NMDM121
MEDICINAL FOOD SCIENCE

Session 10
Traditional Chinese Medicine (TCM)
Nutritional Medicine Department
Session Summary

- Explain the basic tenets and principles of Traditional Chinese Medicine (TCM).
- Classify the different aspects of nature and of the body according to the law of the Five Elements.
- Analyse common foods from an energetic perspective involving Yin and Yang and the Five Elements.
Introduction to TCM

• Based upon the study of humans in harmonious relationships with themselves – in mind, body, spirit and with the universe around them.

• The basic principles of TCM are rooted in the Taoist philosophy of yin and yang. These two polar opposites organise and explain the ongoing process of natural change and transformation in the universe.

• The energy field between the poles of yin and yang gives rise to the universal primal force qi.

(Kastner, 2004)
Introduction to TCM

• The concepts of Chinese Nutrition, or the effects of food on our health, have a 3000 year tradition in China. Records dating back as far as the third century BC state that there was little difference between the application of foods and that of medicine.

• Chinese nutritional therapy is closely related to acupuncture and medicinal plant medicine and follows the same diagnostic principles. It focuses on the qualitative effects of foods on the body. The term “qi” is of vital significance in this context.

(Kastner, 2004)
Introduction to TCM

• The body extracts and absorbs *qi* from foods. Foods, therefore, are mild therapeutic agents that help the body stay balanced, or bring it back into balance.

• Food classification follows the same criteria used for Chinese medicinal herbs:
  • Thermal nature – hot, warm, neutral, cool, cold.
  • Flavour – sweet, acrid, sour, bitter, salty.
  • Organ network – spleen, stomach, lung, large intestine, kidney, bladder, liver, gallbladder, heart, small intestine.
  • Direction of energy flow – upbearing, floating, downbearing, falling.

(Kastner, 2004)
Introduction to TCM

• Western diets are evaluated based on kilojoule, protein, carbohydrate, fat, vitamin, mineral and phytochemical content.

• Chinese diet – foods are considered for their flavours, energies, movements and common actions.

• Chinese diet therapy depends on interaction between food Qi and the properties of the foods and their effects on health.

(Kastner, 2004)
Introduction to TCM

• The TCM practitioner never treats only part of the body – a disease state is not perceived as a sole entity.

• Signs and symptoms are taken into account along with how they relate to the rest of the person – how the client is presenting at the time of the consultation.

• Treatment does not aim for overnight miracle cures – diet plays an important role.

(Kastner, 2004)
Basic Principles of TCM
**Qi**

- “Life force” or “life energy” is of primary importance to TCM.
- Sufficient and freely coursing *qi* signifies vitality, health and the body’s capacities-flow via interconnected pathways or meridians.
- When *Qi* is flowing unobstructed, all life’s processes are in operation in a rhythmic and harmonious way.
- Disease obstructs *Qi* – when *Qi* is obstructed, the life-force is weakened (as can be seen by signs and symptoms of illnesses).
Qi

- The body gathers its daily energy from three sources:
  - Congenital constitution essence (*jing*)
  - *Gu qi* (food *qi*) from food
  - Ancestral (air) *qi* (*zong qi*)

(Kastner, 2004)
Qi is in constant movement; occurs in 4 different directions:

- Ascending
- Descending
- Entering, moving inwards
- Leaving, moving outwards

(Kastner, 2004)
Qi

• Obstructed Qi results in blockages and may cause aches and pains or stiffness in the joints (musculoskeletal conditions).

• Qi moving in the wrong direction is called Rebellious Qi e.g. Stomach Qi should be downward, however in nausea and vomiting it rebels and moves upwards.

• Treatment is aimed at re-establishing the correct movement of Qi and ensuring there is an abundance of Qi in the body.
The Tao

• Means the “way” of self-cultivation and the method of maintaining the harmony between this world and beyond.

• Taoist view, to develop an awareness of the laws of nature as a major component of personal growth and evolution.

• It is believed that people’s attitudes and actions are inseparable from the physical phenomena and that one can alter the reality of the other.
The Tao

• Taoism is admired by other cultures and followers live in harmony in keeping with the laws of nature.

• Belief is to seek prevention rather than cure – to take precautions against dysfunction.

• One philosophy states – ‘To take medicine only when you are sick is like digging a well only when you are thirsty – is it not already too late?’
Yin and Yang

• They are the fundamental principles at the core of all existence – represent duality, obvious in everyday life.

• Every object or phenomenon in the universe consists of two opposite aspects.

• While Yin and Yang control each other, they are not fixed but in a state of constant motion.

• Because of their mutual support, the losing or gaining of one aspect will inevitably influence the other e.g. if Yin is in excess, then Yang will be weak and vice versa.
## Yin and Yang

<table>
<thead>
<tr>
<th>Yin</th>
<th>Yang</th>
<th>Yin</th>
<th>Yang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moon</td>
<td>Sun</td>
<td>Depression disorders</td>
<td>States of agitation</td>
</tr>
<tr>
<td>Down</td>
<td>Up</td>
<td>Dull pain</td>
<td>Sharp pain</td>
</tr>
<tr>
<td>Heaven</td>
<td>Earth</td>
<td>Tropical fruit</td>
<td>Meat</td>
</tr>
<tr>
<td>Structure</td>
<td>Function</td>
<td>Dairy Products</td>
<td>Acrid spices</td>
</tr>
<tr>
<td>Receptive</td>
<td>Creative</td>
<td>Steamed foods</td>
<td>Grilled foods</td>
</tr>
<tr>
<td>Body interior</td>
<td>Body Surface</td>
<td>Urine clear; frequent</td>
<td>Urine; Dark, conc.</td>
</tr>
<tr>
<td>Bones/Organs/sinews</td>
<td>Skin/muscles/body hair</td>
<td>Low blood pressure (hypotension)</td>
<td>High blood pressure</td>
</tr>
<tr>
<td>Quiet voice</td>
<td>Loud voice</td>
<td>Viscera</td>
<td>Bowels</td>
</tr>
<tr>
<td>Pale face</td>
<td>Red Face</td>
<td>Wheat</td>
<td>Oats</td>
</tr>
<tr>
<td>Likes warmth</td>
<td>Likes Cold</td>
<td>Passive</td>
<td>Active</td>
</tr>
<tr>
<td>Chronic Illness</td>
<td>Acute Illness</td>
<td>Insidious illness onset</td>
<td>Acute illness onset</td>
</tr>
<tr>
<td>Hypofunction</td>
<td>Hyperfunction</td>
<td>Tongue pale; white fur</td>
<td>Tongue red, yellow; yellow fur</td>
</tr>
</tbody>
</table>

(Kastner, 2004)
Yin and Yang

- The Four Basic Interactions of Yin and Yang:
  1. Yin and yang are opposites (Opposites)
  2. Yin and yang are divisible but inseparable (Mutual dependency)
  3. Yin and yang are rooted in each other (Mutual dependency)
  4. Yin and yang counterbalance each other (Counterbalance)
  5. Yin and yang mutually transform each other (Mutually transform)

- All therapy principles in TCM intend to either retain or reestablish the balance of yin and yang. Complete balance of yin and yang means perfect health.

(Kastner, 2004)
Five Element Theory

• The theory of the five phases came into being in the 4th century BCE.

• The Taoist model of the five phases (or elements) is an extension of the concept of yin and yang developed earlier. It relates the entire spiritual, emotional, material and energetic phenomena of the universe to five basic phases (earth, metal, water, wood and fire).

• These phases do not exist in isolation from each other, but influence each other in a constant, dynamic interaction.

(Kastner, 2004)
Five Element Theory
# Five Element Theory

<table>
<thead>
<tr>
<th>The Five Phases</th>
<th>Earth</th>
<th>Metal</th>
<th>Water</th>
<th>Wood</th>
<th>Fire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth</td>
<td>Fertility, ripening, harvest, inner core (centre), stability (being grounded), sweet flavour</td>
<td>Reflection, change, death, acrid flavour</td>
<td>Flow, clarity, cold, birth, salty flavour</td>
<td>Growth, bending, childhood, expansion, sour flavour</td>
<td>Heat, flare-up, upbearing, bitter flavour</td>
</tr>
</tbody>
</table>

(Kastner, 2004)
Five Element Theory

- The three phases:
  1. Regenerating (sheng) cycle
  2. Restraining (ke) cycle
  3. Rebellion (wu) cycle

(Kastner, 2004)
Five Element Theory

• Interaction of these elements bring harmony – at end of year the sun completes its course and everything starts from the beginning which is the “Spring”.

• When a balance is maintained, this ensures normal growth and development of things.

• The concept of the five phases plays an important role in classifying foods and Chinese medicinal herbs.
Chinese Dietetics

• TCM makes a close connection between foods and medicinal herbs for therapy, since their classification follows the same criteria.

• General dietary principles have evolved in China over thousands of years of observation and reflection.

• Select foods by their properties and according to the body’s needs e.g. some are cooling, some are warming, some aid digestion, some benefit the lungs etc.

• Selection of foods awareness has developed in Chinese society over the centuries and has become part of traditional methods.

(Kastner, 2004)
Chinese Dietetics

- This traditional way of eating has become very popular over the last decade – as people are looking for ways to improve their dietary habits to help them lose weight if obese, feel lighter and have more energy.

- Conversely, this method can also be used to build and tonify the body, particularly during convalescing.
Chinese Dietetics

There are four basic criteria for energetic classification of foods:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Nature</td>
<td>Hot, warm, neutral, cool, cold</td>
</tr>
<tr>
<td>Flavour</td>
<td>Sweet, acrid, sour, bitter, salty</td>
</tr>
<tr>
<td>Organ Network</td>
<td>Spleen, stomach, lung, large intestine, kidney, bladder, liver, gallbladder, heart, small intestine.</td>
</tr>
<tr>
<td>Direction of movement</td>
<td>Upbearing, floating, downbearing, falling</td>
</tr>
</tbody>
</table>

(Kastner, 2004)
The Five Flavours (Wu wei)

- The five flavours are the oldest system of food classification in TCM.
- Flavours can be divided according to the yin or yang quality.
- In addition to their specific yin/yang effect the five flavours each belong to one of the five phases. Thus each flavour is closely associated with the organ network linked to the phases influenced by the flavour.

(Kastner, 2004)
# The Five Flavours

<table>
<thead>
<tr>
<th>Flavour</th>
<th>Channel and Organ</th>
<th>Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bitter</td>
<td>Heart and Small Intestine</td>
<td>Fire</td>
</tr>
<tr>
<td>Sweet</td>
<td>Spleen and Stomach</td>
<td>Earth</td>
</tr>
<tr>
<td>Acrid</td>
<td>Lung and Colon</td>
<td>Metal</td>
</tr>
<tr>
<td>Salty</td>
<td>Kidney and Bladder</td>
<td>Water</td>
</tr>
<tr>
<td>Sour</td>
<td>Liver and Gall Bladder</td>
<td>Wood</td>
</tr>
</tbody>
</table>

(Kastner, 2004)
# The Five Flavours

## Food Classification According to Flavour

<table>
<thead>
<tr>
<th>Sweet</th>
<th>Acrid</th>
<th>Salty</th>
<th>Sour</th>
<th>Bitter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almond</td>
<td>Celery Root</td>
<td>Duck</td>
<td>Apple</td>
<td>Basil</td>
</tr>
<tr>
<td>Apple</td>
<td>Chilli</td>
<td>Ham</td>
<td>Apricot</td>
<td>Chicory</td>
</tr>
<tr>
<td>Anise</td>
<td>Cinnamon</td>
<td>Oyster</td>
<td>Grape</td>
<td>Celery root</td>
</tr>
<tr>
<td>Barley</td>
<td>Fennel</td>
<td>Pork</td>
<td>Lemon</td>
<td>Coffee</td>
</tr>
<tr>
<td>Cheese</td>
<td>Garlic</td>
<td>Salt</td>
<td>Pineapple</td>
<td>Dandelion</td>
</tr>
<tr>
<td>Pork</td>
<td>Ginger</td>
<td>Soy Sauce</td>
<td>Orange</td>
<td>Lettuce</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>Onion</td>
<td></td>
<td>Plum</td>
<td>Parsley</td>
</tr>
<tr>
<td>Pear</td>
<td>Paprika</td>
<td></td>
<td>Kiwi</td>
<td>Tea</td>
</tr>
<tr>
<td>Rice</td>
<td>Thyme</td>
<td></td>
<td>Adzuki Beans</td>
<td>Tobacco</td>
</tr>
<tr>
<td>Spinach</td>
<td>Watercress</td>
<td></td>
<td>Tomato</td>
<td></td>
</tr>
</tbody>
</table>

(Kastner, 2004)
## The Five Flavours: Usage & Function

<table>
<thead>
<tr>
<th>Flavour</th>
<th>Usage</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweet</td>
<td>Some are used for mild analgesia (e.g. acute pain – licorice tea). Also used as a moderate treatment for deficiency symptoms</td>
<td>Tonic – tonifying, harmonising and slowing down acute symptoms</td>
</tr>
<tr>
<td>Mild</td>
<td>Oedema. Damp diseases. Rheumatism</td>
<td>Drawing out of water. Strengthening urination</td>
</tr>
<tr>
<td>Salty</td>
<td>Constipation, hardness of the muscles or glands</td>
<td>Flows downwards. Softens hardness</td>
</tr>
<tr>
<td>Sour</td>
<td>Checks perspiration and diarrhoea</td>
<td>Astringent, absorbs (contracts)</td>
</tr>
</tbody>
</table>
Thermal Nature: The Five Energies

- Independent of its preparation, every food has a “natural” energetic, basic thermal nature that has a specific effect on the body.

- Five energies are:
  - Hot
  - Warm
  - Neutral
  - Cool
  - Cold

(Kastner, 2004)
Thermal Nature: Hot

- Hot foods increase yang, speed up qi, activate, warm, disperse, move upward and outward, warm the bowels and viscera, eliminate external and internal cold and mobilise defense energy.

- Example:
  - Treatment of cold symptoms
  - Ginger, cinnamon, lamb, chilli

(Kastner, 2004)
Thermal Nature: Warm

- Warm foods strengthen yang and qi, warm the body, bowels and viscera, and warm and strengthen the centre burner.

- Example:
  - Treatment of cold symptoms
  - Fennel, chicken, beef, oats

(Kastner, 2004)
Thermal Nature: Neutral

• Neutral foods build up qi and body fluids, and stabilise and harmonise the body.

• Example:
  – Treatment of qi vacuity
  – Honey, rice, potatoes

(Kastner, 2004)
Thermal Nature: Cool

- Cool foods supplement body fluids and blood, slow down qi, and clear heat.

- Example:
  - Treatment of heat symptoms
  - Yoghurt, soymilk, wheat

(Kastner, 2004)
Thermal Nature: Cold

- Cold foods create cold, cool internal heat, and have a calming effect on the spirit (shen).
- Example:
  - Treatment of heat symptoms
  - Watermelon, dandelion, orange

(Kastner, 2004)
# Flavour & Energy in Disease

<table>
<thead>
<tr>
<th>Energy</th>
<th>Flavour</th>
<th>Therapeutic action</th>
<th>Nature of disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm, Hot</td>
<td>Acrd, Sweet</td>
<td>Removes cold</td>
<td>Yin excess</td>
</tr>
<tr>
<td>Cold</td>
<td>Sweet, Salty</td>
<td>Nourishes Yin</td>
<td>Deficient Yin</td>
</tr>
<tr>
<td>Warm</td>
<td>Acrd, Sweet</td>
<td>Assists Yang</td>
<td>Deficient Yang</td>
</tr>
<tr>
<td>Cold</td>
<td>Sour, Bitter</td>
<td>Clears heat</td>
<td>Yang excess</td>
</tr>
<tr>
<td>Warm</td>
<td>Sweet</td>
<td>Helps Qi</td>
<td>Qi deficiency</td>
</tr>
<tr>
<td>Cool</td>
<td>Sweet</td>
<td>Reduces heat</td>
<td>Yin deficiency</td>
</tr>
<tr>
<td>Warm</td>
<td>Sour</td>
<td>Removes coagulation</td>
<td>Qi stagnation</td>
</tr>
</tbody>
</table>
TCM Cooking Methods

• Chinese dietetics recognises over 50 different ways of preparing foods.

• These ways in which foods are prepared exert the most significant influence on the qi or thermal nature of foods.

• Preparation methods can be categorised into two categories:
  – Cooling Cooking methods (increase the yin)
  – Warming Cooking methods (increase the yang)

(Kastner, 2004)
TCM and Daily Rhythms

“Meals should always be taken at the proper time. This makes them easier to digest”.

“Yang qi increases around noon and is weak at sunset. Thus eat a hearty breakfast, a small lunch and a frugal meal in the evening and at night”.

(Kastner, 2004)
TCM and Daily Rhythms

○ Breakfast:

• Since the stomach is at its optimal digestive capacity between 7-9am the morning meal should be substantial and fortifying.

• Optimal breakfast foods are energetically warming foods, prepared with warm cooking methods that stimulate the body and do not spread dampness.

(Kastner, 2004)
TCM and Daily Rhythms

- Lunch:
  - Preferably substantial, warm meal that strengthens the centre burner.
  - Warming grains and vegetables are highly recommended as well as fish, poultry, some lean meat and salad.

(Kastner, 2004)
TCM and Daily Rhythms

- **Evening Meal/Dinner:**
  
  - Yang and digestive capacity decrease and yin increases.
  
  - Should be small and support the growing yin for example warm grain and vegetable dishes, possibly some meat, moderate amounts of dairy or soy products and a small amount of beer.

  (Kastner, 2004)
TCM and Seasonal Rhythms

- A multitude of the body’s internal processes follow natural external changes of the seasons.

- By developing eating habits and choosing foods that are in tune with the seasons, we can integrate ourselves into these rhythms in a natural way.

- Chinese dietetics views this as beneficial for promoting natural qi flow, compensating for weather effects and preventing potential development of disorders.

(Kastner, 2004)
TCM and Seasonal Rhythms

o Spring
  • Mildly warming foods with upbearing movement: Fennel, rice, buckwheat; Sour flavours; Foods from the wood phase green in colour with neutral, cool or warm energy: Green tea, sprouts, spinach, celery.

o Summer
  • Should contain calming and cooling foods e.g. more vegetables and less meat. Fruit is beneficial as it stimulates the Yin and balances the Yang; Cooling foods.

o Autumn
  • Is cooler and therefore more meat may be introduced with vegetables and fruit still included.

o Winter
  • Requires plenty of Yang foods, more meats, more high-protein foods and even some alcohol.

(Kastner, 2004)
TCM: General Dietary Principles

- Foods have an affinity to particular channels and organs.
- Balanced diet should be varied by tastes, grains, meats, vegetables and a variety of hot, cold, warm and cool foods.
- An excess intake of one particular food can impair certain organs and result in illness.
- Foods are changed by cooking e.g. frying, roasting, grilling, smoking and adding lots of spices makes food more Yang and boiling, steaming, stewing makes foods more Yin.
- Chinese believe in eating foods that are in season only.
TCM: General Dietary Principles

• It is considered unhealthy to take cold drinks with foods – believed to impede digestion.

• Dairy foods are seldom eaten by Chinese cultures – cause damp and phlegm to accumulate in the body (particularly spleen)

• The Earth is at its strongest between 7am and 11am meaning one should eat a substantial breakfast in the morning, a large lunch and a light evening meal as the Earth’s energy is weakest at night. This is often contradictory to the way many people eat.
TCM: Life Stage

Infants:
- Should be given little meat, grains, fruit, raw or cold foods.
- More soft grains and cooked vegetables; reduces phlegm and diarrhoea.

Adolescents:
- Increased stomach fire increases appetite.
- Avoid overheating stomach via greasy, spicy foods; leads to acne.
TCM : Life Stage

Adults:
• Careful to balance the five flavours.
• Eat a variety of foods but with simpler combinations.
• Avoid overeating causes stagnation.

Older adults:
• Kidney and stomach fires weaken.
• Need to eat similar to infants.
Chinese Dietetics Summary

- Little meat is eaten, except in Winter
- Plenty of vegetables and grains
- Little fruit, except in Summer
- Few dairy products
- 4 to 5 small meals per day
- Chinese diet is high in fibre, most food is cooked and does not include iced drinks.
Session Summary

- Review the TCM concepts presented in this session in regards to:
  - The underpinning principles and philosophies of TCM.
  - Dietetic principles of TCM within food as medicine practice.
References

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