the body is the liver. Symptoms might include flu like symptoms, headache, nausea, and skin rash. The liver can increase it's ability to eliminate toxins by the use of the herb milk thistle which is a good idea during cancer therapy.

Sometimes there is so much malignant tissue dying sinus tracts will appear on the skin. This enables the body to get more of the toxic substances released from dead cells out of the body faster. Healthy normal cells have normal electrical potential in their cell membranes which allows them to keep cesium out of the cells.

Cesium capsules can rarely be a cause for perforation of the stomach or small intestine if they become positioned against the wall of either organ. For this reason cesium must always be taken with food and the liquid form of cesium would appear to be safer than a capsule.

One of the conditions observed after cesium therapy was a striking rise in blood uric acid levels. This is caused by massive release of DNA from dead cancer cells. DNA is metabolized into uric acid.

Typically the values went from 3.5 mg. to 20 mg. This has the potential to cause decreased kidney function because large amounts of uric acid appearing in kidney tubules can form crystals that block the tubules. If a large number of kidney tubules become blocked kidney function fails and uremia appears. This is easy to prevent by using the pharmaceutical drug Xyloprim (allopurinol) before and concomitantly with cesium so that excessively high values of uric acid do not develop. This might only be needed when 20 or more grams of cesium (high dosage) are being taken daily. Xyloprim lowers the blood level of uric acid by shifting the metabolism of proteins so that the body produces less uric acid, thus decreasing the blood levels of uric acid and the amount of uric acid the kidney needs to excrete.

Cancer cells contain a fibrin meshwork 13 to 15 times thicker than the fibrin meshwork surrounding normal cells. This fibrin mesh surrounding cancer cells is believed to play a key role in the ability of cancer cells to escape destruction by making it quite difficult for the killer lymphocytes, phagocyes and cytokines of the immune system to contact and destroy cancer cells. As we age our ability to manufacture enzymes steadily diminishes. The key enzyme component in an effective enzyme preparation is chymotrypsin or serrapeptase both of which increase the body's ability to produce more enzymes. We like Vitalzyme for malignancies because of the widespread reports of good results using the the enzyme serrapeptase which is found in Vitalzyme. The dose can begin with 3 tablets three times daily on an empty stomach. This dose should be steadily raised at regular intervals if no improvement is seen. Enzymatic digestion of this fibrin mesh is an important part of cancer therapy. The processing of dead cancer cells is also expedited by the digestion of tissue fragments caused by enzyme therapy.

**Clinical Results With Cesium Therapy**

Dr. H. E. Sartori began his cesium cancer therapy program in April 1981 at Life Sciences Universal Medical Clinics in Rockville, Md. Fifty patients with widespread metastatic tumor deposits were treated. Forty-seven of these 50 patients had already completed maximal modalities of treatment, i.e. surgery, radiation, multiple courses of chemotherapy before cesium was tried. Their condition was hopeless.

Cesium chloride was given in 3 equal divided doses of 6 to 9 grams daily. Supplemental vitamin A emulsion (100,000 to 300,000 U), vitamin C (4 to 30 grams), zinc (80 to 100 mg., selenium (600 to 1200 mg.), and amygadalin (1500 mg.) were given plus other supplements. The diet consisted primarily of whole grains, vegetables, linolenic acid rich foods (flaxseed, walnut, soy, wheat germ) and other supplemented food. EDTA (chelation, dimethylsulfoxide (DMSO) and a combination of vitamins K, and magnesium salts were also given. The types of malignancies treated included 10 patients with breast cancer, 9 with colon cancer, 6 with prostate cancer, 4 had pancreatic cancer, 5 had lung cancer, 3 had liver cancer (hepatoma), 3 had lymphoma, 1 had Ewing's sarcoma of the pelvis, 1 had an adenocarcinoma and 8 had cancer from an unknown site of origin.

Approximately 50 % of patients with breast, colon, prostate, pancreas and lung cancer survived. Three patients were comatose when the therapy was initiated. Thirteen patients died in the first 2 weeks of therapy. Autopsy results in each of these 13 disclosed reduction in tumor mass size caused by cesium therapy. Also pain disappeared in all patients within 1 to 3 days after initiation of cesium therapy. This may have reflected decreased production of lactic acid by dying cancer cells.

One breast cancer patient was of considerable interest. She was comatose when cesium therapy was initiated using a feeding tube. She received 10 grams of cesium chloride three times daily. She walked out of the hospital 5 days later. Unfortunately it was not appreciated that a hip had been completely replaced by tumor tissue which disappeared with therapy. Having no bony tissue to support her weight she fell at home fracturing her neck resulting in death. The autopsy revealed no hip bone and only very small amounts of cancer tissue. This is a spectacular therapeutic result despite the tragic death.

In a group of 8 patients where the site of origin of the malignancy was unknown 2 patients died in the first 14 days and 2 more died in the first year. Four of the patients were still alive when last heard from more than a year later. Conventional cancer therapy has never produced any results like these as similar cases without a clear site of origin for cancer usually die rapidly.

A patient with lymphoma had a huge hard abdomen. He weighed 250 pounds. 120 pounds of weight was lost in the first 3 months of cesium therapy. His spleen was initially in his pelvis. This shrank to nearly normal size. The liver was enlarged to the umbilicus before therapy. This returned to normal size in 3 months. He was alive 3 years later at which time he was again taking chemotherapy.

Dr. Sartori believes that doses of cesium should not exceed 20 to 40 grams daily because of side effects of nausea and diarrhea. He felt that these results confirmed earlier results by Messiha which had suggested that large doses of cesium seemed to be more effective than low doses.

Dr. Sartori took 40 grams of cesium himself which caused only nausea and unusual sensations around the mouth believed to be related to potassium depletion. The usual dosage used in his clinic was 2 or 3 grams three times daily. When there is no remaining sign of cancer he thinks the dose can be safely reduced to .5 or 1 gram daily. Some patients on cesium develop evidence of potassium depletion so serum potassium needs to be monitored along with uric acid blood levels. Any alkali therapy changes the ph of the body toward a more alkalotic state. This causes movement of potassium into cells which may result in low serum potassium values. This movement of potassium into cells means that a person can become seriously depleted of potassium even if there is no diarrhea or vomiting.

A case of primary liver cancer (hepatoma) was treated later. She was a 39 year old school teacher who was terminal on arrival on April 25, 1984. Her liver was enlarged 1 inch below the umbilicus. She walked out of the hospital on May 10, 1984. Her liver had shrunk to 2 inches above the umbilicus. The alpha fetoprotein tumor marker for hepatoma had decreased from 39,000 units to 5000 units.

On one occasion Dr. Sartori noticed the disappearance of metastatic tumor masses within one hour of cesium therapy. Two days later wrinkles appeared in the skin where the tumor masses had been located.

Physicist A. Keith Brewer became very interested in cancer in the 1930s. He performed fundamental research on the membranes surrounding normal cells, rapidly growing cells (embryonal and cancerous) and dead tissue. The methods used by him included spectrographic, fluorescence decay patterns, and phosphorescence decay patterns of radioisotopes of potassium in nature. He felt that he was one of only a few persons who had actually studied ion transport across membranes.

His research enabled him to devise a protocol to treat cancer patients using cesium. Dr. Brewer then treated 30 patients with various cancers using cesium with all subjects surviving. The patients he treated were obviously not as sick as those in Dr. Sartori's group but his results provide further very encouraging evidence about cesium's value.

Rescuing 25 cancer victims from certain death is a remarkable accomplishment for cesium therapy. Conventional therapy for malignancies using chemotherapy and radiation has never been able to cure patients whose initial tumor has spread to another site i.e. liver, lung , brain, etc. The nearly deceased patients treated by Dr. Sartori had tumor deposits scattered all over their bodies. A sizeable number (50 %) of these patients recovered. Additionally, it is unheard of for a patient whose site of origin of a tumor remains unknown to recover. In Dr. Sartori's series 4 out of 8 such patients were alive one year later.

I am sorry that the results of Sartori and Brewer's studies using cesium have not received the wide publication they deserve but this is not surprising. If you know a person with "hopeless" or any other cancer cesium seems like a promising direction to pursue.

In my opinion an ideal therapy for malignancies needs to meet several criteria:

*Safety* --- There have been only a few serious complications of cesium noted (perforations, severe nausea) which may be avoided with liquid cesium.

*Simplicity* --- The therapy needs to be simple enough that an ordinary practitioner can manage it. The patients not requiring hospital care should be able to be cared for in an office practice where any needed lab studies can be obtained.

*Reasonable Expense* --- While not cheap at $80 to $200 for a months supply of cesium this is a pittance compared to the cost of chemotherapy and the certainty of unpleasant side effects from chemotherapy agents.

*Easy Dissemination Of Information About Therapy* --- The public needs to become aware that the pharmaceutical industry and their friends in the FDA and other regulatory agencies will do everything they can to block the spread of information that could decrease the sale of chemotherapy drugs. Cancer has been cured at least twelve times since 1900 but the public never hears about it. Lay people armed with a little understanding of how cesium works and where it can be purchased can save a lot of lives.

There are not many medical practitioners trained in some of the effective sophisticated natural therapies used to treat malignancies. With cancer now ready to supplant heart attacks as the leading cause for death in the U.S. medical practitioners will need to become teachers and enlist lay people to spread good news if the cancer epidemic is to be defeated. Expect no assistance from government bureaucrats because their allegiance is clearly to the pharmaceutical firms who take good care of them. Of course, this does not mean that there are not many government employees sincerely interested in public health measures. Unfortunately these dedicated persons are not the ones making the decisions...

**Who Should Be Considered For Cesium Therapy?**

This is an ideal therapy for anyone with terminal malignancy. If you know someone who has been told get your affairs in order you only have 3 to 6 months to live that person has a reasonable chance of recovery with cesium therapy. They may need 3 to 6 grams of cesium three times daily to recover. The person who is emaciated and unable to eat anything or is in a terminal coma she get 9 grams of cesium three times daily.

Other cancer patients who have not lost their appetites and are eating normally might be tried on one gram of cesium three times daily with observation for signs of recovery (receding tumor masses). The dose should be raised if there is no obvious improvement in 4 to 6 weeks.

The ability of cesium to heal metastatic cancer and cancers that have started and spread without their site of origin being known makes cesium quite important in treating malignancies. Cesium works in lymphomas so there is a possibility it could cure leukemia and polycythemia vera as well because the cells of origin in both are derived from bone marrow ( lymphocytes, white blood cells, red blood cells).

Cesium can be obtained in liquid form from essenseoflife.com Phone 1-417-546-8220 and from Rainbow Minerals Phone1-800-642-9670.

**Footnotes:**

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**Dr. James A. Howenstine** is a board certified specialist in internal medicine who spent 34 years caring for office and hospital patients. After 4 years of personal study he became convinced that natural products are safer, more effective, and less expensive than pharmaceutical drugs. This research

led to the publication of his book A Physicians Guide To Natural Health Products That Work. Information about these products and his book can be obtained from amazon.com and at www.naturalhealthteam.com and phone 1-800-416-2806 U.S. Dr. Howenstine can be reached at jimhow@racsa.co.cr and by mail at Dr. James Howenstine, C/O Remarsa USA SB 37, P.O. Box 25292, Miami, Fl. 33102-5292.

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Cesium, a mineral resource abundantly present in Manitoba with important existing and potential industrial applications was investigated to study its effects on biological systems. Several rodent models of pharmacological activities were utilized. The profile that emerged indicated that cesium is only moderately toxic and exerts salubrious effects which could be gainfully investigated for application in the treatment of certain psychological disorders and some tumors. Its conjunction with existing pharmacological agents for these two types of disorders could yield a pharmacologically active yet less toxic therapeutic combination.

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A brief overview on the relevance in dietary factors in both development and prevention of cancer is presented. The pharmacologic properties of various food ingredients are discussed. Establishing of a special diet for the cancer patient is suggested. In addition, avoidance of certain foods is recommended to counteract mucus production of cancer cells. Evaluation of the nutrient content of certain diets in regions with low incidence of cancer has advanced the use of certain alkali metals, i.e., rubidium and cesium, as chemotherapeutic agents. The rationale for this approach termed the "high pH" therapy resides in changing the acidic pH range of the cancer cell by cesium towards weak alkalinity in which the survival of the cancer cell is endangered, and the formation of acidic and toxic materials, normally formed in cancer cells, is neutralized and eliminated.

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The effect of CsCl on the life span of female Sprague-Dawley rats innoculated with Novikoff's hepatoma was studied as a function of both pre- and post-treatment with CsCl and as a function of the inoculant dose. The effect of KCl on the CsCl treatment was also studied. Rats treated with CsCl for 12 consecutive days prior to or immediately after inoculation with 1.0 ml of viable hepatoma cell suspension showed an increase in mortality score from corresponding controls. Conversely, increases in the dose of the inoculant resulted in delaying the onset of toxicity in rats receiving the Cs-treatment after inoculation as evidenced by a decrease in mortality. Availability of KCl in drinking water ad lib further decreased total mortality when given alone but not when combined with CsCl. The results

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Pharmacol Biochem Behav. 1984;21 Suppl 1:27-30.
PMID: 6522430 [PubMed - indexed for MEDLINE]
**http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=6522430&dopt=Abstract**

The effect of pretreatment with CsCl on mice bearing sarcoma I implants was studied as a function of duration of treatment period, life span and tissue Cs+ and K+ levels. Treatment with CsCl for 14 consecutive days prior to sarcoma implantation resulted in initial reduction of the tumor-mediated mortality compared to controls and to a one week pretreatment period with identical doses of CsCl. A large accumulation of endogenous K+ was noted in tumor mass compared to nonmalignant tissue of the same animals or to tumor-free controls receiving identical Cs-treatment. The entry of exogenously administered Cs+ into malignant tissue was less than that accumulating in respective controls. The accumulation of Cs+ in tumor mass was dose-dependent. The ratio of K+:C+ was greater in tumor tissue than in nonmalignant tissue. The results suggest that a critical balance between these alkali metals may be required for adequate Cs effect against the tumor studied.

5: Tufte MJ, Tufte FW, Brewer AK.
The response of colon carcinoma in mice to cesium, zinc and vitamin A.
Pharmacol Biochem Behav. 1984;21 Suppl 1:25-6.
PMID: 6522429 [PubMed - indexed for MEDLINE]
**http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=6522429&dopt=Abstract**

Predetermined amounts of cesium chloride or carbonate, zinc gluconate and vitamin A were used together to alter growth of colon carcinoma (C38) implants in BDF1 mice. Data show that the use of these compounds in a treatment protocol is responsible for repression of tumor growth.

6: Sartori HE.
Cesium therapy in cancer patients.
Pharmacol Biochem Behav. 1984;21 Suppl 1:11-3.
PMID: 6522427 [PubMed - indexed for MEDLINE]
**http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=6522427&dopt=Abstract**

The effect of cesium therapy on various cancers is reported. A total of 50 patients were treated over a 3 year period with CsCl. The majority of the patients have been unresponsive to previous maximal modalities of cancer treatment and were considered terminal cases. The Cs-treatment consisted of CsCl in addition to some vitamins, minerals, chelating agents and salts of selenium, potassium and magnesium. In addition, a special diet was also instituted. There was an impressive 50% recovery of various cancers, i.e., cancer of unknown primary, breast, colon, prostate, pancrease, lung, liver, lymphoma, ewing sarcoma of the pelvis and adeno-cancer of the gallbladder, by the Cs-therapy employed. There was a 26% and 24% death within the initial 2 weeks and 12 months of treatment, respectively. A consistent finding in these patients was the disappearance of pain within the initial 3 days of Cs-treatment. The small number of autopsies made showed the absence of cancer cells in most cases and the clinical impression indicates a remarkably successful outcome of treatment.

7: Brewer AK.
The high pH therapy for cancer tests on mice and humans.
Pharmacol Biochem Behav. 1984;21 Suppl 1:1-5.
PMID: 6522424 [PubMed - indexed for MEDLINE]
**http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=6522424&dopt=Abstract**
**http://www.mwt.net/~drbrewer/highpH.htm** (full text)

Mass spectrographic and isotope studies have shown that potassium, rubidium, and especially cesium are most efficiently taken up by cancer cells. This uptake was enhanced by Vitamins A and C as well as salts of zinc and selenium. The quantity of cesium taken up was sufficient to raise the cell to the 8 pH range. Where cell mitosis ceases and the life of the cell is short. Tests on mice fed cesium and rubidium showed marked shrinkage in the tumor masses within 2 weeks. In addition, the mice showed none of the side effects of cancer. Tests have been carried out on over 30 humans. In each case the tumor masses disappeared. Also all pains and effects associated with cancer disappeared within 12 to 36 hr; the more chemotherapy and morphine the patient had taken, the longer the withdrawal period. Studies of the food intake in areas where the incidences of cancer are very low showed that it met the requirements for the high pH therapy.

8: Messiha FS.
Effect of cesium and ethanol on tumor bearing rats.
Pharmacol Biochem Behav. 1984;21 Suppl 1:35-40.
PMID: 6395134 [PubMed - indexed for MEDLINE]
**http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=6395134&dopt=Abstract**

The effect of separate and combined administration of 15% ethanol and 0.2% CsCl solution on life span of rats with Novikoff hepatoma implants was studied as a function of time of initiation of treatment. Pretreatment with CsCl alone or combined with ethanol resulted in earlier onset on morbidity compared to the ethanol-treatment or to controls. As high as 87.5% of Cs-treated animals died 16 days post tumor implantation compared to 33% of rats receiving CsCl and ethanol combined. This protective action of ethanol against Cs-evoked toxicity in tumor-bearing rats persisted through the experiment. Animals subjected to drug treatment immediately after tumor transplantation displayed delayed onset of morbidity compared to drug pretreated rats. In both cases the Cs-treatment enhanced morbidity by approximately 2 folds from corresponding controls. Animals sacrificed 18 days post tumor inoculation showed an induction of hepatic alcohol dehydrogenase and an increase in Vmax without changes in the apparent Km by the Cs-treatment. There was an increase in liver mitochondrial aldehyde dehydrogenase of hepatoma-bearing rats from tumor-free controls which was associated with an increase in the apparent Km value. The results indicate potentiation of the hepatoma toxicity by CsCl which may be minimized by ethanol. A role for hepatic enzymes determined in the pathogenesis of tumor line studied and/or their use as a biochemical correlate is suggested.

9: Brewer AK, Clarke BJ, Greenberg M, Rothkopf N.
The effects of rubidium on mammary tumour growth in C57 blk/6J mice.
Cytobios. 1979;24(94):99-101.
**http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=43800&dopt=Abstract**

A high pH therapy for cancer arrived at theoretically was tested in mice by feeding them rubidium carbonate. Tumours were transplanted in the abdomen of mice and allowed to grow for 8 days. The mice were then divided into two groups. The control group was continued on conventional mouse chow. The test group, in addition to the mouse chow, was force-fed 1.11 mg of rubidium carbonate dissolved in distilled water. At the end of 13 more days the tumours in the controls had grown to a large size so all the mice were sacrificed. The tumours were then removed and weighed. The tumours in the test animals weighed essentially one eleventh of those in the controls. In addition the test animals were showing no adverse effects from the cancers. The probability that this marked difference in tumour size could have come about by chance is exceedingly small.

10: El-Domeiri AA, Messiha FS, Hsia WC.
Effect of alkali metal salts on Sarcoma I in A/J mice.
J Surg Oncol. 1981;18(4):423-9.
PMID: 6275211 [PubMed - indexed for MEDLINE]
**http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=6275211&dopt=Abstract**

The chloride salts of lithium (Li+) and cesium (Cs+) were evaluated for their ability to influence the growth of Sarcoma I implants in A/J mice. The administration of daily doses of either 1 or 3 mEq/kg CsCl to these mice reduced the incidence and size of tumor implants. This effect was not apparent in animals receiving a smaller dose (0.5 mEq/kg) of the same drug. At the time of sacrifice the serum level of Cs+ in this latter group was approximately half that recorded in animals receiving the higher doses of CsCl. No effect on tumor incidence or rate of growth was observed in animals receiving different doses of LiCl. Because of the similarities that existed between cesium and potassium, it was postulated that the effect of cesium was due to alterations in the intracellular composition of the tumor cells. Also, the possible role of cytotoxic agents in potentiating the inhibitory effect of cesium on tumors was discussed.

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http://www.cancer.org/docroot/ETO/content/ETO_5_3X_Cesium_Chloride.asp

## Cesium Chloride

Other common name(s): high pH therapy

Scientific/medical name(s): CsCl

**Description**

Cesium is a rare, naturally occurring element of alkali metal similar in chemical structure to lithium, sodium, and potassium. Cesium chloride is a salt form of this element.

**Overview**

Radioactive cesium (cesium-137) is used in certain types of radiation therapy for cancer patients. However, available scientific evidence does not support claims that non-radioactive cesium chloride supplements have any effect on tumors. A few people have had life-threatening problems with heart rhythm, seizures, loss of consciousness, and electrolyte (blood chemistry) imbalances after taking cesium.

**How is it promoted for use?**

Cesium can be absorbed by all cells, probably due to its similarity in chemical structure to potassium. Proponents claim the intracellular pH of tumor cells is usually very low (acidic) compared to normal cells, and that cesium chloride supplements increase the pH level of tumor cells back to a normal level, which is supposed to slow the cancer's growth. Since cesium chloride is claimed to work by raising the pH of the tumor cells, its use in therapy has been called "high pH therapy." Available scientific evidence does not support this theory.

**What does it involve?**

Cesium chloride supplements are available in pill form. Proponents suggest a dosage of 1 to 6 grams per day, sometimes dissolved in juice together with vitamins and other minerals. Some practitioners give cesium chloride intravenously (IV).

**What is the history behind it?**

Interest in cesium therapy began when scientists observed that certain regions of the world with low rates of certain cancers had a high concentration of alkali metals in the soil. As early as the 1920s, some researchers suggested cesium might be effective as an anti-tumor agent. However, further research, starting in the 1930s suggested cesium had no effect on cancer cell growth. The use of cesium chloride for high pH therapy was first advanced in the 1980s.

**What is the evidence?**

There is no evidence that the intracellular pH of a cancer cell is any different than a normal cell or that

malignant cells are more susceptible than normal cells to toxic effects of high pH. Thus, the underlying principle behind high pH therapy remains unproven. Although it was observed that certain areas with low rates of cancers had a high concentration of alkali metals in the soil, it has never been shown that differences in other risk factors or protective factors were not involved, or that cesium provides any benefit in the prevention or treatment of cancer.

Studies conducted in several experimental tumor models in the 1980s found that the use of cesium or cesium chloride led to less tumor growth and fewer deaths of certain tumor-bearing mice such as those with sarcoma or breast cancer. In animal studies, chronic ingestion of cesium caused blood and neuromuscular effects, and even death. Animal and laboratory studies may show a substance has toxic effects, but further studies are necessary to determine if the results apply to humans. More research is needed to determine the risks and safety of cesium. The benefit of cesium for people with cancer, if any, is unknown.

**Are there any possible problems or complications?**

This product is sold as a dietary supplement in the United States. Unlike drugs (which must be tested before being allowed to be sold), the companies that make supplements are not required to prove to the Food and Drug Administration that their supplements are safe or effective, as long as they don't claim the supplements can prevent, treat, or cure any specific disease.

Some such products may not contain the amount of the herb or substance that is written on the label, and some may include other substances (contaminants). Actual amounts per dose may vary between brands or even between different batches of the same brand.

Most such supplements have not been tested to find out if they interact with medicines, foods, or other herbs and supplements. Even though some reports of interactions and harmful effects may be published, full studies of interactions and effects are not often available. Because of these limitations, any information on ill effects and interactions below should be considered incomplete.

In a case report from 1984, one person described his own experiences after taking cesium chloride for 36 days. He took 3 grams of cesium chloride dissolved in fluid after his morning and evening meals, which consisted of an alternative dietary regimen. He describes an “initial general feeling of well-being and heightened sense perception,” as well as nausea, diarrhea, and tingling of his lips, hands, and feet. This case report is very different from a clinical trial involving many patients and is not helpful in deciding on a safe dose of cesium. Another person, who may be younger, older, smaller, or less healthy than this individual may not do well with this dose.

In fact, several recent case reports have described serious side effect in people with cancer taking similar doses, including life-threatening problems with heart rhythm, seizures, loss of consciousness, and electrolyte (blood chemistry) imbalances in patients who were taking cesium. Full information on the acute and chronic toxicity of this substance is not fully known. Consuming large amounts of cesium could result in nausea, diarrhea, disturbed heart rhythm, loss of consciousness, or even death. Based on results of animal studies, women who are pregnant or breast-feeding should avoid taking cesium chloride supplements. Relying on this type of treatment alone, and avoiding conventional medical care, may also have serious health consequences.

**Additional Resources**

More Information From Your American Cancer Society

The following information on complementary and alternative therapies may also be helpful to you. These materials may be ordered from our toll-free number (1-800-ACS-2345).

* Guidelines for Using Complementary and Alternative Methods
* How to Know What Is Safe: Choosing and Using Dietary Supplements
* American Cancer Society Operational Statement on Complementary and Alternative Methods of Cancer Management

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