Appendix 5

Dietary Instructions and the Treatment of Excess Phlegm

An Instruction Booklet for Parents

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1. Introduction

This guidebook is meant to provide basic dietary guidance, with an emphasis on diet for the conditions of excess phlegm that are characteristic of young children.

Excess phlegm may be manifested in a runny nose and a cough, but also in inflammation of the ear and respiratory problems.

This guidebook contains information regarding the production of phlegm in the body and the ways of treating it.

2. What causes phlegm?

The secretion of phlegm is caused by two factors: a) Excess internal heat, and b) a diet that encourages the production of phlegm. We first consider the concept of internal heat and its relationship to the secretion of phlegm.

3. What is internal heat?

Internal heat is heat that reflects metabolic activity, as opposed to high body temperature (fever), which is typical of activity of the immune system. When the body runs a fever, it raises its temperature, making it easier for the immune system to fight bacteria and viruses. The high temperature is adjusted to suit the activity of the cells of the immune system, and, at the same time, impairs the functioning of bacteria. When someone is playing basketball and feels as if he or she is burning up, a thermometer inserted into his or her mouth will read perhaps only half a degree higher than normal. Physical activity increases internal heat, but some people suffer from internal heat that is unrelated to physical activity. People with high metabolism are thin and active, sleep little, are often thirsty, and eat large quantities without gaining weight. Their bodies are working in high gear. People who suffer from low metabolism, on the other hand, eat little and gain weight, are introverted and pale, sleep a lot, and suffer from cold. Children in general suffer from internal heat.

4. Why do children suffer from internal heat?

Childhood illnesses once facilitated the release of internal heat through the skin lesions that are typical of some of them. When the body suffers from excess heat, it releases it by sweating. If the heat is substantial, the body develops a skin lesion. For example, when we come down with the flu, our body raises its temperature in order to fight the illness. After a few days, the illness subsides, the temperature decreases, and cold sores develop. When the illness passes, the body finds itself with excess heat that it no longer needs. This heat is internal and is released via skin lesions, which are external. Children release heat after an illness by developing a rash.

As children tend no longer to contract the childhood illnesses that once facilitated the release of heat that accumulates in the course of growth, children today tend to suffer from significant internal heat. Ailments such as inflammation of the ear, asthma, skin problems, hyperactivity, sleep problems, and uneasiness were rarer in the past, when childhood illnesses were more common. The fatty diet, stormy Western lifestyle, high levels of radiation, and processed food that are common today all increase the high level of internal heat that is not released through childhood illnesses, making heat-related illnesses more common. Today, on average, one out of every six children is diagnosed as suffering from asthma, and nine out of every ten children at least suffer from inflammation of the ear. At the same time, skin ailments are growing increasingly common, and the percentage of children suffering from hyperactivity increases from year to year.

5. Additional Causes of Internal Heat

Although internal heat is characteristic of most children by nature, some factors are liable to increase internal heat. Antibiotic use may produce internal heat in the long run, and the same is true of vaccinations. The most common cause of internal heat, however, is emotional imbalance. Fears, anger, hardship, stress (even positive stress, such as that generated by a child's anticipation for his or her birthday) has the potential to produce internal heat.

6. The Relationship between Excess Heat and Over-Secretion by the Mucous Membrane

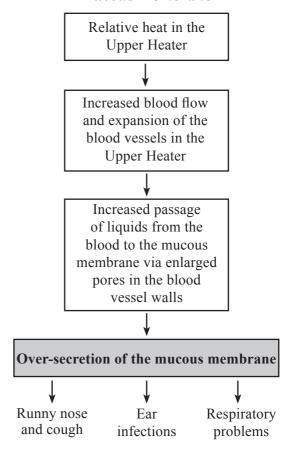
Over-secretion by the mucous membrane that coats all internal cavities in the upper body (the nose, ears, throat, and lungs) is partly linked to the accumulation of heat in the upper body. Excess heat naturally finds its way upward, concentrates in the upper body, and causes increased blood flow. The heat and the increased blood flow cause the blood vessels to expand. The walls of the blood vessels have pores that enable the water molecules to move from the blood to the tissue, and the expansion of the blood vessels increases the size of the pores in their walls and facilitates the undue flow of liquid from the blood to the tissue. The undue flow of liquid becomes excess phlegm secreted by the mucous membrane, the visible manifestations of which are a runny nose and a cough. Some of the Western medications that are used to treat over-secretion by the mucous membrane cause the blood vessels to contract. and decrease the amount of phlegm secreted.

The substantial heat makes the phlegm thick and viscous, and the phlegm accumulates in the upper respiratory system. This state is characteristic of a large portion of common childhood illnesses in the modern era, including ear infections (inflammation of the ear) and respiratory problems.

In the ear – the viscous phlegm blocks the tube leading from the middle ear to the throat, transforming the middle ear into a closed cavity in which bacteria and viruses can thrive.

The respiratory tract – Swelling of the mucous membrane and the build-up of phlegm in the respiratory passages cause them to narrow and provides fertile ground for the development of bacteria and viruses.

Heat and Over-Secretion by the Mucous Membrane



7. Table of Signs of Heat and Cold

Key symptoms appear in **bold**. Most children display mixed signs, but the overall diagnosis of extreme states is clear cut.

Appearance	Heat	Cold
Body temperature	Body hot to the touch, or fever	Body cold to the touch
Attitude toward temperature	Desire to remove clothing or blanket	Aversion to cold
Face color	Flushed face	Pallor
Runny nose	Yellow nasal discharge	Bright nasal discharge
Activeness	Overly active	Relaxed, introverted behavior
Falling asleep	Difficulty falling asleep	Falls asleep easily
Sleep	Disturbed sleep	Deep sleep
Appetite	Reasonable appetite	Decreased appetite
Drinking	Consumption of large quantities of liquid	Little consumption of liquids
Sweating	Excessive sweating – especially at night	Reasonable sweating
Cough	Dry and painful cough	Phlegmy cough
Bowel movements	Foul-smelling bowel movements	Soft, odorless stool

8. Why do children have more runny noses in the winter?

In its effort to preserve heat, the body closes its sweat pores during the winter. When internal heat develops, it is drained upward to the upper part of the body. In the summer, the body seeks to cool itself by opening its sweat pores. In the event of internal heat in the summer, some of the heat is released through the open sweat pores, and only a small amount of heat reaches the upper part of the body.

9. How can we treat internal heat?

Internal heat can be treated in a number of ways, including acupuncture, medical herbs, diet, and massage. The most effective treatment of more acute conditions is acupuncture, as acupuncture is a fundamentally stimulating technique with the ability to release excesses with relative ease. Diet and massage are relatively gentle treatment methods, and are suitable for mild conditions and preventative balancing.

10. Balance by Diet

Chinese food therapy classifies food according to its affect on the body: some foods are warming, and others are cooling. This classification refers not to the temperature of the food but to its energetic affect. For example, drinking a cup of hot mint tea causes our body to slow down, relax, and experience a feeling to which the Chinese refer as cooling. Although the temperature of the tea is warming, this affect is felt only upon drinking. The cooling affect of the mint is deeper. The heat of the water in the tea is quantitative heat, whereas the coolness of the mint, which causes the change, is qualitative, and impacts the way our body functions.

On the other hand, eating hot pepper – even frozen, straight out of the freezer – produces a sense of heat. The cold from the freezer is quickly absorbed by the body, but the affect of the pepper causes stimulation and heat in the body. From an energetic perspective, pepper is hot, as opposed to mint, which is cool. Energetic heat causes faster blood-flow, expansion of the blood vessels, and an overall acceleration of body functioning. All foods can be located on a scale between cooling and warming – between hot pepper and mint, which are two extreme examples of the two poles.

Diet can be used to achieve bodily balance by consuming foods that are the energetic opposite of the problem from which the child is suffering. If the child is suffering from cold, or is in a cold environment, it is best to serve warming foods, whereas states of heat and a hot environment should be treated using cooling foods. For this reason, it is common to drink iced tea with mint in the summer and hot tea with cinnamon in the winter. Mint is cooling and cinnamon is heating. This method of classifying foods as heating and cooling is extremely basic and therefore also useful.

11. Classification of Foods by Energetic Quality

The division of foods below is somewhat simplified. In the world of Chinese food therapy, every food typically has a number of qualities and a more complicated energetic definition. For our purposes, however, simplicity is more important than precision. Moreover, there is no consensus on this subject, and the reader may come across other information about food that differs from the information presented here.

Meat

Beef – Warming Poultry – Warming Fish – Warming

Grains

Buckwheat – Warming
Corn Flour – Warming, elicits phlegm
Oats – Neutral
Quinoa – Warming
Rice – Neutral
Rye – Neutral
Spelt – Neutral

White Wheat Flour – Warming, elicits phlegm

Legumes

Beans – Neutral Chickpeas – Neutral Lentils – Neutral Pearl barley – Neutral Peas – Neutral

Fruit

Avocado – Cooling, elicits phlegm Apple – Cooling Apricot – Warming Banana – Cooling, elicits phlegm Berry (tree) – Warming Cherry – Warming Clementine Orange – Cooling Date – Warming Fig - Neutral Grapefruit – Cooling

Grapes – Warming
Lemon – Cooling
Mandarin oranges – Cooling

Mango – Warming Melon – Cooling Orange – Cooling Papaya – Neutral
Passionfruit – Warming
Peach – Warming
Pear – Cooling
Persimmon – Cooling
Pineapple – Warming
Plumb – Cooling
Pomelo – Cooling
Raisins – Warming
Strawberry – Cooling
Watermelon – Cooling

Vegetables

Beet - Warming Broccoli – Cooling Cabbage – Warming Carrot - Neutral Cauliflower – Cooling Celery – Cooling Chive – Cooling Corn – Cooling Cucumber – Cooling Eggplant – Cooling Garlic – Warming Green Pepper – Warming Hot Pepper – Warming Kohlrabi – Cooling Leek – Warming Mushroom – Cooling Olives – Warming Onion – Warming Potato – Warming Pumpkin – Cooling Radish – Cooling Red Cabbage – Warming Red Pepper – Warming Scallion – Cooling Spinach – Cooling Sweet Potato – Warming Tomato – Cooling Zucchini – Cooling

Seeds and Nuts

Almond – Warming

Cashew – Warming

Chia Seed – Warming, elicits phlegm

Peanuts – Warming

Pecan – Warming

Pine Nut – Warming

Pistachio – Warming

Pumpkin Seed – Warming

Sunflower Seed – Warming

Walnut – Warming

Spices

Chamomile – Warming

Ginger - Warming

Lemon Verbena – Cooling

Lemongrass – Cooling

Mint - Cooling

Oregano - Cooling

Paprika – Warming

Sage – Warming

Thyme – Warming

Turmeric – Warming

White Micromeria – Warming

General Foods

Chocolate Spread – Warming, elicits phlegm

Cocoa - Warming

Cow's Milk – Cooling, elicits phlegm

Date Honey – Warming, elicits phlegm

Egg – Neutral

French Fries – Warming, elicits phlegm

Ice Cream – Cooling, elicits phlegm

Honey – Warming

Halva – Warming, elicits phlegm

Ketchup - Warming

Maple Syrup – Warming

Mayonnaise – Warming, elicits phlegm

Milk Chocolate – Warming, elicits phlegm

Oil – Warming

Peanut Butter - Warming, elicits phlegm

Seaweed – Cooling

Schnitzel – Warming, elicits phlegm

Soy Products – Cooling, elicits phlegm

Spelt Flour Pasta – Neutral

Sugar – Warming, elicits phlegm

Tahini – Warming

Tofu – Cooling, elicits phlegm

Whole Spelt Bread – Neutral

White Flour Bread – Elicits phlegm

White Flour Pasta – Warming, elicits phlegm

12. What is the relationship between diet and phlegm?

As noted above, excessive phlegm secretion is related to the balance of internal heat in the body. However, food also has an affect on the secretion of phlegm in the body. Foods with a phlegmy consistency, such as banana, and protein-rich foods such as dairy products, may result in the excessive secretion of phlegm.

13. Conditions Classified as Conditions of Excess Phlegm in the Body

- Runny nose The yellower the nasal discharge, the more advanced the situation and the more indicative it is of internal heat.
- ∂ Cough − Particularly in the event of a phlegmy cough.
- Rhonchial breathing
- Inflammation of the ear Children suffering from inflammation of the ear (even in the absence of a runny nose) are regarded as suffering from advanced excess phlegm.

14. The Four Basic Types of Food that Cause the Production of Phlegm

- Dairy products
- Fat
- Wheat flour
- Processed sugar

An easy way of remembering this list is by using the word "cheesecake," as this desert contains items from all four groups: cheese, margarine, sugar, and flour.

15. Recommended Foods for Conditions of Excess Phlegm

- Spelt bread − If parents feel it is necessary to serve their child bread.
- Raw tahini − No more than one tablespoon per day. The tahini should be thinned using water and should not be consumed in its raw form, which is too rich and heavy for children.
- Boiled or steamed vegetables (with a preference for orange vegetables) – Carrot, pumpkin, sweet potato, zucchini, broccoli, mangold leaves, beet, potato, cauliflower.
- Legumes Peas, beans, lentils, chickpeas (it is recommended to soak legumes).
- White basmati rice − Whole rice is difficult for children to digest. Basmati rice is low in starch and contains less arsenic.
- Boiled or baked chicken
- Fruit

16. Foods That Are Not Recommended for PhlegmRelated Conditions

Foods appearing in bold below produce substantial amounts of phlegm.

- Cow's milk and cow's milk products Cow's milk, butter, cheese
- Oranges and orange juice
- Tropical fruits Pineapple, avocado, mango, persimmon, carambola, lychee
- Sweets Soft drinks, chocolate, jam, processed halva
- Ice cream and popsicles
- → Wheat flour Bread, challah, pita, cake
- Fried foods French fries, schnitzel, fried snack foods, all other fried foods

17. A Sample Dinner or Breakfast for Children Suffering from Excess Phlegm

- Spelt bread spread with a small amount of tahini
- White basmati rice
- Steamed vegetables
- → A scrambled egg cooked in water instead of oil or butter
- A slice of pear, apple, or any other seasonal fruit
- Halva made of 50% tahini and 50% honey

18. A Sample Lunch for Children Suffering from Excess Phlegm

- Chicken or turkey Boiled or baked
- Lentils or some another legume
- Vegetable soup without powdered soup mix
- Steamed vegetables
- Vegetable salad
- Water

19. What else causes the production of phlegm?

- Cold Walking barefoot, wearing a wet diaper for an extended period of time, insufficiently clothing in cold weather.
- The excessive consumption of whole foods − Whole foods are rich in minerals and are more natural and less processed than many other foods. However, they are also difficult to digest. For children with a weak digestive system from the outset, the consumption of whole foods may cause digestive difficulty and the production of phlegm.

20. Cow's Milk – Components and Substitutes

Cow's milk is the most available type of milk on the market, and its use is a subject of contention. On the one hand, many studies and daily experience have indicated a link between the consumption of cow's milk and problems such as excessive phlegm, digestive problems, and respiratory and skin problems. Some studies, on the other hand, highlight the nutritional value of cow's milk.

Cow's milk contains numerous substances that our bodies need. However, it is difficult to digest due to its cooling

quality. It is rich in milk protein: casein, a protein with a molecular structure that the human digestive system has difficulty breaking down. Cow's milk contains twenty times more casein than human milk

The human digestive system's difficulty breaking down milk protein can lead to two kinds of problems: 1) digestive problems and the secretion of phlegm, caused by the body's difficulty breaking down the milk; and 2) an allergic reaction resulting from the inability to completely break down the milk protein. The pieces of the protein chains that are neither digested nor absorbed into the blood flow via the walls of the small intestine are identified as a foreign body and cause arousal of the immune system and an allergic reaction. For this reason, when cow's milk is removed from the menu, it is important to refrain from using it altogether, and not simply to reduce its consumption.

When a child is suffering from chronic phlegm, he or she should completely cease the consumption of cow's milk products for a period of three weeks. Clinical experience indicates that ceasing the consumption of cow's milk either cures or improves the condition of approximately one-third of all children suffering from excessive phlegm, digestive problems, skin problems, and respiratory problems.

Cow's Milk – Components and Substitutes

Component	Function	Substitutes
Vitamin A	Prevents the oxidation of substances and chemical compounds in the body, improves night vision, maintains healthy skin, bolsters the immune system. Also involved in the growth process.	Egg yolk, liver, apple, fish oil, carrot, sweet potato, pumpkin, apricot, melon, spinach, broccoli, cabbage, cauliflower.
Vitamin B2	Supports the nervous system, hair, fingernails and toenails, skin, and the liver.	Meat, fish, egg yolk, yeast, legumes, whole flour, green leafy vegetables.
Vitamin D	Essential for the growth and construction of bone mass, tooth structure, and muscle functioning.	Liver, fish, egg yolk, exposure to sun.
Potassium	Important for maintaining the balance of liquids, electrolytes, and acidity in the body; essential for maintaining normal blood pressure.	Fruits and vegetables, especially bananas, citrus fruits, dates, tomatoes.
Calcium	The building and maintaining of muscles, teeth, and the nervous system.	Liver, fish, eggs, dark green leafy vegetables, soy, legumes, nuts, tahini, oranges, pistachios.
Magnesium	Involved in building bone, helps produce energy from food, important for the contraction and relaxation of muscles and the conveyance of nerve stimuli.	Green leafy vegetables, whole grains, legumes, nuts, almonds, banana, dark chocolate.
Protein	Essential for the building and recovery of body tissue, regulation of the replacement of substances in the body and the production of enzymes, neurotransmitters, hormones, and more.	Meat, fish, eggs, legumes, nuts, soy, quinoa.
Fat	Helps in the absorption of Vitamin A, D, E, and K; serves as the body's main pool of energy; important in the building of cell membrane and the production of hormones.	Vegetable oil, grains, meat, fish, olives, avocado, nuts, seeds.
Vitamin B12	Essential for proper nervous system functioning, for the production of fats and proteins, for the production of genetic material in the cells, and for the prevention of anemia.	Meat, fish, eggs.

21. Different Kinds of Milk

Warning! All types of milk can serve as a supplement for mother's milk or solid food. However, in the case of children under the age of one year, milk and milk substitutes should not constitute the basis of their diet! Children need to drink mother's milk or formula until they are one year old.

The different types of plant-based milk than can be purchased in stores include soy milk, almond milk, rice milk, oat milk, and others. Plant-based milk can also be prepared at home. Making milk ourselves gives us control over the ingredients used, the milk's freshness, and the financial expense involved. Flavor can be enhanced using dates, pears, apples, almonds, or any other addition that makes the drink more nutritious and better tasting. This is a good way to feed children important foods that they may otherwise refuse to eat due to their shape, texture, or taste. Fruit shakes are also a way of camouflaging refused foods.

- a. Rice Milk
- b. Sesame Milk
- c. Almond, Cashew, Hazelnut, and Pistachio Milk
- d. Soy Milk
- e. Oat Milk

a. Rice Milk

Using a rice-to-water ratio of 1:16 (1 cup of rice for every 16 cups of water), boil the rice and continue cooking over a very low heat for another hour. Add one teaspoon of natural vanilla. After cooling, briefly mix the rice in a blender. The milk does not need to be strained and should not be frozen.

May be stored refrigerated up to four days.

Rice Pudding

Preparation is similar to the above recipe for rice milk but uses a rice-to-water ratio of 1:12, yielding a thicker consistency. Fruit, ground nuts, raisins, or any other ingredient that comes to mind may be added. To achieve a thicker consistency, add a bit of tapioca. Pour into bowls and chill in the refrigerator for one hour. May be stored refrigerated up to four days.

b. Sesame Milk

Soak three tablespoons of sesame seeds (whole sesame is preferable) overnight, then strain and wash. Mix the sesame in a blender with one liter of hot water and strain. At this point, we can add a date or natural date honey. Strain and then refrigerate. While in the refrigerator, the milk will separate into cellulose and water, and the milk should therefore be mixed before serving. One tablespoon of raw tahini can be substituted for the sesame seeds.

May be stored refrigerated up to three days.

c. Almond, Cashew, Hazelnut, or Pistachio Milk

Soak a handful of almonds in water for eight hours. Wash and add three times the quantity of hot water. Pour the almonds and the hot water into a blender and mix at high speed for two minutes. Strain using cheese cloth. As the milk tends to separate into water and cellulose, it should be mixed before serving. The cellulose that remains after straining can be added to soup or any other dish. It can also be used as the basis for a cake.

Instead of fresh almonds, it is also possible to use almond butter. Place one tablespoon in a blender and mix with one liter of hot water. Mix before serving.

May be stored refrigerated up to three days.

Natural food stores also carry hazelnut butter, cashew butter, and pistachio butter, which can be substituted for almond butter in the above recipe.

d. Soy Milk

Soak one cup of soy beans in water overnight until the beans expand to approximately four times their original size, and then wash in a sieve. Add three cups of hot water and mix in a blender. Strain into a large pot using a cheese cloth. Bring to a boil while stirring, lower the heat, and cook for another 15 minutes. While cooking, the mixture can be sweetened using date honey and the flavor can be enhanced with a teaspoon of natural vanilla and/or a stick of cinnamon. May be stored refrigerated up to one week.

e. Oat Milk

Soak one cup of whole (not instant) oats for eight hours. Add:

- Three cups of water
- **∂** 1/4 teaspoon salt
- **∂** 1/4 teaspoon sugar
- **∂** 1/4 teaspoon baking soda
- **∂** 1 1/2 tablespoons sunflower oil
- **∂** A dash of natural vanilla extract

Mix in a blender on high speed for two minutes. Strain using a straining cloth or cheese cloth.

May be stored refrigerated up to four-to-five days.

22. Conclusion

In addition to the practical understanding of what foods are right for your child, the ability to make a change depends on your approach to your child. The two most important principles for making dietary changes at home are personal example and gradualness.

Children are smart in that they see things as they are. Sugarcoating, excuses, and pretending only decrease their trust. What they see is what they believe. The only way to achieve their cooperation in convincing them that something is right is personal example. Attempts to adapt them to a healthy diet by forcing them to do so without their cooperation is doomed to failure. Children experience their world through us and how we live. Ultimately, our children are a reflection of ourselves.

Children are extremely selective, but they are also quite adaptable. They oppose change, but if the change is made gradually, they adapt relatively easily. Continue along what you believe to be the right path, and your children will eventually cooperate.