

The controllability and preventive measures in Pressure Ulcer based on healthy food and good practices

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Abstract- The nutritional needs of people with pressure ulcers are very high and they may need extra protein, calories and vitamins and minerals, to help their wounds heal. Efficiency in vital nutrients may delay wound healing. Research supports the importance of protein, vitamin C and zinc in wound healing. Chronic wound healing requires a multi-disciplinary and holistic approach. Early identification of at-risk patients is vital for the prevention and exacerbation of pressure sore development. Wound healing involves complex physico-chemical interactions that require various micro and macronutrients at every stage. The prevalence of pressure ulcers among hospitalized patients ranges from 3%-11% and 18% among bedridden hospitalized patients. The relationship between malnutrition and pressure sore development is well documented. Clinical manifestations of malnutrition include weight loss and compromised immune function. Both underweight and obese individuals can be malnourished. A high incidence of weight loss, low body mass index, malnutrition and poor visceral protein status are reported nutritional factors associated with pressure ulcer development in long-term care patients. A primary objective for healthcare professionals should be to recognize the risk factors for under nutrition in such patients and to try to maximize their nutritional status if possible.

Index Terms—pressure ulcer; protein, calories and vitamins; physico-chemical interactions; clinical assessment.

I. INTRODUCTION

Pressure ulcers have important consequences both for patients and for the health care system. They can lead to severe or intolerable pain, are prone to infection, and are

associated with high mortality rates [1]. They also inflict a considerable economic burden on the health care system. In a 1996 study, the incremental cost per pressure ulcer (in US dollars) was \$2731 [2], and this cost was dramatically higher (\$59,000) if the pressure ulcer was associated with osteomyelitis [3]. In the Netherlands, treatment of pressure ulcers is estimated to account for 11% of the total health budget [4]. Pressure ulcers are areas of necrosis caused by compression between bony prominences and external surfaces. The damage may be relatively minor, or it may lead to massive destruction of deeper tissues, which can cause significant morbidity and mortality. The incidence and prevalence of pressure ulcers depends on the definition of pressure ulcers used and the patient population studied. The National Pressure Ulcer Advisory Panel has classified pressure ulcers according to 4 stages [5]:

The normal body temperature of an individual is 98.6 degrees which keeps varying with slight changes. This temperature is maintained irrespective of the weather. A drop or rise in the body temperature can bring in various health problems so, we have to make sure that the body's temperature is stagnant. Body heat is a common health problem for many people these days. Body heat is also known as heat stress. The body cannot cool itself and this causes several health problems like internal organs damage, heat cramps, heat rashes, pimples, dizziness and nausea.

Excessive hot weather, working out in hot, eating heat producing foods, drinking less water etc. increases the risk of causing body heat. It is very important to stay

hydrated. Water flushes out toxins from the body and provides a cooling effect. Apart from drinking water, you must also include some healthy and cooling foods that reduces body heat. As summer is upon us, it is time to prepare your body and reduce body heat.

II. VEGETABLES AND FRUITS CAUSES REDUCTION IN PU STATGE

Here are few healthy foods that can reduce body heat and therefore the occurrence of pressure ulcer can be minimized at a large:

Watermelon

This water-rich fruit is very effective in reducing body heat to a great extent. Being rich in water, it keeps you hydrated and cool.

Honeydew melon

This is another fruit that can reduce body heat. During summers, have honeydew melon in your diet.

Mint

It is used as a home remedy to provide cooling effect to the body. Mint leaves juice is the perfect medicine to lower body heat.



Fig.1; Pressure Ulcer reduction fruits and vegetables

Cucumber

This food is very rich in water and effective in providing cooling effect to the body. Have cucumber ever day to reduce body heat naturally.

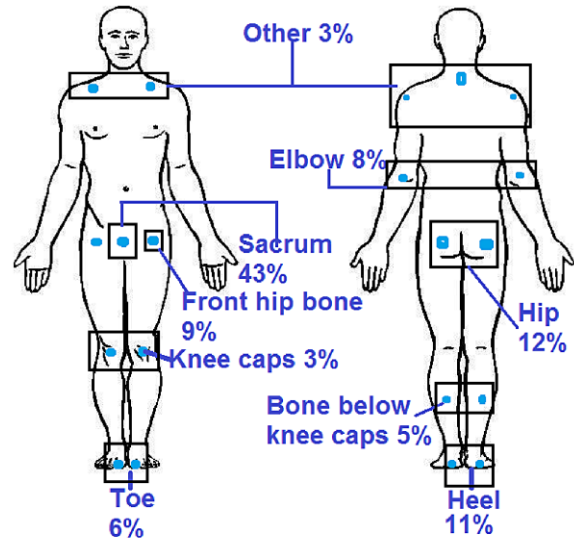


Fig.2; Place of frequent stress at human body and Bedsore patient occurrence rate in human body



Fig.3; Pressure Ulcer reduction grains

Sesame

This is one of the home remedies to reduce body heat naturally. Have some sesame seeds with water to stay cool.

Fennel seeds

Soak fennel seeds in water overnight. Strain and have the water in the morning to lower body heat.

Coconut water

Drinking coconut water is one of the best home remedies to reduce body heat and fight summer health problems like dehydration.

Pomegranate

Have a glass of pomegranate juice every day to stay Cool and lower the body heat naturally.



Poppy seeds

Eat a handful of poppy seeds with water before going to sleep. Poppy seeds induce sleep and also regulates body temperature.

Fenugreek seeds

It is one of the most popular home remedies to reduce body heat. Eat fenugreek seeds every day if you are suffering from body heat.

Cold milk

Healthy and cold fluids like milk or lemon juice are effective in lowering body heat. Mix cold milk with honey and have empty stomach in the morning.

III. FACTORS CLEAR THE PATHOGENESIS OF PRESSURE ULCERS

Sandalwood and water for body heat control

Mix sandalwood with water or cold milk and make it into a fine paste. Apply this paste in your forehead and chin. This is a proven technique to reduce excessive body temperature and cool the skin instantly. You may also want to add few drops of rosewater to the paste for attaining greater results.

Vitamin C rich vegetables

Vegetables that are high in vitamin C and also fruits like orange and sweet lemon that contains citrus in it, are excellent foods to relieve body temperature.

Lemon as a remedy to reduce body heat

Lemon is one of the juicy fruits that is to make juice. The content of vitamin C in it works well in lowering body temperature.

Honey dew melon

During summer, body heat can become really dangerous as it will give rise to many complications. Normally the temperature of human body is 98.6 degrees. But, this can vary from person to person. But 2 to 3 percentage of downfall and rise in temperature can be unhealthy for an individual. These changes in body temperature can give rise to variety of diseases. Getting upward movement of body temperature can be viewed during summer. The heat in the environment will be likely to affect individual's health.

IV. REASONS FOR BODY HEAT

- Wearing tight or artificial clothing may trap water and produce ineffective decrease in heat
- Illnesses for example fever as well as infections
- An increased activity on the thyroid which raises the metabolic activity by the body processes and causes production of excess heat
- Strenuous workout or physical exercise
- Medical conditions for example seizures and muscular disabilities
- Certain drugs or stimulants for example amphetamines, cocaine and so on
- Neurological disorders can bring about excessive body heat even when sleeping
- Others factors which will result in increasing body heat are psoriasis, systemic sclerosis, cystic fibrosis, and eczema Excessive contact with the sun can also result in high body temperature.

REMEDY MEASURES FOR REMOVE HEAT FROM THE BODY

Stay away from hot and spicy food items
Avoid fatty and fried foods (junk/fast foods)
Stay away from caffeine & alcohol
Follow a low sodium diet regime
Use Coconut or Olive herbal oil for cooking than using almond, sesame & corn oil
Do not use nuts in your daily diet as they are known in increasing the body temperature rapidly. Try to have them 2-3 times a week
Try to follow a vegetarian diet regime or reduce your usage of red meat.

V. EVALUATION OF PRESSURE ULCER USING NATURAL FRUITS

Food provides energy for your body to function as well as nutrients to support the thousands of reactions necessary for the cells, tissues and organs to grow and develop. The term macro nutrient describes the chemical substances that provide calories for energy including carbohydrates, proteins and fats. Micro nutrients include the many essential vitamins and minerals required in smaller amounts

Fruits

Fruits, the matured ovary of a plant, generally contain seeds. Many different types of fruits exist from a variety of apples and berries to melons and citrus fruits. Fruits contain natural sugars classified as carbohydrates that the body uses for energy. They also provide micro nutrients such as vitamin C, potassium and folate – also known as vitamin B-9. The USDA food pyramid suggests that adults should include 1.5 to 2 cups of fruit in their diet per day, depending on their level of activity.

Vegetables

Most vegetables are low in fat and calories, they do provide macronutrients, depending on the type of vegetables. Starchy vegetables, which include corn, peas and potatoes, provide carbohydrates as well as vitamins and minerals. Many vegetables, including green leafy vegetables and beans, provide protein. Due to their nutrient content, a diet rich in both fruits and vegetables can help reduce the risk of chronic diseases such as heart disease.

Grains

Grains provide energy in the form of carbohydrates and protein. Grains also serve as a good source of micro nutrients. Because most of the vitamins and minerals, including B vitamins, iron, magnesium and selenium, occur in the outer layers, whole grains that contain the bran, germ and endosperm intact, serve as the best source of nutrients.

Meat and Dairy

Animal-based foods include meat and dairy products. These classifications of food serve as the richest source of protein, but also contain fats that contribute to the calories for energy.

Spinach

It's just one of the many vitamins and minerals that spinach is known for, and one more reason to eat more often. Having a salad with spinach as the base is an easy way to start getting more Zinc.



Beef

Beef is a great food for upping your Zinc levels because for ounce it has more zinc than many other foods.

Shrimp

Shrimp serves as a good food for Zinc intake, and also provides other benefits like being a high quality protein, and being low in calories. They are also a surprising source of antioxidants.

Kidney beans

Kidney beans are a great non-meat source of Zinc. These beans are also helpful in maintaining healthy blood glucose levels, providing energy and keeping you feeling full for long periods without a subsequent crash.

Flax Seeds

Flax seeds get a lot of attention because of their omega-3 and fiber, but it's also a good source of Zinc.

Watermelon seeds

The dry watermelon seeds, and even toast them, they can be a wonderful source of Zinc, as well as other good things for the body, like protein, magnesium, healthy fats, and a host of B Vitamins.

Garlic

Garlic has a long list of health benefits, not the least of which is that it provides a respectable amount of Zinc. Garlic also has cleansing properties, and has long been linked to anti-cancer effects and a healthier heart.

Lima Beans

Lima beans are relatively low in calories and help the body in a number of ways including adding more fiber, protein, folate, iron and magnesium.

Egg Yolks

Egg yolks contain all of the vitamins that are in an egg as well, so by eating the yolk you may be getting more fat but you're also getting Vitamins A, E, D and K, as well as additional amounts of minerals, which more than make up for any potential drawbacks.

Mushrooms

They have a healthy assortment of vitamins and minerals, and several types of mushrooms have been shown to have anti-cancer benefits.

Iron

Many vegetarians and vegans worry about getting enough iron in their diet. Since meat is traditionally thought of as the main source of iron, vegetarians need to find different sources to help them reach their recommended amount of iron each day.

Brussels sprouts

Brussels sprouts are a viable source of antioxidants, vitamins, folate, and fiber. Plus, they're an excellent source of iron, and an obvious choice in helping to prevent fatigue and other symptoms of iron deficiency.

Lentils

These colorful legumes are packed with vitamins and nutrients including iron, protein, and essential amino acids.

Dried Peaches

Dried fruits pack more nutrients, including iron, per serving. A serving of dried peaches contains about 9% of your daily recommended iron, without weighing you down with lots of sugar and calories.

Pinto Beans

Pinto beans contain a splash of color and a spattering of essential vitamins and minerals.



Dried Apricots

Apricots are an excellent source of iron and other nutrients. Just a handful of dried apricots can provide you with up to 35% of your daily iron intake.

Potatoes

Potatoes are packed with vitamin C, it's easier for your body to absorb the iron it needs.

Broccoli

Cruciferous veggies like broccoli are also filled with vitamin C. This plays a huge role in helping your body absorb and digest the essential iron.





Strawberries

Eating fresh strawberries is a great way to ramp up your daily iron intake.

VI. THE EFFECT OF VITAMIN CONTENT FRUITS AND VEGETABLES in PU

Components of the B vitamin group are coenzymes in energy generating reactions necessary for energy metabolism. B vitamins are essential for optimum wound healing including, thiamine (B1), riboflavin (B2), pyridoxine (B6) and pantothenic acid (B5) in particular. B vitamins are found in cereals, wheat germ, whole grain breads, pasta, and fortified foods.

Each vitamin belonging to this family has its own behavior, action and function but they are clubbed together to form a complete solution to all the body requirements' complex family consist of Vitamin B1, Vitamin B2, Vitamin B3, Vitamin B5, Vitamin B6, Vitamin B7, Vitamin B9, Vitamin B12 and four supplements. The numbers attached to the names of these vitamins are based on the order when they were discovered. Richest among all the vitamin B complex foods are milk, yeast, liver, whole-grain cereals, nuts, eggs, yogurt, fruits, meats and leafy vegetables.

Vitamin B1 is an essential vitamin that aids in conversion of carbohydrates into energy. It also helps regulate normal functioning of heart, muscles and nervous system. Rich food sources are whole and enriched grains, potato, dairy products, sunflower seeds, pork and dried beans.

Riboflavin plays a vital role in forming the red blood cells. Good sources of Riboflavin are liver, milk, dairy products, yeast extracts, meat, eggs, spinach, enriched noodles and mushrooms.

Niacin is another B group vitamin that is essential for normal functioning of the digestive system, skin and nerves. It is richly found in dairy products, bread, yeast, fish, legumes, enriched bread, lean meats, nuts, poultry, fish and eggs.

Vitamin B6 is essential for the synthesis of antibodies and functioning of immune system. Good sources of Vitamin B-6 are sunflower seeds, bananas, whole grains, legumes, beans, nuts, meats, fish, eggs and fortified breads and cereals.

Folic acid is required for healthy growth and development as this vitamin acts a co-enzyme for producing energy. Rich food sources of folic acid are beans, legumes, kidneys, whole grains, peas, citrus fruits, fruit juices wheat bran, dark green leafy vegetables, poultry, pork and shellfish liver. These enriched sources enable the vitamin to function as a co-enzyme in the breakdown of fats and proteins to produce energy.

Vitamin B12 aids in regulating metabolism and promotes a healthy nervous system. B12 is mainly found in all animal food sources like poultry, certain algae, shellfish, yeast extract, eggs, meat and milk and milk products.

VII. CONCLUSION

In this article, various remedy measure of pressure ulcer using natural fruits and vegetables has been discussed. The possibility of significantly enhanced pressure ulcer healing using defined amounts of arginine, vitamin C and zinc appears to exist, although confirmatory studies are required to support current clinical evidence. A 'nutrition solution' that is cheap, safe and efficacious would be an ideal adjunct to current medical and nursing approaches in the prevention and treatment of pressure ulcers. Nutritional support in the nutritionally compromised patient is an essential part of ensuring efficient wound healing in these patients. If a patient's oral intake remains inadequate to meet estimated nutritional requirements, supplemental enteral feeding may be indicated. Try to maximize the nutritional content of texture modified diets, e.g. Pureed, soft, set, liquidized and semi solids, using food fortification strategies. Such strategies may include the use of energy and protein dense foods and commercially available supplements.

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