## **REVIEW OF LITERATURE**

This chapter deals with the selected literature, research as well as non research which were relevant to the study.

From the time of Hipocrates, it has been known that certain foods have disease preventing and disease healing benefits. This knowledge has remained history's secrets for most people. There has been growing body of documented medical evidence that diet both causes and cures diseases. Nutritional awareness and practice remains far from a twentieth century world ideal.

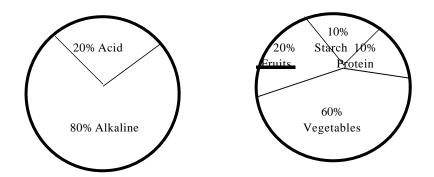
Jensen mentions a survey of 12,000 Americans by the National Cancer Institute (NCI) that revealed a majority continued to practice poor eating habits. Asked by NCI what they had eaten in the last 24 hours, more than 40% of the respondents said they had not even one piece of fruit, and about 20% said they had not eaten even one vegetable. Some 55% of the NCI survey group said they had eaten red meat, and more than 40% had at least one serving of luncheon meat or becon that day. Results like this lead us to believe that the message of good nutrition is not getting out there despite strong evidence that diet can reverse the course of some forms of cancer, heart disease, diabetes and to name a few. Proper nutrition changes the course of disease at its sources i.e. tissue structures. No therapy or drug known to modern medical science can rebuild tissue that has been damaged by disease or trauma. Food alone can accomplish this feat. It is for that reason that nutrition is an indispensable weapon against disease.

Proper food enriches life and well being. Most people are living at only 50% of their full health potential not really sick, but not truly well either. These people need to understand that the same foods that heal by rebuilding damaged tissue will enhance wellness by increasing the efficiency and energy level of under endocrine glands, and all other organs, tissues - including the skin, the muscles, the nerves, the joints, the vein, and the arteries one can feel wonderful if one will simply eat healthful foods and avoid harmful foods.

The amount of food taken have as much of an effect on health as the number of meals are taken. Some persons get long best with one meal a day, other requires two. One common mistake is food in to eat too much, too frequently, taking the next meal before the previous one has been assimilated. This overworks the digestive organs. Others space meals too far apart, depleting their energy stores, and bringing about fatigue before taking the next meal. This, too, places a strain upon the body and the health.

For optimum health, a body should be slightly alkaline. If the body becomes too acidic or too alkaline, illness and disease will result. When we speak of an acid body, we need to understand the pH, or relative acidity alkalinity, in the standard terminology of chemistry. The pH scale is from 1 to 14, with 7 representing neutrality, neither acid or alkaline. Most living things require an acid - alkaline environment of between pH 5.5. and 8 to survive. Outside this range, they become sick and die. The optimum pH range for human tissue is about 7.35 to 7.45 which is very close to neutral, slightly favouring the alkaline side. This is the normal pH for human body therefore we must have six part vegetables, two parts fruit. This will make up the 80 percent of the alkaline forming food required, and one food starch and one protein the 20% acid food required.

Acid Alkaline Proportious



Bernard gives cases of cancer breast cured by grape juice for 30 days, cancer of prostate by pumpkin seed diet and beet juice.

Dewan 1999 Writes.

"...When food does not provide live atoms to the body cells, they become starved and unable to function properly. They became disorganised and start floating around. With an all round deficiency of live atoms from live food, there are places in the body where protective resistance is low. Those floating starved unfunctional cells group together at those weak location and manifest themselves as tumours, ulcers or cancer. ... The simple cure providing a live automatically vibrant food ...fruits and raw vegetables."

Dewan makes following recommendations for treatment of cancers.

- Drinking fresh juice of wheat grass. Raw green or yellow vegetables, especially lettuce. Especially in leakemia
- Remaining on exclusive grass diet
- Eating 2-3 almonds daily
- Taking fresh apricots and fresh asparagus and figs
- Consuming milk and consuming molasses.
- Eating tomatoes, mushrooms, turnips and cabbage.

Cancer patient should take vitamin A, beta carotene 12500 IU, Vitamin C 2000 mg, vitamin E 400 IU, calcium 250 mg in addition to the above food stuff.

Fresh **Apricot** contains high beta carotene, asparagus has high vitamin c, carotene and selenium **cabbage** contain a chemical called indoles that block cancer formation. **Fig** contains a chemical named benzaldehyde and derivatives of benzaldehyde has cured cancer. **Tomatoes** contains the vitamin and a special kind of carotene. **Shiitake mushrooms** have an element lentinan which fortifies the cells against cancer. Anti cancer drug is produced from shitiake mushrooms. **Turnip** contains glucose molaes which is a cancer fighting compound.

Dewan also mentions a study of Potter from university of Minnesota (December 1998) which was printed on journal of Nutrition " the unfolding relationship between diet and colon rectal cancer is to eat more vegetables". He also identified its values in prevention of cancer in high risk group. Another example quoted by Dewan is the study of B.S. Reddy of Valhalla, USA who says "deficiency of vitamins A, C and selenium are associated with any risk of cancer". He also cites, example of Linus Pauling who pioneered the use of mega doses of vitamin C for

cancer around 30,000 to 40,000 mg a day. Vitamin C boosts the immune system, stimulates production of elements to deal with virus infections, and reduces the ability of cancer cells to spread.

## Mindell 1994 says

"...Indoles, found in cruciferous vegetables (cabbage, broccoli, Brussels sprouts), may help to prevent breast cancer by blocking the action of potent oestrogens that trigger the growth of tumours today, onion is high up on the list of foods being investigated by the US National Cancer Institute for its potential cancer fighting properties. People who ate the highest amounts of allium vegetables had lowest rates of stomach cancer. It has more than 100 type of sulphur containing compounds it is also rich in flavonoids, including quercetin, which has been widely studied because it has been shown to deactivate several potent carcinogens and tumour promoters..."

## Mendell mentions

"Alpha-linolenic acid, which is abundant in flexesed, is one of the omega - 3 polyunsaturated fatty acids, similar to those found in fatty fish such as salmon and mackerel. Alpha - linolenic acid has been shown to inhibit the metabolism of another fatty acid, enoleic, which is believed to accelerate the pace at which certain types of cancer cells multiply... the cellular damage caused by free radicals is believed to be responsible for initiating many forms of cancer and premature ageing. Antioxidants can prevent the formation of free radicals or, if formed, can help stop these bad oxygen molecules in their tracts preventing them from binding with other molecules."

Major antioxidants include vitamin c and e, carotenoids such as beta carotene and lycopene selenium, zinc, manganese and coenzyme glutathione, an aminoacid.

Mindell gives the importance of beta carotene and in some cases, vitamin A as a potent weapons against cancer...

"Studies show that consumption of green and yellow leafy vegetables was associated with lower levels of stomach cancer.. consumption of fruits and vegetables has been associated with decreased risk of cancers of the colon and rectum... lower levels of beta carotene with an increased risk of bladder cancer... women with breast cancer had lower concentrations of plasma beta carotene than those free of disease. Lowest ingestion of beta carotene had the highest risk of developing breast cancer after other factors were weighed, including family history, age of first pregnancy etc..."

...High beta carotene intake was associated with a 32 percent lower risk of cervical cancer lower levels of serum beta carotene appear to significantly increase the risk of squamous cells carcinoma of the lung.

Carrots contains a lot of beta carotene so it can reduce wide range of cancers including lung, mouth, throat, stomach, intestine, bladder, prostate and breast.

Mindell quotes that increasing calcium intake lowered the rate of cell turnover in the colon dramatically and cancer is characterised by repid cell turnover.

**Beta - Carotene:** Is found in dark leafy vegetables and yellow and orange fruits and vegetables, beta - carotene is a potent antioxidant. It is converted into vitamin A as the body needs it. People who eat diets rich in beta- carotene have lower levels of many different types of cancer including breast cancer, colon, rectal cancer and have lower levels of coronary artery disease.

**Canthaxanthin:** A carotenoid found in mushroom and used as a food colouring in some cheese has been shown to help prevent breast cancer in laboratory rats.

Lycopene: Which gives red colour to fruits and vegetables protect against certain forms of cancer.

Luten: Extracted from marigold, spinach and kali has anticarcinogenic properties.

**Catechins:** Are bioflavonoids found in green tea and some soft fruits. It reduces the risk of gastrointestinal cancer and may help fight against viral infections.

**Coumarins:** Found in many fruits and vegetables, including parsley, liqorice, cereal grains and citrus fruits, makes blood thin, protect against heart disease and stroke by preventing blood clots and alter a healthy cell into one that is susceptible to cancerous growth.

**Cruciferous Indoles:** Are found in cruiferous vegetables (cabbage, broccoli, Brussels sprouts) helps prevent breast cancer by inducing protective enzymes that deactivate oestogen which is responsible for the growth of oestrogen sensitive tumours.

**Ellagic Acid:** Found in cherries, grapes and strawberries, counteracts synthetic and naturally occurring carcinogens, thus, preventing them from turning healthy cells, into cancerous ones.

**Gutathione:** Acombination of three amino acids, glutamate, glycine and cysteine is a potent artioxidant that deactivates free radicals which can speed up the aging process. It is most potent anticarcinogen in the body. It prevents the harmful side effects of high dose radiation therapy and chemotherapy. Every cell can make glutathione from its components, which are found in fruits, vegetables and raw meat.

**Isoflavones:** Found in legumes such as beans, peas, lentils peanuts block oestrogen receptors thus preventing the growth of an oestrogen dependent tumour cell, the kind of cell prevalent in breast cancer. It also deactivates oestrogen before it can trigger the growth of cancerous cells. Lignans - the flax plant reduces the growth of both precancerous and cancerous cells in the breast and colon, deactivate potent oestrogens that stimulate tumour growth, prevent free radicals from damaging normal cells, making them susceptible to cancerous growth. **Limonene:** A constituent of citrus oil reduces the growth of mammary tumours.

**Lycopene:** A member of the carotenoid family. Lycopene is found in foods such as tomatoes, ruby red fruits and red peppers. There is inverse relationship between blood levels of lycopene and cervical cancer. People with low level of serum lycopene developed bladder and pancreatic cancer.

**Monoterpenes:** The potent antioxidant found in citrus fruits and vegetables such as Parsley, carrots, broccoli, cabbage, ambergines, cucumbers, mint, basil.

**Omega -3 Fatty Acids:** It refers to polyunsaturated fatty acids: docosahexaenoic acid (DHA) and eicosapentaenoid acid (EPA). Omega - 3s are found primarily in marine plant life called phytoplanton and on land in linseed. Fish that feed on omega - 3 rich plants are primary sources of omega - 3 for humans. This protects against heart disease and cancer and can be used in the treatment of arthritis. It reduces the size of the tumour and prevent blood clots.

**Pectin:** Soluble fibers found in fruits such as apples and pulpy portion of grape fruit, reduces cholesterol and helps prevent heart disease. Pectin of citrus fruits protect cancer and prevent cancer cells from clumping together, which promotes metastasis.

**Phonemic Acid:** Found in garlic, linseed, soybean, green tea and citrus fruits are anti oxidants. Which helps prevent free radical damages that to normal cells. Phonemics also neutralise carcinogens.

**Phytaetes:** Found in soyabeans and cereal grains deactivate steroid hormones that promote tumours .

**Polyacetelenes:** Found in umbelliferous vegetables such as carrots, celery, parsnips has prostaglandin's which can contribute to tumour growth as well as destroy benzeopyrene, a lethal carcinogen.

**Protease Inhibitors:** Found in soyabeans, kidney beans, chick peas and whole grains such as flex and oats can prevent the conversion of normal cells to malignant ones in the earliest stages of cancer.

**Psoralens:** Are found in celery, lettuce, lemons and limes can treat psoriasis and lymphomas.

Quercetic: Found in red and yellow onions activates potent carcinogens.

Quiones: Found primarily in rose inhibit carcinogens and protect against cancer.

**Retenoids:** Found in foods of animal origin liver, egg yolk, milk, butter protect from cancer of lung and oral cavity.

**Sulphides:** Found in garlic and cruciferous vegetables deactivate steroid homones that promote the growth of tumours and also inhibit carcinogens and enzymes that can cause cancer.

**Sulphorephane:** Found in broccoli, brussels sprouts, Kale , cauliflower and green onions block carcinogens from damaging healthy cells.

Gala and Gala writes the following cases cured by wheat grass therapy.

...Mr. George Smith 50 years, a resident of Kensas city - USA, suffering from cancer of jaw bone and check, he was given chemo therapy but after operation the wound did not heal. He got wheat grass therapy for seven week. He drank wheat grass juice four times a day, the wound was washed with juice and dressing done after soaking the dressing in wheat grass juice. His 14 year old wound healed and there was improvement in his health.

...As case of blood cancer (leukaemia) completely cured after the continuous treatment of wheat grass juice a cup four times a day.