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High Fluid Content Potassium-Diet as Therapy For Cardiorenal Insufficiency

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ABSTRACT

A very low sodium/high potassium, protein and fat poor diet with high fluid content (consisting of very specific fresh fruit and vegetable juices, fruits, vegetables, and whole grains) has proved an effective treatment for congestive heart and kidney failure in patients refractory to diurectic medications. Historical perspectives of salt and water managements are considered. Presented in detail is the case history of a well known political figure who recovered fully under the influence of Gerson's combined dietary regime from nephritis, decompensated heart, angioneurotic edema, and ascites.

(Editor's note: Early this year the National Institutes of Health (NIH) in Bethesda, MD, sponsored a consensus conference on diet, nutrition, and coronary heart disease which empaneled experts in cardiology, epidemiology, statistics, primary care and preventive medicine. Finding that 50% of the U.S. population is at increased risk for coronary heart disease, the panel recommended this spring that those at risk be treated aggressively with diet before any drugs are considered. This represents a return to successful therapeutic nutrition as developed by Gerson and others in the first third of this century. Ironically, we became aware of the NIH recommendation on April 11, 1985, exactly fifty years after Gerson's and von Weisl's paper was published in Munich. The following text is a translation of the complete article as it occurred in the original publication. A glossary of some medical terms follows the text.)

CONTENTS:

HIGH FLUID CONTENT
POTASSIUM-DIET AS
THERAPY FOR CARDIO-
RENAL INSUFFICIENCY.
*BY MAX GERSON, M.D.
— PAGE 1

SUCCESSFUL THERAPY
OF HEART DISEASE BY
HIGH K TOGETHER WITH
LOW NA.
*BY P.W. COPE, M.D.
— PAGE 9

REVERSAL OF
CORONARY ARTERY
DISEASE — ONE
MAN'S EXPERIENCE
— PAGE 10

REPORT FROM LA
GLORIA — IMPROVE-
MENT OF ALS THROUGH
GERSON THERAPY
— PAGE 11

CHARLOTTE GERSON
LECTURE SCHEDULE
— PAGE 12

FOR YOUR INFO:
CHEMOTHERAPY
— PAGE 12

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In spite of the great number of effective drugs for the treatment of heart and kidney malfunction, treatment by nutrition is becoming increasingly important in advanced heart disease. Frequently, timely application of a sufficiently strict heart diet renders medications superfluous (Salomon), and frequently dietary therapy is the last recourse after all medications appear to have failed. It is not always possible to use the most effective diuretics; in severe nephritis, for example, mercury based products must be avoided from the outset, and how frequently does one encounter exactly this type of nephritis and degenerative kidney in chronic heart disease! Smetz 1) has pointed out recently in an interesting article that aside from the above contraindications for the use of Salyrgan (and also the other mercury based drugs such as Novasurol, Novurit, Neptal) these drugs are poorly tolerated by the patient. However, the more the issue of the nutrition for heart patients gains in importance as opposed to the ever unsolved question of the ideal medications, the more significant the obligation to formulate an optimum diet which speaks to the following demands:

Rapid establishment of initial improvement - because there is often danger in delay and one cannot wait long for the diuresis;

Long lasting effectiveness - because these patients will have to depend for years, sometimes until the end of their lives, on the diuretic effect of the diet;

Adequate flexibility - so that calories (proteins and fats) can be increased or decreased as required, and so that a strict primary and also an adequate continuation diet can be prescribed.

There have been numerous dietary methods proposed, all of which have advantages, but which do not fulfill all of the above requirements. The rationales of these dietary modes are in part so widely varied that, in order to clarify, we need to recall the following views which have been essential in heart management: high protein or low protein, low calorie or high calorie, fluid restriction, low salt, high fiber, high vitamin (raw food), high potassium. Dietary methods have been worked out with all possible combinations of these individual components in an attempt to find a diet which was sufficiently effective. As we now propose a new approach with new combinations, we do so with the conviction that with it better results can be achieved even in those cases in which even the strongest diuretics — also Salyrgan in combination with ammonia (Gelamon) — have failed either from the start or after a more or less satisfactory diuresis.

Before the monumental discoveries of H. Strauss and Widal we had essentially two methods of treatment for heart disease. The Karell-Cure on the one hand, which was nearly forgotten by the end of the last century, and the to some extent official high protein diet as it was proposed, for example, by Oertel 2). Karell gave initially 240 to 800 cc milk daily, increasing to 1500 cc. This method was — as we know today — decidedly poor in calories; with 25 grams of protein at the end of the first week and 50 grams at the end of the second, it was also temporarily poor in protein; the fluid content furnished was minimal; (the cooking salt content in the milk was minimal); and the balance of potassium over sodium considerable.

In contrast, clinicians such as Leyden, Oertel, and others gave exceptionally large quantities of protein and proportionally large amounts of calories. In "Hydramic Plethora", Oertel prescribed no less than 204 grams of protein daily in the context of a collective 2,200 calories. The principle of a "strengthening nutrition" which, as one can see, is still in effect in tuberculosis therapy, was at that time also dominant in heart therapy.

After H. Strauss and Widal achieved the most extensive elimination possible of cooking salt from the nutrition of patients with edema of nephritis, experiments followed with the same therapy in heart patients. The first works of Widal and his colleagues, Javal, Lemierre, et al, always stressed only chloride as the edema causing component of NaCl, and as a result, other researchers omitted sodium from their experiments. Now, as a matter of fact, in renal edema (nephroses) predominantly Cl is retained, while in cardiac edema and other renal edemas the Na component is of much greater importance. It is apparent that in some cardiac edemas chloride retention is of little importance, but sodium retention is the determining factor.

In this way the theoretical rationales unfolded for the beginning of salt free nutrition of

cardiorenal insufficiency. Sodium and chloride, the two "lymph salts" (Forster) have a joint effect, they are mutually supportive in the production of edema, and if in various diseases perhaps one or the other of these ions is the one retained in excess, the presence of the opposite ion -- whether stored in deposits in the body or present in the nutrition -- is still of essential importance. Rudolph Keller accordingly introduced the more appropriate concept of the "sodium group" which includes both sodium and chloride, and which in biological organisms behaves opposite to the "potassium group". While the sodium group (and the amino acids) in a biological environment migrate toward the cathode, potassium and the similarly oriented salts move toward the anode, thus in serum they behave contrary to their electrical reactions in water 3).

Salt restriction has today become an indispensable component of all proposed diets for heart insufficiency; also, the often surprisingly good effect of the Karell Cure in its strictest form no doubt comes back to its extreme salt restriction.

The second rationale of the diet for heart disease was and still is the rather general fluid restriction, greater with one diet management, less with others. We know that edemas cannot occur if Na and Cl as well as water are not given; further, no matter how great the dosage of table salt given experimentally, no edema could be produced unless corresponding doses of fluid were given! On that observation rests the use of large amount of NaCl for its diuretic effect (Nonnenbruch). It seemed logical by that reasoning to spare water in edema patients; if the organism is retaining water, a smaller supply of water must be more advantageous than a larger one. On this rationale the various "thirst cures" were originated: the dry-raw-food diet as recently stated again by Eimer and Voigt 4) rests on a combination of fluid restriction and extreme salt restriction, through which the patient's thirst is diminished. In particular in this category belong the "fruit cures" of Salomon 5) which are both more pleasant for advanced patients and at the same time more effective. Whereas the dry-raw-foods are soon rejected by heart patients, causing digestive difficulties, the fruit days are tolerated most excellently.

A third point of view, which Salomon 6) valued above all others, is the caloric restriction of the nutrition. In contrast to the view of the era of Liebig which feared nothing more than "insufficient nutrition", recently we have come to value "labor-sparing" which can be achieved in advanced heart disease through undernutrition and simultaneous rest (Hirschfeld). From this standpoint, the Karell-Cure, the fruit- or banana-days (Salomon), the potato-days (Salomon and Jagicz) are also of value. The raw vegetable diet belongs here also, as according to experience patients using it consume 1,200 - 1,300 calories, whereas the Eimer-Voigt dry-raw-food which supplies almost 1,800 calories is a maintenance diet. Also the question of underfeeding protein belongs in this chapter. All of the above mentioned diets supply an exceptionally modest amount of protein -- with the exception again of the Eimer-Voigt dry-raw-food in which 160 grams of cream and condensed milk, 20 grams of egg yolk, and 40 grams of hazel nuts together run counter to the nature of strict protein underfeeding.

Further points of view regarding the heart diet are the high fiber content of raw foods, fruit- and potato days, as well as their high potassium content, through which "chloride excretion will be enhanced" as Salomon indicated in 1932.

All these various dietary methods: Karell-Cure, dry-raw-food, banana-days, fruit-days, potato-cure, unsalted fiber-food, supported by Digitalis, Euphyllin, Scillaren, Caffeine, Salyrgan, Salmiak, etc., do not always lead to the objective. The edemas increase, the asthma worsens, the pulse deteriorates -- but nevertheless much can be achieved therapeutically, the hope that life can be maintained for a long time should not be abandoned. We have found that in the most severe cases of cardiorenal insufficiency, even after the failure of Salyrgan, diuresis can be reestablished through a specific salt-free, low protein diet, which we describe further below and which we call a "high-fluid potassium (K) diet" (fl.K.D.) to distinguish it from the customarily proposed low fluid edema diets. It is moreover predictably stressed that we understand "diet" in the sense of the Hippocratic definition to mean not only the prescribed foods but also the other supporting rules of conduct.

In the interest of summarizing we offer a schematic categorization of the four primary modifications adapted to the "high-fluid potassium diet" which we have used to treat heart disease patients:

1. Strictest form: "liquid raw food"

2. Transition form: "protective food"
3. Permanent potassium diet: in essence comparable to diet steps II and III of the Gerson Diet 7).
4. Highly diuretic interpolation days: "apple-potato days" 8).

All these methods have in common: very high fluid content (1,500 to 3,500 grams daily!), extreme protein restriction, relatively low calcium content, and extraordinary predominance of potassium over sodium in the food. The "liquid raw food" and the "protective food" are in addition very low in calories. In all forms of therapy nicotine, even in the smallest amounts, is forbidden.

1. The "liquid raw food", as a rule, is not given for more than three to five days except in the most severe cardiorenal insufficiency and in complete depression of appetite; a shorter introduction to the management with liquid raw food is also always of value in the less severely ill cases of heart disease. On these days the patient is encouraged to drink, in essence, without interruption; he is even awakened at night in order to take fluids at regular intervals, but only tiny doses at one time - about 30 to 50 grams sip by sip. During each 24 hours one gives in this manner a minimum of 1,000 and at most 1,600 grams throughout the first week. Water, tea, coffee, and especially mineral water are strictly forbidden. Exclusively the juices of the following raw foods come into consideration: apples, lemons, oranges, grapefruit, grapes (in small amounts), and carrots (especially in diarrhea, but preferably to be avoided in the first week). As semi-solid food, raw grated apples or applesauce may be given, and in less severely ill patients also apple compote and mashed bananas with raw grated apples. The strongest diuresis is produced by raw apple juice.

The same regime is reinstated immediately in heart-kidney patients who suffer later relapses and also during fevers.

2. With the Transition Diet we gradually add to these high potassium foods pureed vegetables (principally spinach, lettuce, carrots, tomatoes), potatoes baked in their skins and mashed with fresh butter, as well as whole uncut fruits. Pears and plums are permitted only as compote (cooked) as they are not digested well with the juices of fruits and vegetables. If the patient desires warm food, unsalted potato soup and hot orange- or apple-tea are permitted.

The length of time on these "protective foods" varies with each patient. If the diuresis remains invariably good, the patient improves, the previous lack of appetite is replaced by an ever intensifying hunger, the physician may permit new foods sooner than if improvement and appetite are slow in coming. In no case must appetite be confused with hunger. Gradually now we give some salad, potatoes in other preparations, compotes sweetened with some raw sugar and honey, open-faced sandwiches of buttered, toasted bread with grated radishes, sliced tomatoes, also some raw grated carrots, kohlrabi and other raw foods. During this time we must painstakingly avoid even the smallest amounts of milk as an ingredient for the vegetables and the purees, although we have no theoretical rationales to offer for this. We know only that we always see better diuresis in those heart patients who do not receive milk.

3. The permanent diet consists of equal parts of fruit juice and carrot juice (whereby it differs a bit from the basic diet for lung tuberculosis in which approximately 3/4 of the amount of juices consists of vegetable juices); also all steamed vegetables which do not cause flatulence, potatoes in all forms, fruit and vegetable salads, baked fruit, bread, rye meal and oatmeal which may be used in larger or smaller amounts depending on the condition of the case. White bread and cakes are strictly forbidden for a long time, as are nuts and almonds. This diet differs from the basic diet of the Gerson Diet through a rejection of sodium rich foods and a predominance of fresh fruits over the fresh and cooked vegetables. The directions for food preparation are the same as those for the Gerson Diet.

4. During the apple-potato days we achieve an especially rich surplus of potassium and at the same time good satisfaction of appetite. This regimen, which we will discuss later, is particularly well suited to heart patients whose digestive systems function well.

We have observed the diuretic efficacy of this diet in its various modifications in several hundred patients in whom congestion of a lesser degree was recognized. We have achieved extensive improvement in seven far advanced cardiorenal insufficiency patients in whom all other methods, including Salyrgan-Gelamon, had failed; moreover, seven similar cases are available through Huth

(Mauer Sanatorium at Vienna).

An instructive case is offered here as an example: a more complete description is available elsewhere (ref. 7, pg. 41).

After an exhausting, stressful life a nearly seventy year old statesman with angina suffered heart disease precipitated by an overdose of salicylic acid preparations. For six years his blood pressure was over 200; he suffered occasional attacks of angina pectoris. Approximately six months prior to initiation of the potassium diet his heart and kidneys failed. Several months of salt free nutrition and several weeks of raw foods were without effect. With the first injection, Salyrgan yielded a urine output of only 1,500 grams, which diminished subsequently to between 350 and 600 cc. The entire body was swollen from the feet to the middle of the chest and the back: severe ascites, pleural effusion, and emphysema placing him in immediate danger of his life. Frequent diarrheas, an irregular, difficult to count pulse. The patient passed the hours sleepless in an armchair. — The therapy now initiated included, in addition to the prescribed liquid raw food, an immediate bloodletting which was repeated on the fourth day of the diet: enemas three times daily (in spite of diarrhea). Aside from a few drops of digitalis and 20 drops of a 10% solution of caffeine in the enemas, all medications were discontinued as they had already shown themselves to be ineffective. His food during the first six days consisted exclusively of raw grated apples and a liter of juice from grapes and apples with some lemon, later also carrot juice.

By the end of the first week the pulse was already distinctly better; strong diuresis set in. Several days later compote, mashed potatoes, and some pureed vegetables with fresh butter were added. Still later steamed vegetables and salad — all saltless, of course. After seven weeks of this food, during which the edema patient received over 1,500 grams of fluid daily in the form of raw pressed juices, and in addition to this much fruit, vegetables and salad, he had lost forty pounds. Almost all of the edema was gone, the pleural effusion and ascites barely detectable, pulse almost regular, the heart significantly reduced in size, appetite and sleep good.

We have also seen the diuretic effect of the raw pressed juices of fruits, and also of specific vegetables, in less severe heart patients. If we attempt to find the active agent which allows these simple juices to be superior to mercury preparations, in order to come to a better understanding we must bear in mind that also the "dry raw food" and the "fiber food" have a favorable effect, although it is less distinct, less certain, and less rapid, and this lesser effect is due in our modest opinion to the lack of fluid in these diets.

In the above cited case, raw food and salt-free vegetable diets with fluid restriction had been tried in vain, only the generous supply of fluids (apple juice) achieved a decisive reversal. The entire fluid intake of our "high-fluid potassium diet" is 2,500 grams! (Incidentally, the fiber content so greatly valued by Salomon is lowest in the most effective form of the "liquid raw food".)

The common components of the fl.K.D. and the other proven heart diets are:

- a) extremely low sodium chloride content,
- b) extremely low protein content,
- c) moderately low calorie content,
- d) high vitamin content.

The essential differences are:

- a) high fluid content of the fl.K.D.,
- b) exceptionally high K content as opposed to Na.

Of these components, we will discuss in the first place the much too little appreciated role of potassium, the decided antagonist of the edema-promoting sodium. As is well known, all unsalted foods contain far more potassium than sodium; only salting produces an artificial sodium surplus, which for a long time now has somehow been held as vital for life. In fact von Bunge whose opinion regarding the sodium-potassium-antagonism is today extensively corroborated, believed the (healthy) man used more salt if his food is poorer in protein, simply because in predominantly vegetarian food the potassium of the nutrition far exceeds the content of sodium and chloride.

Without going further into the question of whether this high intake of inorganic NaCl is actually necessary in a healthy person as von Bunge believed, we took his observation of the antagonism of K to Na as rationale for experiments in pathological cases where a Na (and Cl) retention existed, to drive sodium out of the organism through an abundant supply of potassium with simultaneous chloride restriction. In fact, we almost always achieved an excellent diuresis with this diet. A series of tests by Zuckerkandl demonstrated thereby a vast and months long continuous predominance of sodium as opposed to chloride eliminated in the urine of our patients, and indeed Zuckerkandl found a much higher Na/Cl-quotient in the fluid rich diet than in the customary raw food without juices. However, these findings were not unequivocal, because with our (low chloride) food proportionately much more sodium was occasionally supplied. (In vegetable juices during the winter for example one occasionally finds more Na than K and, of course, much more Na than Cl.) Therefore, we investigated the Na elimination of patients and healthy individuals who were given experimentally almost no Na and virtually no Cl. We chose to that end a diet which contained exceptionally high potassium as opposed to a minimum of sodium: In apples K predominates by about one hundred fold, just as in oranges and other citrus fruits; potatoes (whose good, bio-available, comparatively high value protein provides the prerequisite for an experiment of longer duration) have on the average about 30-40 times more K than Na. And now likewise with these nearly Na-free foods a vast excess of sodium over chloride was evident in the urine, thus a genuine sodium elimination. Although our experiments still do not answer the important question of whether sodium in its organic compounds can be expelled by potassium, we believe that we may state with reservation that plentiful supply of potassium in chloride- and sodium-poor nutrition with a simultaneous voluminous supply of fluid can eliminate excess sodium from the body. These results call to mind the significant experiments of Leon Blum 9) who demonstrated that kidney patients who normally retain Na and eliminate K, when given KCl retain K and eliminate Na and water (10). This elimination of sodium via potassium appears to be the rationale for the diuretic effect of potassium preparations which is well known, for example, in potassium acetate. In the therapy which we employ, however, we give no inorganic potassium; it appears that the organic potassium salts, perhaps assisted by other factors (pectins?) have such a great diuretic efficacy that they surpass all heretofore known diuretics. We tend to the opinion that these factors are to be found perhaps at least in part in the simultaneous flooding with exceptionally potassium-rich fluids such as we have in apple juice. If the patient receives approximately 8 glasses of apple (and orange) juice daily and occasionally potato soup as well, apple-, orange- and lemon tea, and much raw fruit, this imitates the diuretic stimulation of the "Wasserstoss" (water-expulsion) of Volhard, with the distinction that with these juices we are dealing with a very different colloidal solution which is not given all at once but in small doses.

It is interesting to observe during the "Wasserstoss" effect in healthy persons (and patients with healthy kidneys) among others, that not only are noteworthy amounts of absolute sodium eliminated, but in contrast, even in subjects extensively dechlorinated (through previous salt-free diet) the excess of Na over Cl (Na/Cl quotient) is great: sodium is being excreted in the "Wasserstoss" of Volhard as well.

Both the surplus potassium and surplus fluid of the "fluid-rich potassium diet" are being used therapeutically to accelerate the elimination of retained sodium and thereby indirectly also of retained chloride.

Occasionally in severe chronic or acute changes of the kidney even the diuretic effect of this diet is insufficient. In his search for still stronger diuretic plant extracts Gerson experimented with leeks which are praised in part as a diuretic, in part as an aphrodisiac, and with celery. An exceptionally strong effect was demonstrated by hot or cold concentrated decoction of celery, leeks, and parsley. The effect of this soup, of which 400-600 grams was given daily, is extraordinarily strong, but diminishes after a time. In the case of damaged kidneys it should not be given continuously because of the possibility of an undesirable strong irritation. With these limitations, the celery, leek, parsley soups are a valuable enrichment of our fl.K.D., even though the excess of potassium is not particularly great in these plants.

The effect of potassium is definitely enhanced through the extremely low protein content of the vegetarian diet; this enhanced effect is certainly demonstrated with the increased, unspecific stimulation of the K.D..

Clinical observations, of which we shall not go into detail here, indicate in the first place that with intentional protein deprivation, protein compounds which have become useless protein

deposits will be broken down anywhere they are stored in the body. Because Na as well as Cl in part enters poorly soluble protein compounds in edema, protein-poor nutrition appears to provide a favorable prerequisite for the accelerated elimination of these compounds.

It appears to us that herein lies a theoretical rationale for the empirically long recognized beneficial effect of protein poor nutrition in edema patients. Salomon attributes it to the reduced workload of the diseased heart in the combustion of protein poor nutrition. As Urbeanu 11) we prefer to concentrate on underlying connections between the retention of Na and Cl in compounds with "protein-group-connections", which the research of Rudolph Keller also corroborates, in which most amino acids in the biological environment stand out in the same sense with Na and Cl and therefore as antagonists of the potassium group. Urbeanu had previously required a minimum ratio of potassium to protein: for each 16 grams of nutritional protein, there must be allotted "at least 1 gram of potassium". With our fl.K-D we by far exceed this minimum. With the strictest form of the "liquid raw food" the patients receive practically no notable amounts of vegetable protein; the numerical ratio of the apple-potato diet was calculated by Schall 12).

In this form the protein poor, fluid rich potassium diet exerts a "potassium thrust" which occurs after 3-4 days in healthy persons as well and increases more and more with each successive day of the strict diet, as we shall discuss in another place. The blood picture of healthy subjects during apple-potato days also shows an increasing leukocytosis with a shift to the left which quickly diminishes after protein is increased with an otherwise unchanged diet. It appears to be clear that this "potassium thrust" owes its stimulating effect largely to simultaneous protein underfeeding. When, however, a reduction of the edema of patients is initiated through this mechanism, it carries with it a now stimulating effect which is not found in healthy persons. The circulation of the patient is literally flooded during the successful treatment and intense diuresis with edema decomposition products -- with a generally severely damaged heart this flooding with such products is by no means harmless.

We have already remarked preliminarily, that one must understand "diet" to mean not only a specific nutrition but a "universally preventive lifestyle". That is to say, if one were to give the fl.K.D. to an advanced heart patient without making use of any therapeutic adjuvants, one could under certain conditions harm the patient. The products of edema decomposition should not burden the circulation for too long: their most rapid elimination is of the utmost importance.

1. In this respect, bloodletting may often be truly invaluable in the treatment of the decompensated heart; and if it is to develop its unburdening effect it must as a rule be repeated at least once. 2. Not less important in the first 2-3 months are regular enemas. In most decompensated heart patients the digestion is disturbed anyway (—thus the beneficial effect of the digestion regulating high fiber diet in such patients—), however even where this is not the case one must partly unburden the kidney function and the liver-bile-activity via the rectum through 2-3 enemas daily. 3. The vegetable juices, as well as raw egg yolk which is added after a time, have a choleric effect; still more effective however is the regular addition of caffeine to the enemas (20 drops of a 10% solution in 1 liter of lukewarm camomile tea), which at the same time prevents the enemas from causing sleepiness and weakness.

In general, with this diet therapy supporting medicaments become unnecessary; usually one finds that digitalis in small oral doses and some alcohol (wine) are sufficient. With one important exception: with pyknic and lymphatic adipose patients. Here one must often add hormone preparations to enhance the diuresis after the first 2-3 weeks of the diet, most frequently thyroid, seldom anterior pituitary or ovarian preparations.

Summary

An unsalted, very protein poor, somewhat calorie poor, "high-fluid potassium diet" is recommended in cardiorenal insufficiency and other heart diseases. Its diuretic effect is most evident with a generous supply of fluids (apple juice). The effect still occurs when Salyrgan has failed. Bloodletting at the outset of the therapy and continuous ample enemas are indispensable for the unburdening of the circulation. The empirically discovered effect of the fl.K.D. is attributable to the combined action of three components:

- 1) protein restriction
- 2) flooding with potassium and relative absence of sodium

- 3) simultaneous dechlorination through very low chloride diet and most plentiful fluid supply of potassium-rich juices (modified "Wasserstoss" effect). —

The protein restriction of the potassium diet causes in part its stimulating effect, which can also be shown in the blood picture of healthy persons.

GLOSSARY

- angioneurotic edema** A condition characterized by the development of local allergic wheals accompanied by swelling of subcutaneous or submucous tissues. Large areas of swelling of subcutaneous tissues, mucous membranes, and occasionally viscera. May be due to allergic sensitivity to drugs, food, or physical agents such as cold or wind.
- anode** The positive pole of an electrical source.
- bloodletting** Removal of blood as a therapeutic measure, usually by venipuncture.
- cardiorenal** [Gr.kardia,heart+L.renalis,pert.to kidney]. Both the heart and the kidneys.
- cathode** The negative pole. Opposed to the anode or positive pole.
- congestive heart** The presence of an excessive amount of blood or tissue fluid in the heart.
- decompensated heart** Failure of the heart to maintain adequate circulation.
- diuresis** [Gr.diourein,to urinate]. Free or excessive secretion of urine.
- diuretic** Increasing or an agent which increases the secretion of urine. Diuretics act in at least two ways: by increasing filtration by the glomeruli of the kidneys or by decreasing reabsorption from the tubules. Diuretics act on the kidney cells, increasing permeability, and also on the circulation of the kidneys.
- nephritis** [Gr.nephros,kidney,+ itis,inflammation]. Inflammation of the kidney. Glomeruli, tubules, and interstitial tissue may be affected. It may be either acute or chronic.
- nephrosis** [Gr.nephros,kidney + osis,condition]. Condition in which there are degenerative changes in the kidneys, esp. the renal tubules, without the occurrence of inflammation.
- plethora** [Gr.plethore,fullness]. 1. Overfullness of blood vessels or of the total quantity of any fluid in the body. 2. Congestion causing distention of blood vessels.

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Successful Therapy of Heart Disease by High Potassium Together With Low Sodium in Accord With Predictions from the Associated Cation, Structured Water Concept of the Cell

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(Reprinted from Physiological Chemistry and Physics, Volume 11, 1979.)

ABSTRACT

> High potassium together with low sodium in diet and intravenous fluids has been observed clinically by Sodi-Pallares to have a beneficial effect on chronic heart failure and on acute myocardial infarction. Recent studies from the laboratory of Ling indicate that high potassium, low sodium environments can partially restore damaged cell proteins to their normal undamaged configuration. It follows that by this mechanism cell proteins damaged by the chronic or acute hypoxia of heart disease are probably partly repaired when high potassium, low sodium therapy is used.

The modern concept of the normal cell pictures it as analogous to an ion exchanger resin with structured water in the interstices and with potassium and sodium ions associated with negative charges on the protein matrix. This has led to a parallel concept of the damaged cell as containing a matrix of protein which has shifted from the normal to damaged configuration, causing observed salt and water disturbances as elsewhere described (the tissue damage syndrome)1). This led to the prediction that all diseases showing this set of disturbances should respond favorably to high potassium, low sodium therapy.

The only experimental verification of that prediction known to me at the time of the original presentation 1) was the widely observed favorable response of acute and chronic heart disease to low sodium diet. Subsequently it was learned that high potassium plus low sodium already had been demonstrated to be an essential part of the cure of advanced cancer by diet in the Gerson therapy 2,3). The present note is intended to present a further experimental verification of the above prediction, a verification that until recently was not known to me and apparently is not known to most other medical investigators even though it has been described repeatedly in the literature 4-10).

Present treatments of salt and water disturbances are mostly empirical. This approach was necessary because the usual concept of the cell as a bag of liquid water with Na and K in free solution is wrong 11,12), so that it lacks predictive value. However, the correct general concept of the cell as described briefly above, and which may be considered to represent the general outline of more detailed theories [the association-induction hypothesis of Ling 13,14), the ion exchanger resin model of Damadian 15), and the solid state physical theory of Cope 16,17] should have the power to correctly predict therapy. A start in this direction was made by Cope by conceptualizing a pattern of observed salt and water disturbances of tissue into the tissue damage syndrome. This led to clear and logical predictions regarding general mechanisms for reversal of the syndrome by medical therapy. As mentioned above, one of these predicted mechanisms for the restoration of normal function in damaged tissue is the establishment of high potassium, low sodium environments in the patient by administration of potassium and depletion of sodium. That prediction was based on the experimental observations of Ling and Bohr 18) on muscle tissue in culture.

The correlation of the above prediction with the widely used and successful application of low sodium diets to the therapy of heart disease is noted above and in ref. 1. It was also predicted that the addition of potassium administration to low sodium cardiac therapy would be a next logical step. I have since discovered that this step has already been taken. Sodi-Pallares et al. 4-10) in Mexico have for many years been using high potassium in diet and intravenous fluids together with low sodium for successful therapy of both chronic heart failure and acute myocardial infarction. Dr. Sodi-Pallares is one of the most widely respected cardiologists of Latin America.

This additional clinical confirmation of predictions derived from the modern associated-cation, structured water concept of the cell may be considered as further evidence for the correctness of that concept. It also encourages expectation that this conceptual approach will lead to other important applications in clinical medicine.

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(Editor's note: The late Dr. Freeman W. Cope was one of the most eclectic scientists of the twentieth century. He imparted concepts regarding medical applications of nuclear magnetic resonance to Dr. Raymond Damadian, president of FONAR Corp., resulting in the development of magnetic imaging diagnostic procedures. At the time of the above article, Dr. Cope was not aware of Gerson's 1935 article regarding high K, low Na treatment of heart disease.)

REVERSAL OF CORONARY ARTERY DISEASE — ONE MAN'S EXPERIENCE

The following letter was received May 7th, 1985 by the Gerson Institute. Its author, Patrick E. McLeod of Orlando Florida, a free lance writer, is currently writing a book regarding his battle against crippling degenerative coronary artery disease. In his book, Mr. McLeod relates in a blow-by-blow account his own frightening experiences during hospitalization for testing and later during surgical preparation. At the time he elected to try nutritional therapy rather than conventional surgical management, he was within two hours of surgery.

Mr. McLeod suffered numerous medical debilities, including carotid artery occlusion, cardiovascular disease, angina, gout, hypertension (220/110), atherosclerosis, constipation, obesity, and psoriasis. His major medications, all taken concurrently, were inderal, isordil, nitroglycerin, hydrochlorothiazide, coumadin, colchicine, zyloprim, and darvon. In addition to these, he took five other minor medications for constipation, psoriasis, and headaches.

(Editor's note: Coronary arterial by-pass surgery has been perfected. However, a recent study involving 10,000 patients failed to demonstrate any increase in actual survival time for patients who had undergone surgical by-pass procedures for occluded coronary arteries. At this time, the only known insurance against the inexorable progress of coronary artery disease is controlled nutrition. A high fat, salty diet causes build up of plaque on the walls of arteries which in turn reduces oxygenation and nutrition of all tissues and organs of the body. It is probable that such circulatory damage is related to the development of malignancies due to failure of cell respiration [Warburg] as a result of oxygen starvation and deprivation of respiratory enzymes.)

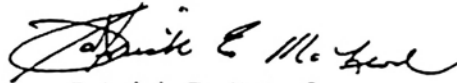
Gentlemen,

I have just completed "CANCER? Think CURABLE!" by S.J. Haught. I also have as my bible, "A CANCER THERAPY, Results of Fifty Cases" by Max Gerson, M.D., which I have used for a number of years.

With the help of this book and its instruction, I healed myself of severe heart and carotid artery disease along with the gout, high blood pressure and other chronic diseases. It work's and it did heal all the other disease along the way. I had two (coronary) arteries that were 100% and one that was 85% stopped up. I was within two hours of the open heart and carotid artery surgery, when I knew there was a better way. AND THERE WAS....thanks to Dr. Gerson. This is my fourth year now, that I have had no IRS tax deductions for medicine, drugs or doctors. The doctors gave me from 2 days to 2 months to live without the surgery. Now I'm free to do anything physical I desire. (I never had the surgery).

Thanks again, for my continued health...

Very Truly Yours,



Patrick E. McLeod

REPORT FROM LA GLORIA - IMPROVEMENT OF ALS THROUGH GERSON THERAPY

An ALS (Amyotrophic Lateral Sclerosis — a terminal disease of the upper and lower motor neurons) patient was admitted to the La Gloria Hospital April 14, 1985. He had been told that his condition was untreatable.

Although symptoms such as slurred speech and upper body weakness had appeared in June of 1983, he was diagnosed in July of 1984 at the Health Extension Center of Joliet, Illinois. This was confirmed in October of 1984 by the U. of Chicago Hospital. The prognosis was death within 2-5 years. The patient is 42 (April 1985).

Upon admission his symptoms had worsened: severely slurred speech, difficulty swallowing even pureed, liquid foods, inability to move tongue from side to side for chewing, could not extend tongue or curl it, right arm could not be raised above elbow, atrophy evident in right hand, could shake hands with difficulty, left arm movement impaired, could not comb hair, could walk but could not place one foot heel to toe in front of the other, could not whistle.

The patient gave a history of living his first 20 years within one block of a copper smelting factory which permeated the air constantly with the smell of sulphur. He then moved to a rural area where he was exposed repeatedly to intensive insecticide spraying. He also handled insecticides in his own garden.

After 10 days on the Gerson Therapy, his tongue was moving from side to side; his speech was virtually normal (his wife could not believe he was calling her on the phone) and his tongue was moving food normally for chewing. Swallowing was almost normal, and he was playfully, happily sticking his tongue out. He is able to grab and shake hands, can raise both arms (the left also behind his head), can comb his hair. He can place one foot in from of the other, heel to toe, and is confident of improving further.

He was amazed to note after the first week that his elimination with enemas was extremely odorous, having the exact smell of the copper plant he was exposed to for so many years. He was also amazed that he had an extremely strong, unpleasant body odor several times during the night. He excreted tremendous amounts of toxins and always felt much relieved after enemas. Prior to admission, he had been on medications to control fasciculation which has been discontinued as it is no longer necessary.

The above case is not represented as a cure, but as an example of remarkable clinical improvement in a patient considered untreatable with conventional medical procedures. While no claims are made that the Gerson Therapy is the correct medical management for ALS, the observed results suggest that more experience in the treatment of ALS should be worthwhile. Although no

rationales can be isolated for the beneficial effects of the Gerson Therapy in the treatment of this case of Lou Gerhig's Disease, it is appropriate to bear in mind the beneficial effects of a high potassium, low sodium diet on general tissue damage syndrome as predicted by Dr. Freeman W. Cope, M.D. [Pathology of structured water and associated cations in cells (the tissue damage syndrome) and its medical treatment. Physiological Chemistry and Physics, 9, 457 (1977)].

CHARLOTTE GERSON'S LECTURE SCHEDULE, JULY - NOVEMBER 1985

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FOR YOUR INFORMATION:

CHEMOTHERAPY (Gr.chemeia,chemistry,+ therapeia,treatment). In the treatment of disease, the application of chemical reagents which are not harmful (1 - Ed.) to the patient but which have a specific and toxic effect upon the disease-causing microorganism.

The above is the definition given by Taber's Cyclopedic Medical Dictionary in its 13th edition.

Although the irony of this definition seems obvious, we must ask the question: Can drugs which are capable of killing the patient and which may have little or no effect on most major forms of cancer rightfully be called "chemotherapy" if that therapy by definition must be harmless to the patient and act specifically against the disease causing agent?

On the other hand,
 non-toxic metabolic therapy
 seems to be
 the real chemotherapy!

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