



## Teacher's Reference

### Holistic Health and Wellness: Physical, Mental, Social and Spiritual

#### • Definition

- ◇ According to the definition set down by the World Health Organization in 1947, "good health" refers to a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. A person cannot be regarded as having good health if he is not in a good state mentally and socially.
  - ◇ In short, the definition of health should include wellness of the four aspects: "physical condition" (physical), "intellectual ability" (mental), "social interaction/integration/relationship with the society" (social) and "emotion/spirituality/meaning of life/religion" (spiritual).
  - ◇ These four aspects operate independently but also coordinate with and influence each other. Only when these four aspects function well, holistic health and wellness can be achieved.
  - ◇ In other words, holistic health and wellness is a state of complete physical, mental, social and spiritual well-being.
  - ◇ The concept of "holism" came from the Greek word "holo", which carries both the meaning of "whole" and "wellness".
  - ◇ A person with "holistic health and wellness" has:
    - Physical Health – The body can function well and is in good condition.
    - Mental Health – Good mental state, capable of memorising, reasoning, analysing and making reasonable decisions, and able to cope with stress in daily life.
    - Social Health – Capable of communicating effectively, establishing and maintaining good relationships with others, taking the initiative to care for and respect others, and having a sense of belonging to the society.
    - Spiritual Health – Capable of dealing with emotions such as happiness, anger, sadness, panic and depression, and having a high-level life goal of pursuing truth, goodness and beauty; or having religious beliefs.
- ◇ The four aspects are interrelated, for example:
    - Physical disability (physical) can limit mobility and thus hinder communication, affecting one's social life (social).
    - Discomfort or pain caused by illness (physical) can lead to depression (mental).
    - People suffering from depression (mental) may be afraid of interacting with others (social), leading to social barriers.
    - Organ failure implies an unhealthy body (physical), which can lead to depression and even suicidal thoughts (mental). It can also affect work and interaction with family and friends (social).
    - It is essential to maintain holistic health and wellness (including physical, mental, social and spiritual).

#### • Knowing Our Body

##### The Major Organs:

###### ◇ Heart

- The main function is to assist blood flow in the circulatory system. Blood provides oxygen and nutrients to different organs of the body for maintaining their functions. It also carries metabolic waste to the kidney and liver for breakdown and excretion.
- Risk factors for heart disease include smoking, overweight, lack of exercise, high blood pressure, high blood lipid (cholesterol) level and diabetes, etc.
- From time to time, there are patients requiring heart transplant because of heart failure. Diseases that require heart transplant include: idiopathic dilated cardiomyopathy, coronary heart disease, valvular heart disease, congenital heart disease.
- The size of the heart and the body should be compatible for both the donor and the recipient. The first successful heart transplant in Hong Kong was conducted in Grantham Hospital in 1992.

#### ◇ Liver

- Liver has many functions which include breaking down toxins such as medicine and alcohol; glucose metabolism to maintain a normal blood sugar level; protein synthesis; producing bile to help digestion and excretion.
- The main causes of liver diseases include hepatitis, alcohol and drug abuse, over-work, family heredity etc. Taking toxic food, such as moldy peanuts or toxic fungi may also cause liver problem.
- Diseases that require liver transplant for recovery include cirrhosis, acute liver failure, liver cancer, metabolic liver disease, and other irreversible liver diseases (e.g. polycystic liver disease).
- Liver is the only organ that can regenerate in the human body. Even if the amount of normal liver cells is less than 25%, it can still grow back to the normal size. Therefore, liver is an organ eligible for living donation. The first successful cadaveric liver transplant in Hong Kong was conducted in Queen Mary Hospital in 1991.

#### ◇ Lung

- The main function of the lung is to transfer oxygen inhaled from the air to the blood for transmission to different parts of the body. It will also discharge carbon dioxide from the blood to the air. The lung has five lobes: the right lung has three and the left lung has two.
- Long-term smoking can cause continuous lung inflammation, stimulate mucus secretion, damage the tracheal wall and lung tissue, resulting in chronic bronchitis, emphysema, chronic obstructive pulmonary disease and lung cancer. Long-term exposure to second-hand smoke can also cause the same type of lung diseases.
- Before lung transplant, the body functions of the patient have to be in a good condition so as to achieve a good result in the treatment. Diseases that require lung transplant for recovery include chronic obstructive pulmonary disease (COPD), idiopathic pulmonary fibrosis, and idiopathic pulmonary arterial hypertension.
- The lung of the donor and the recipient should be compatible in size. The first successful lung transplant in Hong Kong was conducted in Grantham Hospital in 1995.

#### ◇ Kidney

- Kidney is part of the urinary system. It produces urine to discharge excess water, metabolic waste and poisons out of the body. Kidney also helps regulate blood pressure, maintain balance of body fluid and electrolyte (such as sodium, potassium, calcium etc.) and release erythropoietin to stimulate the bone marrow to make red blood cells.
- Common causes of kidney disease include: diabetes, glomerulonephritis, high blood pressure, gout, medicine and polycystic kidney.
- When a patient has reached a final stage of kidney failure, kidney transplant is required for a recovery.
- Human beings has two kidneys, but we can live a normal life with only one kidney. Therefore, kidney is an organ suitable for living donation. Hong Kong has rich experience in kidney transplantation. The first successful cadaveric kidney transplant in Hong Kong was conducted in Queen Mary Hospital in 1969.

#### The Major Tissues:

##### ◇ Cornea

- Cornea is a transparent thin layer in the front part of the eye. It allows light to pass through, refract through the lens, and focus on the retina to form images.
- Cornea can be easily scarred by damage or infection, which can lead to blindness in severe cases.
- Cornea transplant is the most common tissue transplant in Hong Kong. It has a higher successful rate than other organ transplant because the chance of rejection is lower. The first successful cornea transplant in Hong Kong was conducted in 1961.



◇ **Skin**

- Skin is the largest tissue of the human body. Its main functions are to provide protection to the body, prevent invasion of bacteria and micro-organisms, minimise evaporation, regulate body temperature (perspiration) and sensation, produce vitamin D and store fat. Skin in different parts of the body has different sensations. Fingers are the most sensitive, especially in touching. Some parts are quite insensitive, such as the soles of the feet.
- Skin can be easily injured. If the wound is small, the body can produce collagen and fibrin to repair it. If the wound is too large (for example, patient of fire injury), skin grafts will be necessary.
- There are two types of skin transplant, autologous and allograft transplant. Autologous transplant allows a patient to transfer part of his skin to another part of the body. It is mainly used to treat serious burnt and surgical revision. Allograft transplant is to transfer skin from a deceased donor, and the transplant enables the coverage of an extensive burnt area.

◇ **Bone**

- Bones can protect and support the organs inside a human body and provide a strong and flexible scaffold for the muscles. Bone marrow, found in the long bone marrow cavity and gap between spongy bone, will produce red and white blood cells. In addition, bones can store minerals (mainly phosphorus and calcium).
- There are two types of bone transplant, autologous transplant and allograft transplant. The former is the transplant of bones in the same person. The later is the transplant of bone from another person, which can both be a cadaveric or living donation.
- Bone grafts are necessary for reconstruction of large sections of bone, femoral or knee joints, or for repair of wounds and coloboma after resection of osteomas.

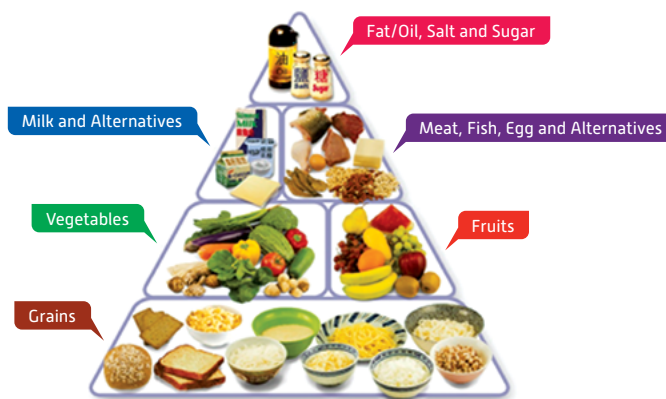
• **Maintaining “Physical Health”**

- ◇ We have many different habits in our daily life, which can be good or bad for our body.
- ◇ Habit is the second nature, we should establish and maintain good habits, including a balanced diet, regular exercise, and balanced routine.

◇ **Balanced diet**

▪ **Food Pyramid**

Balanced diet is a key to stay healthy. Follow the “Healthy Eating Food Pyramid” guide as you pick your food. Grains should be taken as the major dietary source. Eat more fruit and vegetables. Have a moderate amount of meat, fish, egg, milk and their alternatives. Reduce salt, fat/oil and sugar. Trim fat from meat before cooking. Choose low-fat cooking methods such as steaming, stewing, simmering, boiling, scalding or cooking with non-stick frying pans. Also reduce the use of frying and deep-frying. These can help us achieve balanced diet and promote health.



- Eat the Right Food

Since different foods have different nutritional values, it is not possible to obtain all the nutrients we need from a single food. According to the Healthy Eating Food Pyramid, we have to eat a variety of foods among all food groups as well as within each group in order to get different nutrients and meet our daily needs.

- Eat the Right Amount

Neither eating too much nor too little is good for our health. Every day, we need a specific amount of nutrients to maintain optimal health. If we do not eat enough, under-nutrition and symptoms of deficiency are likely to develop; while over-nutrition and obesity can be resulted when we consume an excessive amount of any type of food. Therefore, we have to eat a right amount of food to stay healthy.

- ▲ Eat Most – Grains

- ▲ Eat More – Vegetables and fruits

- ▲ Eat Moderately – Meat, fish, egg and alternatives (including dry beans) and milk and alternatives

- ▲ Eat Less – Fat/oil, salt and sugar

- ▲ Drink adequate amount of fluid (including water, tea, clear soup, etc) every day

[Source: Department of Health, Centre for Health Protection – Health Information].

- Adequate and balanced nutrition obtained from food can facilitate body growth, maintain body function and rehabilitate cells and tissues. Nutrients in food include: carbohydrates, fats, proteins, vitamins and minerals, etc.

- Malnutrition (excess or insufficient nutrition) can harm a person's health

- ▲ Overnutrition, such as excessive intake of total fat, saturated fat, polyunsaturated fat, carbohydrates and sugars, will lead to obesity, overweight and diabetes, which can result in heart disease, kidney disease, stroke and higher risk of other cardiovascular diseases.

- ▲ Undernutrition refers to a lack of essential nutrients such as protein or vitamins. There are many causes of undernutrition, most of which are related to poor eating habits, inadequate nutrition intake and persistent infections. Although nutritional deficiencies are rarely directly fatal, they can impair health and cause illness.

(A) A decrease in dietary fibre intake is associated with a higher risk of colon cancer.

(B) Low fruit and vegetable intake increases the risk of stroke, heart disease and cancers (such as lung and stomach cancer).

(C) Deficiency of iron, vitamin A, zinc, iodine and other microelements may also lead to nutritional deficiency syndrome. Lack of vitamin A can result in blindness.



◇ **Regular Exercise**

▪ **Proven Benefits of Regular Physical Activity**

Regular physical activity of moderate intensity performed on most days of the week improves health in the following ways:

- ▲ Reduces the risk of dying prematurely.
- ▲ Reduces the risk of dying from heart disease.
- ▲ Reduces the risk of developing diabetes.
- ▲ Reduces the risk of developing high blood pressure.
- ▲ Helps reduce blood pressure in people who already have high blood pressure.
- ▲ Reduces the risk of developing colon cancer.
- ▲ Reduces feelings of depression and anxiety.
- ▲ Helps control weight.
- ▲ Helps build and maintain healthy bones, muscles, and joints.
- ▲ Helps older adults become stronger and better able to move about without falling.
- ▲ Promotes psychological well-being.

▪ **Amount of Physical Activity for Good Health**

Physical activity needs not be strenuous to be beneficial. Physical activity equivalents to 150 Calories per day is already associated with health gains. The amount of physical activity is a function of:

- ▲ duration (D)
- ▲ intensity (I)
- ▲ frequency (F)

- People can achieve a moderate amount of physical activity in a variety of ways they like. That is to say, the health impact is the same for a less vigorous exercise performed over a longer time and a more vigorous exercise performed over a shorter period of time. As a simple guide, exercise that makes your heart beat faster and stronger, or makes you feel sweaty or breathe heavily is considered physical activity of moderate intensity.

(Source: Department of Health, Centre for Health Protection - Health Information).

◇ **Balanced Routine**

- A balanced routine and good habits are the basis of “holistic health and wellness”. A regular schedule can help us develop good dietary and working habits, which is good for both our physical and mental health.

◇ **Seek medical treatment when ill**

- Take medicine according to doctor's instructions.
- Prevent the disease from deteriorating. For example, if the disease of kidney or any other organs are not carefully controlled in the early stage, it can lead to organ failure which requires dialysis or organ transplant (such as kidney, heart, lung, liver).

• **Impact of Bad Habits on our Health**

◇ **Smoking**

- Both active or passive smokers have a higher risk of stroke, heart disease and various cancers than non-smokers. Smoking can greatly increase the risk of myocardial infarction, arrhythmia and heart failure. It can also cause blockage of blood vessels and lead to stroke. The tar in cigarettes can damage lung and tracheal cells, increase the chance of airway obstruction, bronchitis, emphysema, lung failure and lung cancer. Smoking can also increase the risk of other cancers such as bladder cancer and prostate cancer; and smokers are 5 times more likely to have periodontal disease than non-smokers. 80% of lung cancer patients and 90% of oral cancer patients are smokers. Apart from that, second-hand smoke contains harmful chemicals and carcinogens, which are equally harmful.

- E-cigarettes heat up and vaporize chemicals, which can produce harmful substances and carcinogens. Hong Kong Council on Smoking and Health commissioned the Hong Kong Baptist University to test 13 e-cigarettes on the market and found that they contained a variety of harmful and carcinogenic materials and can interfere with thyroid secretion, affect reproductive ability and foetal development. In addition, the safety of electronic devices in e-cigarettes is questionable, and there have been examples of e-cigarettes exploding when heated or charged.

(Source: Department of Health, Centre for Health Protection - Health Information).

#### ◇ **Drug abuse**

- Drug is extremely harmful to our human body and can result in many sequelae, including brain damage, frequent urination and incontinence, liver and kidney damage, and heart failure, which in severe cases can be fatal.
- Many drugs are addictive and can affect a person's emotions and behaviours. When a drug taker is angry, anxious or depressed, drugs can further strengthen these emotions. Even for drugs that have a sedative effect, such as tranquillisers, it can induce impulsiveness and affect a person's social behaviour and self-control ability, leading to criminal behaviour that harms oneself and others, with devastating consequences.

[Source: Narcotics Division, Security Bureau]

#### ◇ **Alcohol abuse**

- Minors should not drink alcohol. Alcoholism is defined as an addiction to alcohol that causes cognitive, behavioural, physical, social or interpersonal dysfunction or impairment.
- Excessive drinking can damage health, especially the brain, heart, liver, pancreas and immune system. It can lead to arrhythmias, cirrhosis and liver failure and increase the risk of cancer. Alcohol consumption during pregnancy can affect the foetus. Alcohol is addictive and can lead to a variety of physical and mental health problems, family problems, and could be harmful to oneself and others.

#### ◇ **Video game addiction**

- Addiction to video game can lead to social alienation and social barriers.
- Focusing on screen and keyboard control can be harmful to our eyes, spine and wrist, etc.
- Indulging in the virtual world will result in a waste of time and money, and hinder one's study.

- ◇ Drug abuse, smoking, alcohol abuse and addiction to video games are harmful to our health. They may lead to various types of diseases and in certain serious cases, may result in organ failure, then requiring organ transplant.

#### • **Maintaining "Mental Health"**

- ◇ Mental health is an important part of "holistic health and wellness". It is very important to maintain mental health.
- ◇ Mentally healthy people are in good mental state, capable of memorising, reasoning, analysing, making reasonable decisions, and coping with stress in daily life.
- ◇ People with good mental health will see "changes" as "challenges", instead of a source of stress.
- ◇ A person's physiological system will react to his mental state. In response to stress, our blood will contain higher level of activated platelets and lipids such as cholesterol. This will accelerate atherosclerosis in the arteries walls, harden and narrowing the arteries, increase blood pressure and the chances of heart attack and stroke. Short-term stress can also affect our immune system and increase the chances of contracting infectious diseases.
- ◇ To maintain good mental health and relieve stress, we can do exercise and take part in social activities, etc.
- ◇ **Exercise**
  - Exercise can help us deal with stress. Continuous exercise increases our instinct to deal with all kinds of stress.
  - During exercise, the brain releases endorphins (substances similar to natural morphine), which can make one feel happy.
  - Endorphins inside our body can help us relax, control our emotions and relieve stress.
- ◇ **Leisure activities and hobbies**
  - People are born to enjoy playing. Participating in different recreational and leisure activities will bring people a sense of pleasure.
  - A positive mental state can be achieved through healthy leisure activities (such as family chats, family trips, outings). People who enjoy leisure activities and have hobbies are more likely to be in a good mental state.
  - Hobbies such as playing chess, fishing, keeping pet etc., can help us relax and are good stress relief method.



- **Maintaining “Social Health”**

- ◇ Human being is a social animal, as well as a member of a community. A socially healthy person is able to interact effectively with others, maintain intimate relationships, and respect and tolerate others.
- ◇ People who are “socially healthy” are also able to care for, love and respect others. They can contribute to and build a sense of belonging in their family, the community and society in which they live.
- ◇ **Family**
  - Family is a major component in a society. Chinese places much value on family. Whenever at festivals, Chinese families would meet up and pay respect to each other. This shows the importance of kinship and family to Chinese people.
  - Family is also an important element in other culture. In the Western world, a family made up of parents and children is the core unit in the society. In a family, good parent-child, marital and interpersonal relationships are very important for the physical and mental health of all members of the family.
  - Influenced by the Confucian culture, many people in Hong Kong have the traditional concepts of “respect for superiority and seniority”. However, the rapidly changing social environment in recent years and the differences in life experience may easily create gaps between generations. The generation gap may then lead to disagreements in a family.
  - Tolerance, communication and caring are the keys to solving problems and building good relationships.

- Putting oneself in his family's shoes and trying to understand the difficulties of others can help reduce conflicts. Taking action to care for their needs would also help maintain harmony in one's family.
- If there is a patient of chronic disease in the family, there will be a great deal of pressure on both the patient himself and the family members taking care of him. The patient will feel frustrated when others cannot truly understand his feelings. Family members who take care of him will feel physically and mentally exhausted when they have to give up their time for the patient.
- Life is hard to control. One may not be able to avoid illness and accident but if one has the care and support of family members and can stay positive and optimistic, it is always the best way to cope with adversity.

- ◇ **Friends and community**

- As we are living in a society, we are bound to come into contact with many individuals, such as neighbours, classmates, teachers and friends. A good social life can help strengthen our self-confidence, reduce depressed emotion and help build an optimistic attitude.
- If you can maintain your “social health”, the help and care of your friends can certainly help improve your “physical” or “mental” health. Therefore, one should not isolate themselves even in the face of illness. Try to accept the care of relatives and friends, communicate with other patients, encourage and support each other. This would be beneficial to your recovery.

## • **Maintaining “Spiritual Health”**

- ◇ Spiritual health will affect both mental and physical health. It is an essential part of “holistic health and wellness”.
  - ◇ Spiritually healthy people are capable of dealing with emotions such as happiness, anger, sadness, panic and depression; establishing a high-level life goal of pursuing truth, goodness and beauty; and having a clear outlook on the world.
  - ◇ Religion/philosophy/clear outlook on the world can explain the meaning of existence of an individual, and provide answers to questions such as “What is the meaning of my existence?” “Where did I come from? Where will I end up?” “Why am I born in this world?” “How can I find meaning and satisfaction in my life?” “What is the truth?”.
  - ◇ If people find the meaning and purpose of life, and know how to fulfil their dreams, goals or missions, they will have the will power and motivation to survive, and be able to deal with emotions such as happiness, anger, sadness, panic and depression.
- ◇ Some people have a clear direction in life and a good emotion stance, even though they are physically disabled or in difficulties (such as illness, misfortune, accident, etc.), they are able to face adversity positively and live a meaningful life.
  - ◇ From a religious point of view, faith is the foundation of spiritual health. People with faith have high confidence, hope and commitment in the religion they believe in. True religions give meaning and purpose to one’s existence, provide moral direction (such as the pursuit of “truth, goodness and beauty”), and define what is meaningful in one’s life for the believers.
  - ◇ This belief must include the pursuit of “holistic health and wellness”. Through religious discipline and encouragement, fellowship and spiritual formation, believers will gradually develop perseverance and willpower and practise their beliefs in their daily lives. Therefore, “spiritual health” is also an important cornerstone of “holistic health and wellness”.





## The Case Study of Ng Miu-Man, Maggie

### • The First Transplant

- ◇ Ng Miu-Man, Maggie studied Journalism in the University. She was diagnosed end-stage kidney failure at the age of 23. According to the doctor, the function of her kidney was already very poor at that time. There was no other way of treatment but to receive dialysis for the rest of her life, unless someone was willing to donate a kidney to her. Her sister Ng Miu-Chong, a student nurse at that time, suddenly found out that her sister Maggie was in serious illness. Without much hesitation, Miu-Chong decided to donate her kidney to save Maggie.
- ◇ Instead of worrying about death, the decision of Miu-Chong has given Maggie hope. Both Maggie and Miu-Chong recovered after the transplant operation. Thereafter, Maggie started a new life, she got married and had children.

### • The Second Transplant

- ◇ 30 years later, Maggie suffered from kidney failure again and her health deteriorated badly. The doctor told her that there were only two choices, dialysis or transplant. Maggie originally intended to live on dialysis for the rest of her life as she did not want anyone else to take risk again. In the last 30 years, whenever Miu-Chong was not feeling well, she would tend to relate it to her kidney donation.
- ◇ However, dialysis treatment was not a total cure for her disease. Maggie's other sister Miu-King did not want to see her suffering. She believed that living donation from close relative would reduce the chance of rejection. She then volunteered to donate her kidney to Maggie. The operation was successful and both of them have recovered well.

### • The Love of the Ng's Sisters

- ◇ Maggie said that her family acted calmly in the two transplant incidents. The Ng's sisters grew up together and had a close relationship. They are sisters and friends of each other and the relationship would not change after the transplant. They have demonstrated how they faced the adversity in life together.
- ◇ Maggie said that her positive attitude was inherited from her father. When facing difficulties in life, her father would always find ways to solve them.
- ◇ The three sisters continued to participate actively in voluntary work to promote organ donation, hoping that their own experience could inspire and help more people in needed.