

What about Juicing?

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As a medical doctor, who lectures on lifestyle medicine concerns, I am frequently approached with questions about the health benefits of juicing and/or the drinking of smoothies.

It is essential to evaluate if the origin of a health practice recommends it. "Juice therapy has long been a component of the 5,000 year-old tradition of Ayurveda. Ayurveda was a traditional system of medicine that originated in India."¹ This Ancient Indian Healing Tradition involves believing in universal energy called prana, energy which is believed to travel through the body via chakras.² Ayurveda is concerned with achieving balance in body and mind by restoring the balance of three elements, or factors...VATA, PITTA and KAPHA (Air, Fire and Water) of which the body is made. Juice is involved in the balance these elements.³ I would show you a picture of the Hindu god Dhanvantari behind all this, but the god is poorly clad and I won't risk offending your sense of modesty. "It is common practice in Hinduism for worshipers to pray to Dhanvantari seeking his blessings for sound health for themselves and/or others, especially on Dhanteras."⁴

It is important to note that your body handles liquid foods differently than it handles solid foods.

More happens in the mouth than many appreciate. The immune tissue in the mouth and throat, like the tonsils, tests substances coming into the body to let the body know what is being eaten as food.^{5,6,7,8,9} Allergy, inflammation and autoimmune diseases are more likely to flair up when food is not chewed long and well, when the body has not had sufficient time or impetus to identify the incoming antigens.^{10,11} One technique of alternative allergists is to take a food to which someone is allergic, make a liquid tincture out of it and then have the person hold it under their tongue for 15 minutes prior to eating, thus presenting it to the testing cells of the mouth (dendritic cells), which in turn lower the sensitivity of the body to that substance. Chewing your food long, thoroughly, and well are part of avoiding or preventing food sensitivity diseases.

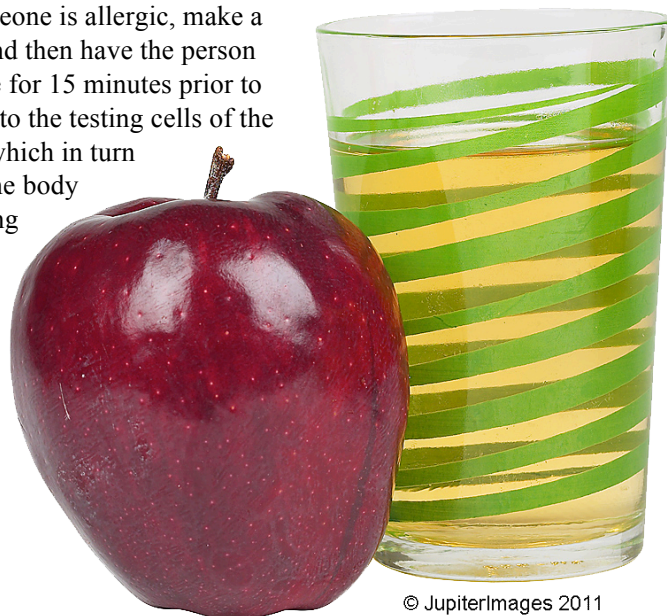
Most people making liquid meals are not

careful to follow good food combining principles. They intake a large variety of food at each meal in their smoothies or juices as though they had to balance their entire life's nutritional requirements at one sitting. This confuses the body. Each type of food takes a different digestive approach. You may realize that your body reacts very differently to a lemon than it does to a banana. Excessive variety, as encountered in a complex meal comprised of multiple diverse foods or in complex smoothies, can provoke allergy, inflammation and autoimmunity.¹²

Super blenders are capable of making a drink of almost any solid food. When solids are whizzed up with liquid in a blender they are atomized into nano-particles. These nano-particles then tend to absorb into the bloodstream unchecked by the usual filtering mechanisms provided by the wall of the intestines. This is like a dangerous condition referred to as leaky gut syndrome.¹³ This has been the drawback to homogenization of milk.^{14, 15, 16} When these nano-particles appear unfiltered in the blood stream the body develops sensitivities and unhealthy reactions.

Juicing has gained considerable popularity in the alternative and integrative approach to cancer therapy. One such system is that of Gerson. Gerson therapy focuses on the role of minerals, enzymes, hormones, and other dietary factors thought to restore health and well-being. The daily regimen calls for drinking 13 glasses of juice from fresh, organic fruits, vegetables and calves' livers, and eating vegetarian meals prepared from or grown fruits, vegetables and whole grains.¹⁷

Do large multi national epidemiological studies bear out that juicing is effective for cancer? March 4-6, 2008 I attended the Fifth International Congress on Vegetarian Nutrition. With over 700 in attendance, representing over 40 countries the congress was reestablished as the premiere scientific conference on plant based diets. Scientists from a dozen different countries shared the podium to impart their evidence for the efficacy of vegetarian nutrition. In many cases we were asked not to photograph the presenters slides as they were unpublished data. One such case was a presenter from



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Europe revealing his data from several countries on the benefit of vegetable consumption for the prevention of cancer. One slide showed that consumption of the recommended servings of whole vegetables reduced the risk of cancer by 30% (OR 0.7), while for the same population, consumption of the vegetables as juice raised the risk for cancer by 30% (OR 1.3).¹⁸ In other words, juicing increases the risk of cancer.

One rationale often sighted for the use of liquid food is that nutrients are absorbed more quickly and go straight to the cells. One example might be sugar. The removal of fiber from food or physically disrupting it by blending can result in faster ingestion and absorption, but results in decreased satisfaction and disturbed glucose control. Drinking your meals often results in the blood sugar rising faster and higher than the body can control, resulting in excessively high insulin production and low blood sugars (hypoglycemia). Because liquids have less fiber or disrupted fiber, people drinking their meals tend to get hungry again before next meal.¹⁹ These effects favor over nutrition and, if often repeated, could lead to diabetes^{23, 20} For the diabetic juice drinking spells high blood sugar or hyperglycemia.²¹

Another example of unbridled absorption and subsequent health compromise is the case of oxalate as found in such commonly liquefied foods as spinach. Oxalate is a component of some painful renal compromising kidney stones. People who make liquid nutrition a significant portion of their food intake have been documented to suffer from oxalate overload and kidney stone formation.²²

That's the story for sugar and oxalate, what about other nutrients driven out of balance by liquefying them? Example: kale juice can drive down thyroid function.

Hearty chewing is part of appetite control. Liquid food is counter productive in this regard. Juices are significantly less satisfying than purées, sauces or smoothies, and purées, sauces or smoothies than whole fruit.^{23, 24, 25} People drinking more liquid food tend to gain more weight.^{26, 27} The faster food is eaten the more calories are typically eaten.

Choosing foods that require more chewing can help reduce the number of calories you eat and help with weight management. Thorough chewing increases food satisfaction and decreases appetite.²⁸ The more you chew, the less food it takes to satisfy your appetite.²⁹ Appetite is reduced by nerve feedback from the teeth to the brain when you chew something hard.³⁰ Liquid nutrition does not engage the teeth as solid foods would.

Liquids consumed with a solid meal do not decrease the amount of food eaten, they just tend to add to the total number of calories eaten.³¹ If you drink with your meal you will tend to eat the same amount of food, plus the liquid, this will just add to your weight gain.

When the intestine does not sense the presence of substantial fiber in the food the appetite is not suppressed and over nutrition can result.^{32, 33} People who eat more fiber will tend to eat fewer calories and be less apt to become obese and get diabetes.^{34, 35} This effect is not limited to the meal currently being eaten, low natural fiber content in food makes it so the person will eat a greater amount of food at the next meal too.³⁶

Most any food or drink that raises your insulin to high levels also raises your cholesterol, as has been demonstrated with some forms of liquid nutrition.³⁷



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Digestion begins in your mouth. You need saliva with amylase and other enzymes to digest your food properly and for you to get all the nutrients you need from it. Solid foods in your mouth that require extensive chewing stimulate the saliva glands to produce a greater volume and better quality of saliva to begin digestion.^{38, 39} Saliva is rich in enzymes, cofactors and water necessary to process your food. How hard you chew determines how much saliva will be produced and how loaded it will be in enzymes. Dry foods stimulate the glands to produce even more saliva higher in amylase than liquid foods.⁴⁰ If you are quickly drinking down smoothies or juices, enzymes will be missing from your digestion, digestion will be incomplete, nutrients from the valuable food you are eating will be unavailable to you and you could become deficient in some necessary nutrient.

“But I don’t have enough time to eat, I’m in a hurry!” Stress decreases saliva production.⁴¹ If you do not have enough time to eat, better to skip and just drink water than to slurp down a smoothie. Stressed living is the source of many modern ailments. Failing to plan adequate time for meals and substituting with liquid nutrition are not healthy.

For children, eating foods that require more chewing builds the jaw, spreads the teeth and makes it more likely that they will not need braces from an orthodontist to straighten out their bite.^{42, 43}

Juicing takes juice away from the whole fruit or vegetable. The processing results in a reduction in vitamins and minerals, because the nutrient-rich skin and fiber is left behind or disrupted as in blending.

In the stomach, a liquid meal just makes for more work; the excess fluid must be adsorbed before serious digestion can begin.^{44, 45} Having not spent much time in the mouth, the fluid is in danger of being warmer or colder than what the stomach likes, thus hampering or delaying digestion.⁴⁶

Many people suffer with reflux disease. For the esophagus, a liquid taken into the stomach just tends to put it at greater risk for reflux and the associated heart burn.^{47, 48} Solid food stays down much better.

Fiber is the bulk in food that gives it body or fullness. When a meal, complete with unprocessed natural fiber enters the intestines, it provides bulk, which stretches the intestinal walls. When the walls or the intestines sense stretching, they send a signal to the stomach to cut back on acid and digestion. Juices and smoothies with disrupted fiber do not provide this stimulus for acid reduction; the stomach continues to make too much acid and heart burn, reflux and indigestion can be the result.²⁸

When predigested liquid meals such as juices are substituted instead of whole foods the intestines atrophy.⁴⁹ Intestines that are atrophied are more prone to disease and poor adsorption of nutrients.

Good dietary fiber is important for the health of the intestines, it reduces inflammation and as it breaks down it actually feeds healthy intestinal flora.⁵⁰

Where does all this liquid food end up that goes rushing into the blood stream? The filters are the kidneys and they really suffer, not to mention, until the kidneys do clear the murk out of the blood you may experience some brain fog. Liquid food is a major hazard to kidney failure.

I am not saying to never take a sip of juice. Pointing out the disadvantages of some lifestyle practice is not a complete condemnation of it entirely. Situations where a little liquid food could be lifesaving would include someone with dangerously low blood sugar, or someone who has extreme debilitating fatigue.

“Taken in a liquid state, your food would not give healthful vigor or tone to the system. But when you change this habit, and eat more solids and less liquids, your stomach will feel disturbed. Notwithstanding this, you should not yield the point; you should educate your stomach to bear a more solid diet.”⁵¹

Habits are difficult to change, and some of these practices we have embraced unwittingly. But God loves us and is willing to supply the power for positive change. Aren't you glad we serve a God like that?

Appendix

Councils from E. G. White on liquid food.

Call to give up liquid food

I am advising the people wherever I go to give up liquid food as much as possible.-- U. T., Oct. 29, 1894. {HL 90.2}

Liquid food classified with meat

Of Daniel and his fellows the Scripture states: "As for these four children, God gave them knowledge and skill in all learning and wisdom: and Daniel had understanding in all visions and dreams." In what manner are you fitting yourselves to co-operate with God? "Draw nigh to God, and He will draw nigh to you." "Resist the devil, and he will flee from you." Let the diet be carefully studied; it is not healthful. The various little dishes concocted for desserts are injurious instead of helpful and healthful, and from the light given me, there should be a decided change in the preparation of food. There should be a skillful, thorough cook, that will give ample supplies of substantial dishes to the hungry students. The education in this line of table supplies is not correct, healthful, or satisfying, and a decided reform is essential. These students are God's inheritance, and the most sound and healthful principles are to be brought into the boarding-school in regard to diet. The dishes of soft foods, the soups and liquid foods, or the free use of meat, are not the best to give healthful muscles, sound digestive organs, or clear brains. O how slow we are to learn! And of all institutions in our world the school is the most important! Here the diet question is to be studied; no one

person's appetite, or tastes, or fancy or notion is to be followed; but there is need of great reform; for lifelong injury will surely be the result of the present manner of cooking. Of all the positions of importance in that college, the first is that of the one who is employed to direct in the preparation of the dishes to be placed before the hungry students; for if this work is neglected, the mind will not be prepared to do its work, because the stomach has been treated unwisely and cannot do its work properly. Strong minds are needed. The human intellect must gain expansion and vigor and acuteness and activity. It must be taxed to do hard work, or it will become weak and inefficient. Brain power is required to think most earnestly; it must be put to the stretch to solve hard problems and master them, else the mind decreases in power and aptitude to think. The mind must invent, work, and wrestle, in order to give hardness and vigor to the intellect; and if the physical organs are not kept in the most healthful condition by substantial, nourishing food, the brain does not receive its portion of nutrition to work. Daniel understood this, and he brought himself to a plain, simple, nutritious diet, and refused the luxuries of the king's table. The desserts which take so much time to prepare, are, many of them, detrimental to health. Solid foods requiring mastication will be far better than mush or liquid foods. I dwell upon this as essential. I send my warning to the College at Battle Creek, to go from there to all our institutions of learning. Study up on these subjects, and let the students obtain a proper education in the

preparation of wholesome, appetizing, solid foods that nourish the system. They do not have now, and have not had in the past, the right kind of training and education as to the most healthful food to make healthful sinews and muscle, and give nourishment to the brain and nerve powers. {FE 225.2}

Liquid food does not give healthful vigor to the body

Had your physical health been unimpaired, you would have made an eminently useful woman. You have long been diseased, and this has affected your imagination so that your thoughts have been concentrated upon yourself, and the imagination has affected the body. Your habits have not been good in many respects. Your food has not been of the right quantity or quality. You have eaten too largely, and of a poor quality of food, which could not be converted into good blood. You have educated the stomach to this kind of diet. This, your judgment has taught you, was the best, because you realized the least disturbance from it. But this was not a correct experience. Your stomach was not receiving that vigor that it should from your food. Taken in a liquid state, your food would not give healthful vigor or tone to the system. But when you change this habit, and eat more solids and less liquids, your stomach will feel disturbed. Notwithstanding this, you should not yield the point; you should educate your stomach to bear a more solid diet. {CD 105.1}

Liquid food taxes the kidneys

I told them that the preparation of their food was wrong, and that living principally on soups and coffee and bread was not health reform; that so much liquid taken into the stomach was not healthful, and that all who subsisted on such a diet placed a great tax upon the kidneys, and so much watery substance debilitated the stomach. {CD 105.2}

I was thoroughly convinced that many in the establishment were suffering with indigestion because of eating this kind of food. The digestive organs were enfeebled and the blood impoverished. Their breakfast consisted of coffee and bread with the addition of prune sauce. This was not healthful. The stomach, after rest and sleep, was better able to take care of a substantial meal than when wearied with work. Then the noon meal was generally soup, sometimes meat. The stomach is small, but the appetite, unsatisfied, partakes largely of this liquid food; so it is burdened. {CD 105.3}

Do not give liquid food to students

I know not who is cook at the boarding hall, but I beseech you, do not place any persons to oversee the cooking of food for the college students unless they have a thorough knowledge of the right kind of cooking, that the students shall take away with them the very best intelligence of what hygienic cooking means. The much-liquid food, the pastries, the desserts, prepared for the table after European hotel fashion, is not the proper food to place before a hungry lot of students, whose appetites are keen to devour the most substantial food. The very best, thorough cook should be employed. If I were speaking to your own family, I would say the same. But it is not merely your own family; it is in behalf of God's heritage of children I am speaking. No one person's ideas, or tastes, or customs, or habits are to control the boarding-house table. But obtain the very best cook, and have helpers that she, as matron in the kitchen, shall oversee. The students pay for their board; give them good, solid, nourishing food.-- Letter 46, 1893, p. 5. (To W. W. Prescott, Sept. 5, 1893.) {2MR 217.2}

Liquid foods are not wholesome

Grains used for porridge or "mush" should have several hours' cooking. But soft or liquid foods are less wholesome than dry foods, which require thorough mastication. Zwieback, or twice-baked bread, is one of the most easily digested and most palatable of foods. Let ordinary raised bread be cut in slices and dried in a warm oven till the last trace of moisture disappears. Then let it be browned slightly all

the way through. In a dry place this bread can be kept much longer than ordinary bread, and, if reheated before using, it will be as fresh as when new. {MH 301.3}

Saliva is the liquid you need with your meals not drink

Many make a mistake in drinking cold water with their meals. Taken with meals water diminishes the flow of the salivary glands; and the colder the water, the greater the injury to the stomach. Ice water or iced lemonade, drank with meals, will arrest digestion until the system has imparted sufficient warmth to the stomach to enable it to take up its work again. Hot drinks are debilitating; and besides, those who indulge in their use become slaves to the habit. Food should not be washed down; no drink is needed with meals. Eat slowly, and allow the saliva to mingle with the food. The more liquid there is taken into the stomach with the meals, the more difficult it is for the food to digest; for the liquid must first be absorbed. Do not eat largely of salt, give up bottled pickles, keep fiery, spiced food out of your stomach, eat fruit with your meals, and the irritation that calls for so much drink will cease to exist. But if anything is needed to quench thirst, pure water drank some little time before or after the meal is all that nature requires. Never take tea, coffee, beer, wine, or any spirituous liquors. Water is the best liquid possible to cleanse the tissues. {RH, July 29, 1884 par. 7}

Very hot food ought not to be taken into the stomach. Soups, puddings, and other articles of the kind, are often eaten too hot, and as a consequence the stomach is debilitated. Let them become partly cooled before they are eaten. {RH, July 29, 1884 par. 8}

Longer in the mouth better for the health

In order to have healthy digestion, food should be eaten slowly. Those who wish to avoid dyspepsia, and those who realize their obligation to keep all their powers in the condition which will enable them to render the best service to God, will do well to remember this. If your time to eat is limited, do not bolt your food, but eat less, and eat slowly. The benefit you derive from your food does not depend so much on the quantity eaten as on its thorough digestion, nor the gratification of the taste so much on the amount of food swallowed as on the length of time it remains in the mouth. Those who are excited, anxious, or in a great hurry, would do well not to eat until they have found rest or relief; for the vital powers, already severely taxed, cannot supply the necessary gastric juice. {RH, July 29, 1884 par. 9}

Liquid diet fad like man falling into sin

Man has fallen by sin; but there is no need of his continually repeating the transgression of Adam and Eve. There is no necessity for pleasing and gratifying the appetite by indulging in forbidden things. All should understand that by indulging perverted appetite, they violate the laws of health and life. Many have misinterpreted health-reform, and have received perverted ideas of what constitutes right living. Some honestly think that a proper dietary consists chiefly of porridge. To eat largely of porridge would not insure health to the digestive organs; for it is too much like liquid. Encourage the eating of fruit and vegetables and bread. A meat diet is not the most wholesome of diets, and yet I would take the position that meat should not be discarded by every one. Those who have feeble digestive organs can often use meat, when they cannot eat vegetables, fruit, or porridge. If we would preserve the best health, we should avoid eating vegetables and fruit at the same meal. If the stomach is feeble, there will be distress, the brain will be confused, and unable to put forth mental effort. Have fruit at one meal and vegetables at the next. {YI, May 31, 1894 par. 7}

Liquid food must be adsorbed before the real process of digestion can begin

Food should not be eaten very hot or very cold. If food is cold, the vital force of the stomach is drawn upon in order to warm it before digestion can take place. Cold drinks are injurious for the same

reason; while the free use of hot drinks is debilitating. In fact, the more liquid there is taken with the meals, the more difficult it is for the food to digest; for the liquid must be absorbed before digestion can begin. Do not eat largely of salt, avoid the use of pickles and spiced foods, eat an abundance of fruit, and the irritation that calls for so much drink at mealtime will largely disappear. Food should be eaten slowly and should be thoroughly masticated. This is necessary in order that the saliva may be properly mixed with the food and the digestive fluids be called into action. 397 {CCh 224.5}

Example of author leaving off liquid food

I have recently left off the use of all liquids, such as homemade coffee, with my meals. I eat my food as dry as possible. The result is excellent. In the morning I take lemon and water. I drink nothing between meals unless it be occasionally some lemon and water. At the table I do not eat many things either. I use dry peas boiled, then strained, then baked, and canned tomatoes. When fresh, I use the tomatoes uncooked with bread. This is my principal article of food. {21MR 290.6}

Taken in a liquid state, your food would not give healthful vigor or tone to the system. But when you change this habit, and eat more solids and less liquids, your stomach will feel disturbed. Notwithstanding this, you should not yield the point; you should educate your stomach to bear a more solid diet. {CD 105.1}

Is there any place for juice?

The pure juice of the grape, free from fermentation, is a wholesome drink. But many of the alcoholic drinks which are now so largely consumed contain death-dealing potions. Those who partake of them are often maddened, bereft of their reason. Under their deadly influence men commit crimes of violence and often murder. {CD 436.4}

Make fruit the article of diet to be placed on your table, which shall constitute the bill of fare. The juices of fruit, mingled with bread, will be highly enjoyed. Good, ripe, undecayed fruit is a thing we should thank the Lord for, because it is beneficial to health. {CD 437.1}

I cannot see how, in the light of the law of God, Christians can conscientiously engage in the raising of hops or in the manufacture of wine or cider for the market. All these articles may be put to a good use and prove a blessing, or they may be put to a wrong use and prove a temptation and a curse. Cider and wine may be canned when fresh and kept sweet a long time, and if used in an unfermented state they will not dethrone reason. But those who manufacture apples into cider for the market are not careful as to the condition of the fruit used, and in many cases the juice of decayed apples is expressed. Those who would not think of using the poisonous rotten apples in any other way will drink the cider made from them and call it a luxury; but the microscope would reveal the fact that this pleasant beverage is often unfit for the human stomach, even when fresh from the press. If it is boiled, and care is taken to remove the impurities, it is less objectionable. {5T 356.1}

It is a treat to have all the oranges we want. I use lemon juice freely. It is the best thing you could use for rheumatism, for your head, and for malaria.--Letter 119, 1896, p. 3. (To "Children," July 31, 1896.) Released 1958. {2MR 48.1}

We are now expressing juice from the oranges and canning the same. We have pressed out the juice from the lemons also, in order that we may furnish palatable drink for hot weather. . . . {6MR 135.2}

The third day when the aromatic odor of the cigars came to me I became stomach-sick. The most intense pain pierced my eyeballs and back of the eyeballs in my head. It seemed that the top of my head was crashing like broken glass. My distress became very great. I thought I was going into a fit. Large drops of perspiration stood upon my face and my entire body broke out in profuse perspiration. Then came a confused noise in my head and I became blind and fainted entirely away. In half an hour I revived by lemon juice being pressed in my mouth. I knew as soon as I revived that it was the smoking of cigars which had thus affected me. All in the cars were alarmed and smoking was banished from the car. I have not fully recovered from the effects of this illness. {11MR 122.1}

I have some things I wish to send you, if I can get them off in this mail. Several cases have been presented to me, which I will speak of in time; meanwhile, do not put yourself through [such an extreme regimen] as you have done, and do not go to extremes in regard to the health reform. Some of our people are very careless in regard to health reform. But because some are far behind, you must not, in order to be an example to them, be an extremist. You must not deprive yourself of that class of food which makes good blood. Your devotion to true principles is leading you to submit yourself to a diet which is giving you an experience that will not recommend health reform. This is your danger. When you see that you are becoming weak physically, it is essential for you to make changes, and at once. Put into your diet something you have left out. It is your duty to do this. Get eggs of healthy fowls. Use these eggs cooked or raw. Drop them uncooked into the best unfermented wine you can find. [DR. KRESS ACCEPTED THIS COUNSEL. HE FOLLOWED THE RAW-EGG AND GRAPE-JUICE REGIMEN REGULARLY UNTIL HIS DEATH IN 1956 AT THE AGE OF 94.] This will supply that which is necessary to your system. Do not for a moment suppose that it will not be right to do this. There is one thing that has saved life--an infusion of blood from one person to another; but this would be difficult and perhaps impossible for you to do. I merely suggest it. {12MR 168.2}

Preston, Melbourne, June 18, 1892. The past night was one of great suffering. During the evening I had a coke fire in the grate. I awoke with a sense of suffocation and pressure for breath. I called for help. By mistake all the windows in my room had been left closed. I felt sick all over and very faint, and for a time I lost all sense of things about me. At last May Walling and Emily Campbell came to my help, and every effort was made to give me ease. But I was not entirely relieved for some time. {17MR 61.1}

After all had been done that anyone could do, the windows were opened and a screen placed around my bed to prevent the air striking directly upon me. I slept again, a troubled, dangerous sleep. For the next two hours I was wrestling in my sleep to find my way out of a dense wood, to where I could get a free breath of air. When at last I aroused from sleep, I did not come to my proper bearings for some time, yes, for hours. Then I knew that something must be done. I was weak, and my heart pained me. I felt the need of a strong cordial, but there was nothing in the house but grape juice. I took some of this, and it strengthened me, but I was much exhausted. {17MR 61.2}

As Grace described meals at Ellen White's table, she declared, "The meals were delicious." Mealtime was "a happy time" and "a big occasion of the day" (ibid.). {6BIO 395.3}

Grace reported that good bread was made in the home, and perhaps two or three times a week whole-wheat "gems" would be served--a muffinlike product made without leaven, raised by the air beaten into the batter and baked in a very hot oven in cast-iron "gem irons." Gems in the White household went back to the decade of the health reform vision. {6BIO 395.4}

Questioned about preserves or fruit butters in the White home, Grace replied: {6BIO 395.5}

We put up strawberry jam and blackberry jam and loganberry jam, but we ate it sparingly, I would say. Grandmother was not one to say, "No, you can't have any of this." But, "Eat it moderately. . . . Don't eat too much, but enjoy a nice slice of bread and cream and strawberry jam. It's delicious."--Ibid. {6BIO 395.6}

Beverages were often on the table, but used in modest amounts--tomato juice, grape and other fruit juices, carrot juice, milk, and buttermilk. Besides the cows on the farm, there were chickens fenced in under the apple trees. These supplied the family with eggs that were used in cooking and occasionally served soft-boiled on the table. For desserts, fruit was often used, and occasionally a little pumpkin or lemon pie, tapioca pudding, or bread pudding. {6BIO 395.7}

The Sanitarium Food Company was in the valley close by, and such foods as "nut loaf," "protose," peanut butter, crackers--both plain and with fruit--bread, and "granose" biscuits (a wheat-flake product) all found their way into the White home. {6BIO 396.1}

It can be said that the table represented no extremes, only the consistent counsels given down through the years, and everyone enjoyed eating at Sister White's table. It has been rumored that Ellen White, during the last few years of her life reverted to the use of some meat. This is wholly untrue. {6BIO 396.2}

Mention has been made that only two meals were served in the White home. Those who ate at the table were engaged in literary work, and the program worked well. If a member of the household or a visitor desired a light evening meal, he was at liberty to go to the large, well-stocked pantry and fix whatever appealed to him. Such was not frowned upon by Ellen White, or other members of the family. {6BIO 396.3}

It is many years since I have had meat on my table at home. We never use tea or coffee. Occasionally I have used red-clover-blossom tea for a warm drink, but few of my family drink any fluid at our meals. The table is provided with cream instead of butter, even though we have company present. I have not used butter for many years. {CD 492.1}

THE DAY FOLLOWING THIS ALMOST SLEEPLESS NIGHT WAS UNEVENTFUL. THE TRAIN GLIDED SWIFTLY ALONG THROUGH WESTERN UTAH AND NEVADA. SHORTLY BEFORE DAYLIGHT THURSDAY MORNING, SEPTEMBER 9, WHEN THE TRAIN HAD PASSED THE HIGHEST ALTITUDE, AND WAS JUST FINISHING ITS RUN THROUGH FORTY MILES OF TUNNELS AND SNOWSHEDS, MISS MCENTERFER, WHOSE BERTH WAS NEARLY OPPOSITE, AND SOME OTHERS NEAR BY, HEARD AGONIZED GROANS FROM MRS. WHITE. WHEN ASKED WHAT WAS THE MATTER, SHE SAID SHE MUST HAVE AIR, SHE COULD NOT BREATHE. BUT HER WINDOW WAS OPEN, AND THE BERTH WAS FILLED WITH SMOKY AIR FROM THE SNOW-SHED. {RH, January 20, 1910 par. 13}

KNOWING THAT WE WERE THEN SEVEN THOUSAND FEET ABOVE SEA-LEVEL, AND THAT WE HAD BEEN SEVERAL HOURS IN THIS HIGH ALTITUDE, WE RECOGNIZED THE DIFFICULTY AS HEART FAILURE, AND TREMBLED FOR THE OUTCOME. MISS MCENTERFER ATTEMPTED TO COUNT HER PULSE, BUT FOUND THAT IMPOSSIBLE, AS THERE WAS ONLY A LITTLE QUIVER INSTEAD OF A REGULAR BEAT. THIS GREW MORE AND MORE FAINT. SHE ASKED HER SEVERAL QUESTIONS, BUT THERE WAS NO ANSWER. HER HEARING AND HER SPEECH HAD GONE. HER LIMBS WERE COLD, AND SHE SEEMED POWERLESS. {RH, January 20, 1910 par. 14}

THE PORTER BROUGHT SOME HOT WATER. INTO THIS MISS MCENTERFER PUT A LITTLE PEPPERMINT, AND WITH MUCH DIFFICULTY GOT MRS. WHITE TO SWALLOW A FEW

SPOONFULS. THEN SHE VIGOROUSLY RUBBED HER HANDS AND ARMS AND FEET. AFTER MUCH DELAY BOTTLES OF HOT WATER WERE SECURED AND PLACED OVER HER HEART AND AT HER FEET. IN THE COURSE OF AN HOUR HER PULSE BEGAN TO GROW STRONGER, AND AS WE DROPPED INTO THE LOWER ALTITUDE, HER HEART ACTION INCREASED. AN HOUR LATER AS WE NEARED COLFAX, SHE HAD SO FAR RECOVERED AS TO BE ABLE TO SPEAK AND TO HEAR WHAT WE SAID TO HER. DURING THE DAY SHE WAS ABLE TO TAKE A LITTLE LIQUID FOOD, AND AT OAKLAND PIER AND VALLEJO JUNCTION MADE THE TRANSFERS WITH THE AID OF THE WHEELCHAIRS FURNISHED BY THE RAILWAY COMPANY. ARRIVING AT ST. HELENA AT 7 P.M., SHE WALKED FROM THE TRAIN TO HER CARRIAGE, AND WAS SOON IN HER OWN HOME, FROM WHICH SHE HAD BEEN ABSENT FIVE MONTHS. {RH, January 20, 1910 par. 15}

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