



*Waldorf Journal Project #3
June 2004
AWSNA*

Food and Nutrition

What Nourishes Our Children?

by

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Printed with support from the Waldorf Curriculum Fund

Published by:

AWSNA Publications
The Association of Waldorf Schools of North America
3911 Bannister Road
Fair Oaks, CA 95628

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Waldorf Journal Project #3

Title: *Food and Nurition: What Nourishes Our Children?*

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Translator: Nina Kuettel

Editor: David Mitchell

Proofreader: Ann Erwin

German title: *Was ernährt unsere Kinder? Von Nähr-Stoffen und Lebens-Mitteln*

Gratitude expressed to Peter Lang, Internationale Vereinigung der Waldorfkindergärten e.V., Stuttgart, and to Verein für erweiteres Heilwesen e.V., Bad Liebenzell for permissions granted to translate the essays.

Food and Nutrition: What Nourishes Our Children?

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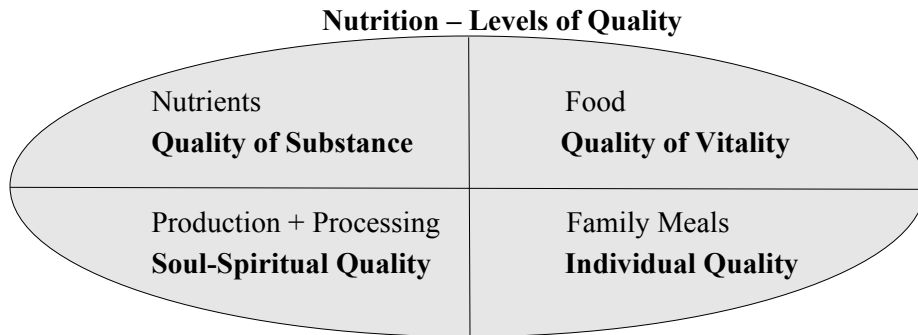
What is Quality Nutrition?

Surveys indicate that children's best-loved foods are pizza, french fries with catsup, spaghetti, and pudding. Vegetables, fruits, and grains are at the bottom of the list. What kind of a taste for food are our children developing? What do they need and how can we make those foods palatable? Balanced nutrition makes possible the growth of the physical body, its formation, and vitality. It is the foundation of children's soul-spiritual development, that is, their ability to concentrate, activate their will, and sustain energy. It has also been found to influence social behavior. Proper nutrition influences children's development far more than is generally recognized.

Four Levels of Quality in Nutrition

1. Nutrition indicates supplying *nutrients*, but that only represents nutrition at its basic level. Naturally, food must contain enough protein, fat, carbohydrates, vitamins, and so forth.
2. Nobody eats nutrients. Everybody eats *food*. What matters is the form in which it is eaten. Like protein, for example, protein found in the grain of bread is completely different from protein found in meat and it has different effects on a child.
3. The next level of quality has to do with how food is grown, processed, and prepared. This level of quality is brought about through human activity, a quasi *soul-spiritual* process. Farmers decide which method of farming will be employed: organic, biodynamic, or methods using mineral fertilizers and pesticides. The consumers have in their control the quality level of food that they purchase for their children and ultimately how nature and the earth are treated in the growing of the food they buy. The same goes for food processing and preparation. Our choices in food exhibit varying grades of quality: sugar-based soda beverages or fruit juice, chocolate candy bars or shortbread, fish sticks or fresh fish. The *quality of production* structures and changes food and also the nutrients in food. Consequently, it has an overall, formative effect on the quality of the food.

4. Finally, nutrition becomes *individualized* by the food and drink that is put on the family table and consumed by the children.



The Character of Food

In order to nourish children according to their developmental requirements, we need knowledge and experience in the area of nutrition. Adequate nutrition for children consists of a sensible mix of high quality foods. That means that the inner vitality, the actual nourishing power within food, should be taken into consideration *along with* its nutrient content. Food should not only fill the stomach, it should stimulate the human organism and activate it into a state of agility. This depends upon the degree of “life energy” in the food product. Digestion of food challenges the metabolism of human beings. Thus human beings are invigorated. That is real nutrition.

This inner structure of vitality within a plant or an animal is predetermined as to its character (grain, pumpkin, pig, sheep, and so forth) which unfolds itself during growth. For example, grain has its own substantial power to stand upright. Its blades, heads, and ears grow toward the sun by their own power. A pumpkin, with its heavy weight, does not stand upright. It does not have this special strength aspect. The differing energies of nutritional plants also have differing effects on human beings. For instance, one would feed a child who has a phlegmatic temperament (pudgy figure, prefers comfort) more grains rather than watery, less-upright, melon-type plants. Beyond that, the farming method used is decisive, *how* these energies can unfold. A greenhouse plant that is transplanted outdoors will have less resistance and heartiness than one that is planted outdoors from the beginning. Accordingly, it can also pass on only certain energies to human beings. If a child eats only such “sheltered” plants, then no “robust” stimulation can be expected from food. This is also significant for the psychological constitution of the child.

The quality of nutrition opens up possibilities to give a child the stimulation needed for his or her development. The biodynamic farming method takes the characteristics of these energies into consideration and their species-appropriate unfolding in a special way. For this reason, food grown using biodynamic methods (Demeter® or Helios®) are highly recommended.

As in many other areas of life today, we see big changes in the choices of food and drink available to us. Foods designed and marketed to children by well-known name-brands are supposed to speak to the “kids.” Even the natural foods industry is going this route. However, we must ask if all of these offers are in line with the goal to provide a foundation for the health and development of our children?

Our eating habits are formed in the first years of life. Later in adult life, these habits are very hard to correct unless an illness or deficiency forces us to change. It is the task of those raising children to introduce them to many different foods. Just as we do not give full responsibility to children in questions of daily life because their faculty of judgment is not fully developed, so, too, we should not give them full responsibility for their nutrition by granting all of their wishes and cravings. Adults must lay the foundation, with consideration for particular likes and dislikes that a child may have. In this way, parents have control over whether their children become used to white bread or whole-grain bread, canned or fresh vegetables.

Illnesses Caused by Over-consumption and One-sidedness – Results of Faulty Nutrition

We in the industrialized nations have enjoyed a high standard of living since the 1950s. Seldom has there been such a wide choice of food available at such affordable prices. However, a wide choice requires that people choose their food selectively to create healthy and tasty nutrition. Herein resides the problem. All too often food is bought and eaten according to tastes and cravings to such an extent that while we seldom run into deficient nutrition, we often have faulty nutrition. Eating the wrong foods for years can cause afflictions and illnesses resulting from inappropriate nutrition. These afflictions even begin in childhood.

Illnesses Caused by Faulty Nutrition

- Diabetes
- Gout (Uric Acid)
- Problems with Fat Metabolism (too much animal fat)
- Goiter (iodine deficiency, iodine utilization)
- Anemia (iron deficiency, iron utilization)
- Tooth Decay (too much sugar, white flour)
- High Blood Pressure
- Heart – Circulatory System Illnesses
- Cancer of the Digestive Organs

Adults have a special responsibility to children in choosing their food and nutrition. A small child can not differentiate between “healthy” or “unhealthy,” “desired” or “less-desired.” Today, learning to eat right is more important than

ever before since many products, such as sweets, are produced with children in mind and marketed directed to children in a wide variety of advertisements.

The main nutritional mistakes that appear during childhood are:

- Over-eating at meals
- Eating too much sugar
- Eating too little fiber
- Eating too much fat
- Snacking too often

These things can be remedied if children eat only at mealtimes as much as possible and if they are given fruits, vegetables and whole-grains. One can reduce the amount of fat in the diet by reducing deep-fried foods (frenchfries, deep-fried chicken, potato chips), fatty meats like hotdogs, and cheese. Sweet foods should be chosen very carefully and sugar replaced with sweet fruit.

From Infancy to Adolescence – The Needs Change

Humans require twenty years for their physical growth to be completed. During this time, various impulses are working that are also indicators of nutritional needs. This shows itself very clearly during infancy, and is met in the way in which the infant is slowly introduced to solid foods. Starting at age two the child is slowly brought to the point of eating the same food as the rest of the family at mealtimes. However, a two-year-old is a long way from eating everything and also should not be given everything that is put on the table. In order to understand the nutritional needs of the child, it is helpful to observe the phases of growth because children do not always grow at a steady pace, but rather in “spurts.”

During these growth phases children have more appetite for protein-rich foods. Inbetween the growth spurts there is more desire for carbohydrate-rich foods like bread, rice, potatoes, and sugary foods. Carbohydrates act more on the *nerves* and support soul/spiritual development. Protein is significant in *physical growth* and muscle development.

These phases of growth occur in children at the following times:

Ages 5 – 7 – End of kindergarten
Ages 10 – 12 (Girls), 12 – 14 (Boys) – Preadolescence
Ages 16 – 18 – Full height reached

Soul-spiritual development is more of an inner process. In a toddler, for instance, it shows itself with the first forays into thought, learning to speak, and, later, at the beginning of kindergarten age, in the development of social abilities. By the time they reach school age, children are capable of new things: directed learning, a desire to “discover” and experience the world. They no longer just play. Foodstuffs in their manifold variety are discovered and differentiated more according to likes

and dislikes. Puberty follows and brings an end to childhood. From this point onward, one speaks of *adolescence*. Often, adolescents develop their individual personalities separately from their environment. As a result, their nutritional needs are also in a state of transition. These growth phases can be ordered within the following three stages of development:

Ages 0 – 7 infancy and early childhood
Ages 7 – 14 school-age
Ages 14 – 21 adolescence

During these stages of development a child has differing needs to be supported by the appropriate nutrition.

Infancy and Preschool-age

In the *first years of life* a child becomes accustomed to the rhythm of mealtimes: They progress from liquid food (breast milk or a formula) to porridge and finally to solid foods. The infant is given only small amounts at a time to get used to the food.

Starting at age two, the child increasingly eats what the rest of the family has at mealtimes. Some children begin this earlier while others need more time to make the transition and still enjoy their meals of porridge.

The important thing at this age is the *regularity of mealtimes*. Most children do not value change; they would rather eat the same, well-liked foods. At this age, children mimic what they experience with others. They learn from the behavior and nutritional habits of their parents. Sometime around kindergarten age, children begin to get much joy in preparing “real” food for others and not just playing in their doll kitchens.

School-age Children

The needs change when children reach school age, and, not only that, they eat more. Their increasing need for movement also creates increased thirst and an interest in more food variety, and they want to experience the world through their sense of taste. At the same time, their likes and dislikes begin to take shape and be strongly identified. This is the last period of time during which it will be possible to instill good eating habits; this kind of training is no longer possible during the adolescent period. In addition to having breakfast at home, a snack for recess should be given, perhaps whole grain bread or crackers with cheese or some kind of vegetarian spread along with a piece of fruit or vegetables (carrots, celery, turnips). At noon, there should be an easily-digested, but filling, lunch with warm soup, if possible. After school a glass of milk and snack will allow the efforts expended at school to recede. A lacto-vegetable, whole-food diet is well-suited for this. Furthermore, it is important to continue with regular mealtimes.

Adolescence

When you begin to hear very critical comments about foods that were previously well-liked, then you will know that adolescence has begun. During puberty, adolescents experience the outside world more intensely, its temptations and dangers. They want to come to grips with it. Daily life becomes a “matter of taste” and there is a “hunger” for experience. The eating habits of the family are often rejected. New, different foods are tried of which parents often disapprove. This behavior is a result of their normal development. Adolescents want to choose and judge for themselves. In conjunction with this there is a need for more nutrition, especially protein. Parents should try to balance out the adolescent’s often one-sided food choices by serving more fruits and vegetables.

Modern Food Choices – Are They Child-Appropriate?

In earlier times children took part in their fair share of family meals soon after infancy. Parents were careful that certain things were not given to the children such as spicy foods or drinks with caffeine. Today there is the opposite trend of putting special emphasis on the requirements of the child. This is manifested also by the development of special foods for children or recommendations for increased consumption of certain added vitamins or minerals.

Does My Child Need Vitamin and Mineral Supplements?

Vitamins and minerals belong to that group of nutrients which human beings need in small amounts. Vitamin and mineral deficiencies are actually unknown in our present varied diet. Only people who have extreme or one-sided diets are affected by deficiencies. In spite of that, the number of vitamin and mineral fortified foods, especially for children, is very much on the upswing. Calcium, iron, and iodine are the most prevalent minerals with which foods are fortified. Of the vitamins, B1, B2, and C are the most commonly supplemented. New food supplement regulations for children younger than three years of age require such a high vitamin content that practically all products destined for children must be vitamin-fortified.

Vitamins are effective mainly through their relationship to the whole food as well as to the other ingredients. Isolated, artificially-added vitamins can not take over these functions. Experts agree that vitamin and mineral supplementation of foods is mostly superfluous and accustoms the child’s organism to enriched food. With a reduced supply (no vitamins added), the child might possibly have problems subsisting on what nutrients are available. Fat soluble vitamins (A, D, E, and K) can be dangerous at high dosage levels. For the consumer, the addition of vitamins and minerals to a variety of food products can lead to uncontrolled dosages: for example, calcium in juice, calcium in yogurt, and so forth. Vitamin C supplements can not replace oranges.

Iron-rich Foods

- millet, oats, beans, lentils, sunflower seeds, pistachio nuts,
- sesame seeds, peaches, red fruits, eggs, animal innards

Calcium-rich Foods

- milk, milk products, sesame seeds, almonds, legumes

Vitamin B-rich Foods

- oil-rich seeds, yeast, oats, wheat germ, pork

Vitamin C-rich Foods

- sea buckthorn, black currants, oranges, paprika, parsley,
- broccoli, kale, kiwi, fennel

What Can You Do?

Children should learn to get their nutrition from a palette of natural foods and not depend upon artificially enriched products. Hence, such products are not recommended. Instead, concentrate on food that has not been fortified with artificial enrichments.

Some general guidelines:

- Sweets are not improved simply because they contain supplemented vitamins.
- A glass of fresh milk is better than one that has been enriched with minerals.
- A piece of fruit is a good replacement for sweets.

Problems of Nutrition – Too Fat, too Thin

My Child is too Fat!

Up to twenty-five percent of children in Germany are overweight. Among other things, this presents a high risk for later metabolic diseases. It also presents a psychological burden when, for instance, a child is teased by his or her classmates or is unwilling or unable to move around much because of being overweight.

The table below provides information on normal weights. Slight deviations are still within the normal range.

Age and Body Weight			
Age	Weight in Kilograms/Pounds		
1	9.3/20.5	to	10.3/22.7
2	14.5/31.9	to	14.9/32.8
4	16.6/35.5	to	16.8/37.0
5	19.0/41.8	to	21.2/46.6
7	23.3/51.3	to	24.0/52.8
8	25.5/56.1	to	25.9/57.0
9	28.3/62.3	to	28.7/63.1
10	31.6/69.5	to	31.7/69.7

In the long run, weight reduction is not easy. Crash diets and fad diets bring short-term success and often also faulty eating habits. Adolescent girls often have a dominating desire to lose weight even if their weight is normal. In this case, society's body ideals play a role. Parents and educators must confront this issue with their children before unbalanced eating habits have a chance to take hold. Here is one method to reach a normal body weight:

- Reduce the amount of food, especially fats and sweets.
- Learn about healthy nutrition so that in the long term over-eating does not reoccur.
- Get enough exercise. With children this does not necessarily mean sports and training clubs, but rather everyday exercise such as walking to school when possible, playing outdoors, and so forth.

My Child Eats Such Unhealthy Food!

Being underweight is seldom a problem in our affluent society. However, there are children who appear very thin and are “bad” eaters. They are often from families in which there are siblings who quite “normally” take in their food and are in no way thin. Many times the thin children are very sinewy and germ-resistant and are no more susceptible to illness than their siblings. If you look at the parents and see one parent with a similar constitution and form, then you know that this is

an inherited trait. You should also consider the fact that our body ideals are often stamped with the image of very well-nourished children so that thinner children already appear to be underweight.

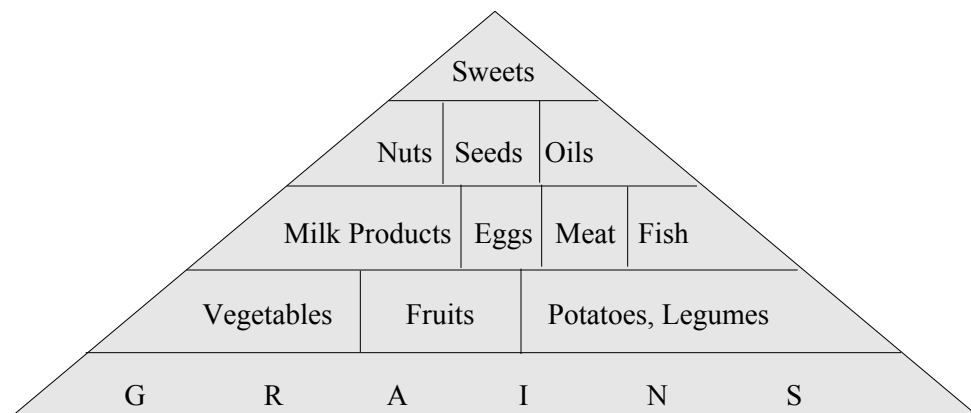
Certainly, there is the phenomenon of children who eat very little at mealtimes and then have between-meal snacks. In this case, it is no wonder that they eat little at mealtimes. Snacking spoils the appetite. The wide variety of bars and snacks readily available is a temptation to children. They are enticingly packaged and easily procured. Often these snacks are high in calories and thus very filling. In their nutritional composition, many of them do not meet recommendations. They are either too sweet or too fatty and they spoil the appetite for nutritious meals.

The only remedy is to see that children eat something *only* during the five organized snack and meal times. Raising children by this concept begins when they are toddlers—this is when they become used to mealtime rhythms. Rhythmic eating is also therapeutic for the digestive and metabolic organs a rhythm of the “working time” and “rest.”

In a situation where someone is truly underweight, one should try to stimulate the appetite. This is possible by stimulating the liver function and also by talking to the person in a positive, morale-building way. Eating must be combined with sympathy. With children, one can still depend upon their true nutritional instincts which often are accurate about what foods are right for them. This method has been considerably more successful than trying to trick children into consuming more calories.

In addition, bitter herbs have proven effective in stimulating the appetite. They can be incorporated into the meals, for example: drink a glass of grapefruit juice before a meal; eat a light, bitter salad like endive, or drink a light, bitter herb tea like chamomile or centaury. Common “fattening diets” with a lot of fats and carbohydrates are usually only successful in the short term and often ruin a person’s joy in eating, having the opposite effect in the long run. Naturally, you can make sure that these children get more cream and butter with their meals, but that does not increase the appetite and usually does not increase calorie consumption. When in doubt, consult your doctor.

Which Foods Are Important?



The food pyramid tells which foods are important for sensible, healthy nutrition and where these foods stand in relation to the other groups. The nutritional model is built upon grains in the form of bread, rice and pasta. The next most important group is fruits, vegetables and potatoes. Milk and milk products follow, along with the other animal food products – eggs, meat, and fish – which have a somewhat lower valuation. Fats and oils are in one of the smaller areas of the pyramid where nuts and oily seeds also belong. At the smallest, top section, with the lowest nutritional value, are sweet foods. They belong in the diet, but only in small amounts. Drinks will be considered separately.

Grains, Bread, and Pasta – The Things that Satisfy Us

Grain is a high-quality food that is the nutritional foundation for the entire world. Wheat, spelt, rice, barley, millet, rye, oats, corn, and the grain-like seeds of buckwheat, amaranth, and quinoa, all belong in this group.

Grain, which are seeds, is a “compact” food; it must be opened-up before it can be eaten. This is accomplished by grinding, sieving, dough-preparation, baking, or cooking.

Flakes, grits, and semolina are generally well-liked, easily-digested foods. Muesli made from grain flakes is an ideal breakfast food with added seasonal fruit and milk (Bircher-muesli). Grits (cooked to a grainy consistency), bulgur, or couscous are usually well-liked and made for quick lunches. Grain dishes such as muesli, made from uncooked oats, are generally too hard to digest for small children.

Bread should be in the form of well-baked, whole-grain bread. Whole grain berries in bread are often difficult for younger children to digest. A finely-ground, whole-grain loaf of bread is lighter and just as rich in nutrients. Herb-seasoned bread usually tastes very pleasant to adults, but children are not so enthusiastic when they bite into caraway or fennel seeds. Light seasoning with ground herbs and seeds is a good alternative.

Bread should be made from the easily-baked grains of wheat, spelt, or rye and are among the most important foods in our culture since they are rich in nutrients and satisfying. However, there are differences. White bread contains fewer of the important vitamins and minerals than whole-grain bread. Dark, whole-grain bread provides a child more nutrients, vitamins, and fiber than the lighter varieties. Therefore, whole-grain bread is an important component of healthy nutrition.

Vitamin B1 – The “Nerve Vitamin”

For concentration and immunity against colds and infections

Whole-grain Bread	0.18 mg = 100%
White Bread	0.09 mg = 50%

Iron

(found in blood and metabolic enzymes)

Deficiency leads to fatigue, pallor, exhaustion

Whole-grain Bread: 0.70 mg = 100%

White Bread only: 0.24 mg = 34%

Potatoes or Grain – Is it only a Question of Taste?

In many regions potatoes are the unquestioned nutritional basis and the most important, filling part of the midday meal. There are many potato products that are well-loved by children: mashed potatoes, fried potatoes, frenchfries, potato puffs, hash browns, potato salad, potato cakes. Potato chips and other potato snacks shall not be included here. Children are usually not so enthusiastic about boiled potatoes. It is not widely known that the potato became a staple in our kitchens only about two-hundred-fifty years ago and that it pushed out regional grain dishes as diet staples. The potato is often praised for its vitamin C content. This was significant in the times when, in the spring, there were hardly any vegetables or salad available. Today, with the availability of fresh fruit and vegetables at all seasons, the vitamin C content of potatoes no longer holds the same significance for our daily diet.

Anthroposophical nutritional science does *not* recommend potatoes as a staple food, but rather more as vegetables that are not eaten everyday. Instead, grains should become the prominent staple food. Nutritionally, grains are much better endowed than potatoes. Better to have cooked millet or bulgur than boiled or mashed potatoes. Furthermore, potatoes are solanaceous herbs (which means they grow at night). If one looks at its growth from the viewpoint of its inner structure of forces, then one sees there are one-sided qualities that can, among other things, contribute to poor memory abilities in children who are predisposed to that affliction, another reason potatoes should not be a predominant part of our diet. The more preparation that goes into cooking potatoes the better for children: for example, fried potatoes, potato puffs, dumplings, mashed potatoes. Through intense preparation, the characteristic quality of the food is reduced somewhat and the general, satisfying qualities become more prominent.

Fruits and Vegetables – Fresh Variety

Fruits and vegetables are the second most important food group for children's nutrition. They are prized for their natural aromas and colors as well as their stimulating effect on the metabolism and various other health-promoting effects. They deliver the most important vitamins and minerals. Above all, fruits contain vitamin C and minerals such as potassium and iron. It is recommended that children have at least one piece of fruit daily (apple, pear, peach). Seasonal fruit should have precedence because are fully ripened, they taste better, and are less likely to contain fermentation. Fruits can be grown in ways that are environmentally friendly.

Seasonal Fruits	
Spring	Strawberries
Summer	Currents, Blueberries, Raspberries, Blackberries, Gooseberries, Cranberries, Apricots, Peaches, Nectarines, Cherries, Plums, Melons, Apples
Autumn	Rose Hips, Elderberries, Apples, Pears, Quince, Grapes, Buckthorn

Vegetables belong in children's daily diets since they are also rich in vitamins and minerals. It is sensible to eat a salad or a few pieces of raw or cooked vegetables everyday.

A few tips about choosing vegetables:

- *Use seasonally-ripe vegetables*

Children live according to the seasons. A vegetable that carries the energy of the season within supports the child's experience. Seasonal vegetables grown outdoors are healthier; for example, they contain fewer nitrates than their greenhouse-grown counterparts.

- *Use vegetables grown in your region when possible*

Vegetables grown in the region where you live grow under the same impulses of nature that your children also experience. They unfold under the same influences of the region such as sunlight, moisture, light, and warmth. This harmony has a strengthening function.

- *Choose vegetables according to their location on the plant*

One can roughly differentiate between above-ground and below-ground vegetables. Roots and tubers are underground and green leaves, stems, fruits, and seeds are above-ground. Lettuce, chard, and cabbage belong in the leaf and stem group. Tomatoes, cucumbers, zucchinis, pumpkins, and melons belong in the fruit group. In order to take in the wide variety of impulses of the *whole* plant that nourishes the whole human being, it is beneficial to eat all three kinds of vegetables everyday; for instance, carrots, green, leafy salad, and cucumbers. Since fruity vegetables are not always available, they can be replaced by seeds such as sesame or sunflower.

Legumes like peas, lentils, or beans hardly play a role in today's nutrition. However, they are significant protein sources for vegetarians. Since legumes are all somewhat more difficult to digest, with the exception of lentils, they are hardly used in child nutrition. Preferable legumes for children are green beans or peas.

Milk – Nutrition from the Very Beginning

Milk is one of our oldest foods. It is important for both children and adolescents. In adulthood, consumption of milk declines and consumption of sour milk products increases.

Milk provides children with protein and calcium. It is a “light” protein in comparison to other animal proteins. Rudolf Steiner spoke of milk as a food that gives human beings firmness without being too much of a burden on the human organism. Milk helps in bone development and formation.

Today we see extreme behavior regarding milk consumption. Either children get too much milk or their parents reject milk altogether; neither behavior is appropriate. Consuming too much milk, together with cream and other milk products, is not healthy, such over-consumption leading to doughy skin and delivering too much protein to the organism which again must be broken down. Milk should be completely removed from the diet only if a proven allergy to lactose exists or a genuine intolerance for milk. Even in those cases, one should try to give the children other milk products or cheese. Sometimes it makes sense to change over to milk products from other animals such as sheep or goats.

These are the daily recommendations for children:

Young Children (Ages 3 – 7)	3 servings of milk (including milk products)
School Children (Ages 7 – 14)	3.5 servings of milk
Adolescents	4 servings of milk

Meat, Fish, and Eggs – Necessary or Dispensable?

About ten percent of the German population is vegetarian and at least ten percent seldom eat food made from animal products. This tendency is increasing, especially among young people. Often the wish to eat no meat or fish comes from the children. Very young children seldom have a desire for meat as its stringiness is not well-liked; they would rather eat hot dogs because they look less like something from animals.

From the standpoint of nutrition and physiology, meat and fish are not a necessary part of a child’s diet. Very young children, up to age one, should eat neither meat nor fish since the high protein content can be a burden on the internal organs. It is best to introduce these animal products after age three since they have a more formative effect on the child’s small organism than milk has, for example. However, this all depends on the eating habits of the parents, and children of “meat lovers” usually start eating meat at an earlier age.

A requirement of a vegetarian diet is that the child receives enough vegetables and fruits, whole grains, and milk and milk products (cheese, fresh cheese, yogurt) as long as there is no allergy or intolerance of milk present. Such a lacto-vegetable diet makes up a physical basis that does not bond itself too strongly with the body

and provides the child with inner support for that openness that he or she needs to have self-determined, free development.

One should never dogmatically insist upon a vegetarian diet for school-age children, just as one should tolerate a child's rejection of meat and fish. The child simply eats what is normally provided at home. If animal products are eaten, it is recommended that you pay attention to its ecological quality (consider how the animals were kept and fed), as well as limiting the amount. Even for adults, nutritional scientists recommend meat consumption in moderate amounts (one or two times per week). This is because of the higher cholesterol, fat, and protein content of meat.

Eggs are not in the same category as meat and fish because from a fertilized egg, an animal can be formed. Eggs contain a very dynamic, growth-promoting yolk and also albumen (egg-white) which is very moldable (it can be whipped into meringue, for instance). The part of the egg that actually contains minerals, the calcium-rich shell, is not eaten. The growth dynamic that is in a chicken egg, which is shown in the nutrients it contains (cholesterol, protein, and fat), leads us to the conclusion that children should not eat too many eggs so as not to stimulate their physical growth too strongly. This depends upon factors such as the child's age, the season (children grow more in spring, up to Easter, than in summer!), their level of physical activity, and their intake of other proteins. Eggs strengthen the body but they do not impart any soul-spiritual stimulation; therefore, they make one more dreamy and sleepy. That is why one would hardly ever give eggs to children with a phlegmatic temperament, but rather to sanguine, nervous children. In general, the recommendation for egg consumption is similar to that of meat and fish. On average, older (school-age) children should not have eggs more than three to four times per week. Just as with meat, one should look at quality when buying eggs; inform yourself about how the chickens are kept and what they are fed.

Fats and Oils

Children's meals should not contain too much fat. *Cold pressed oils* such as sunflower oil or olive oil with vegetables or on salads are important sources of essential fatty acids. *Butter* is ideal to spread on bread. Nuts and oily seeds (sunflower seeds, pumpkin seeds) mixed with dried fruits such as raisins are "nutrition for the nerves" and are well-suited to school children.

Deep-fat-fried products such as french-fries, which are so well-liked by children, should not be on the menu too often because of their high fat content, among other things. The same goes for other fried foods whose fat content is often underestimated.

Sweets – No Minor Matter

Children love sweet foods. This begins with the very sweet mother's milk. Sweet foods contain easily-digestible sugar that can be absorbed without great digestive effort. But too much sugar can lead to health problems like tooth decay or fermentation in the intestines. For this reason, sugar intake should be limited. It can be enjoyed in moderation through the use of natural sweeteners in baked goods and other sweet foods given to children. Manufactured sweet foods often prove to contain too much sugar, besides added artificial flavors or colors. These artificial ingredients are foreign substances for the organism which require a tremendous effort to digest. Here one must be very careful and choose well what is to be given to the children. Fruit, fruit bars, and cookies from a natural foods store are good alternatives. Isolated sugars like refined cane sugar, grape sugar (dextrose), and fruit sugar (fructose) should be avoided. They do not contain the naturally-occurring, accompanying nutrients that the body needs to digest sugar. Instead of these refined sugars, we can use natural sweeteners such as maple syrup, whole cane sugar (sucanat), beet sugar, molasses, dried fruit, and honey.

Sugar Content of Certain Foods			
Sweet Products		Fruit	
Candy	97%	Banana	18%
Gummi Bears	77%	Grapes	15%
Chocolate Bar	65%	Mango	12%
Nut-Nougat-Cream	54%	Apple	10%
Sherbet	32%	Peach	8%
Tomato Catsup	17-28%	Blackberries	5%

Beverages – The Best Thirst Quenchers

“Stop drinking so much, it will make you sick!” some parents call out to their children when they see the amount of liquid they can take in on hot days or after sports. How much fluid does a child need? People take in liquid as well as solid nutrition. In the beginning, infants do not yet have this separation of liquids and solids; an infant gets everything s/he needs to eat and drink from breast milk. After this phase, nutrition is separated into liquids and solid foods. An infant's food becomes incrementally more solid beginning with porridge and progressing to bread. Supplementary drinking then becomes necessary.

A person's fluid intake requirement depends upon, among other things, how much fluid is lost through perspiration and other elimination processes. If one looks at children playing and running around, then it is no wonder that they drink more liquids than adults. Dry, cold air or strong winds also lead to increased thirst. By the way, it is not true that children who drink a lot have a more difficult time with toilet training.

Vomiting, fever, or diarrhea results in loss of fluids, and obviously increases the necessary fluid-intake requirement. The need for fluids is also increased in the case of a cold with a runny nose, sneezing, or coughing.

Last but not least, the fluid intake requirement depends upon the child's diet as a whole. If a family eats a lot of bread and less muesli, fruit, salad, vegetables, and soup, then there is more thirst. The following recommended fluid amounts should serve only as a guide.

Necessary Daily Fluid Intake in Liters		
	Beverages	Solid Foods
Preschool-age	0.9	0.5
Kindergarten-age	1.1	0.6
School-age (7- 13)	1.2	0.6 – 0.7
Adolescents (age 15)	1.3	0.8

Herbal teas are important beverages, for example, fennel tea for infants and toddlers. Lemon balm and peppermint teas have a relaxing effect. There are fruit teas available without artificial flavors such as rose-hip, apple peel, hibiscus, and assorted mixtures.

Fruit juices are valuable foods that are very concentrated in their undiluted form and should not serve as thirst-quenchers. One should dilute them with mineral water or fruit tea. The most important fruit juice is the well-tolerated apple juice. Red grape juice is rich in iron. Orange juice has high vitamin C content. Fruit juices made for children are mixtures blending the advantages of the different juices and should be given rather more for their nutritional value than diluted as thirst quenchers. Of the *vegetable juices*, carrot juice is best for children.

Fruit juice drinks that contain mostly sugar with added fruit juice absolutely are not recommended. Soda drinks should likewise be avoided as they contain less juice than additives. Cola drinks are especially questionable since they almost always contain the nerve stimulant caffeine and are not at all good for children. The same goes for the modern *energy* and *thirst quenching* beverages which often contain even more caffeine than colas. *Low-carbonated mineral water* is also very appropriate for children. Some families enjoy drinking "*grain-coffee*." For children it should be mixed half milk and half grain-coffee beverage. It is a good, warm, breakfast drink and contains no caffeine. *Milk* should be considered more as a food than a beverage.

Our Children Need a New Eating Culture

Besides the question of what kinds of food our children need today, the question of how food is presented is becoming ever more important. There is a saying: "Man does not live by bread alone." Rather, we live also by our eating environment, the presentation of our food and its regularity. Just a few decades ago eating customs

were regulated by tradition. These traditions are outdated. Modern cooking techniques, commercially-prepared foods, and our mobile lifestyles have led to changes in our eating customs and meal presentations. It may be that adults find it freeing and comfortable to eat here and there whenever they feel like it, but for children, this kind of restlessness and “independence” is burdensome. It saps energies that a child needs for his or her inner development. Children want to know where they stand. Therefore, it is important that families create new habits and customs for their mealtimes. Parents who make this effort will soon notice how young children especially love these rites and repetitions. What follow are a few important basics that make up a culture suitable for eating.

Rhythm

Regularity in daily life, a daily rhythm, has a nurturing and healing influence. Everyone lives within nature’s rhythms of day and night, the weeks, and the seasons. Our metabolism is formed out of rhythms and they help save energy because a regular configuration does not require permanent attention “monitoring.”

Mealtimes can help people achieve rhythm in their lives. A rhythmic structure can be created: breakfast, mid-morning snack, lunch, afternoon snack, dinner. The week could be divided into weekdays and Sunday. For example, on Sundays there could always be something “special” that differentiates it from the everyday meals. Perhaps there is a candle on the table, or flowers, or a “Sunday tablecloth.” But, above all, there should be more “time and calm” at mealtimes on this special day than on the weekdays. Young children do not orient themselves to abstract terms like “weekdays,” but rather on observable events, for example, Wednesday is “millet day.” This gives them security and orientation and creates a foundation for their “standpoints.”

The seasons also offer possibilities for structuring meals. For instance, you could use seasonal fruit and vegetables. As adults, perhaps you can remember the time of year when there were fresh strawberries and asparagus at Easter or cracking nuts at the time of Advent. The yearly festivals can become special high points. They can contribute to experiencing the rhythm of the seasons as well as offering a special assortment of foods.

Age-appropriate Standards

The wide variety of foods available often leads to even young children becoming acquainted with a large number of products including foreign foods. This overabundant supply should be viewed very critically. There is a danger that the child’s metabolism becomes overtaxed. Every food must be “recognized” by the digestive organs and very specifically broken-down. If there are too many unknown or new foods introduced into the digestive tract, then it becomes overtaxed and, finally, the body goes on strike and has an allergic reaction.

Challenges to the child's digestion should, therefore, be age-appropriate so that certain developments do not appear too early and take away energy that the child needs for other development. This concept includes all areas of life such as toys the child is given, as well as nutrition. There is good reason for infants to start out with liquid nutrition, then porridge, and then solid foods so that they gradually become accustomed to the appropriate nutrition. Likewise one should not offer a child of kindergarten age too many different kinds of foods. And, one should show preference for seasonal foods and those grown in the region where one lives so that your food ripens in the same climactic zone that the child experiences. This creates security and recognition. Almost all children love repetition whether it is listening to the same fairytales over and over or eating the same foods. Usually starting around age twelve, but sometimes as late as age fifteen, children begin to eat foods they had previously rejected, the children's menu is no longer required.

Building the Will

What does the will have to do with nutrition? This legitimate question can be answered if one looks at the process of digestion. All metabolic processes are based upon inner will—that inner, driving force that creates the actual living part of us. Digestion and metabolism mean tearing-down and building-up, the directed activity of material transformation. The inner will wants to become active and tear down food. From the look, smell, and taste of the food, the body learns to put the appropriate digestive activity into action. A diet based on natural foods that contain substances which our senses can perceive leads to metabolic stimulation. A person's entire structure of vitality is strengthened by this. However, if a child has a diet of foods that promise much from their look and smell but are really "imitations" like artificial flavors, for example, then the metabolic system has prepared itself for nothing. It does not receive what was expected based upon the sense perceptions. If this happens often, the inner will becomes lame. Such a diet leads to inner dullness and a weakening of the metabolic will. Metabolic forces determine the strength of the vitality of body, soul, and spirit for a person's entire life. A lack of challenge or slackening or outright misinformation has the effect of a general weakening. When one thinks that inner "flexibility" shows itself not only in the physical, but also in flexible thinking or feeling, then one can see the full significance of vital and sound nutrition. A diet based on whole, natural foods that are grown biodynamically, if possible, can stimulate the metabolic-will in a variety of ways and makes an important contribution to a person's long-term health.

The Credibility of Parents/Educators

All parents want what is best for their children even when they deny or try to impose certain foods. However, often parents turn to their children when it comes to food decisions. This can be very problematic. Children learn mostly by imitation in the first nine years, not what parents *say* but what they *do*. For instance, it is very detrimental if a child gets no candy because the parents know the effects, but

the parents like to snack on sweets and so they keep a “stash” hidden somewhere. Children sense this “dishonesty.” It would be advisable to have clear-cut rules, regardless of what those rules are, as long as they are upfront and transparent. Even outright denial, of coffee for example, will be accepted by children if they see that parents are acting out of a sense of inner consequence. “You can’t have that!” or some other lukewarm statement is often not successful. The child will probably try to get the desired food anyway by whining or crying.

Every adult should weigh the consequences of his or her words and actions. Nobody is perfect, but it is the striving that counts. Parents and educators may find help in this regard in a book by Steiner called *Knowledge of Higher Worlds* in which exercises are given to help in self-education.

Learning Social Behavior at Mealtimes

Mealtimes are one of the most important training grounds for learning and practicing social behavior. Where can one better learn to share, to have regard for others, to put one’s own needs in second place, rather than selfishly inhaling the food as soon as the plate is placed on the table? These challenges, which should be practiced on a daily basis starting with toddlers, are part of the school of life and should not be underestimated. They can be expanded. Meals also include preparation (cleaning vegetables, cooking, making dough, and so forth), setting the table and clearing it afterward, doing the dishes (or filling and emptying the dishwasher), even purchasing the food is important. While children of kindergarten age like to help as much as possible, this desire markedly declines starting around age ten. This seems to be more the case today than in earlier times. It requires efforts of inner strength, nerves, and will power for parents to insist upon the completion of small chores. Sometimes it helps if there is a written plan of who does what: get the beverages, empty the garbage, or clear the dishes. This social aspect of nutrition should not be forgotten. Rules, division of duties, table manners, and beginning each meal with a blessing or thankful pause are all helpful. Such habits and considerations stay with people their entire lives and positively influence their behavior in other life situations.

Hands-on experience of meal preparation is important. There are so many ready-to-eat products on the market that children no longer know how much work is involved in cleaning vegetables, cutting fruit for a salad, or in baking a cake. Children are losing the opportunity to develop *appreciation* for the human work that is done in the kitchen. More and more young adults can not prepare even the simplest foods because they did not learn to cook at home. It may be that in our world where most adults work outside of the home that cooking everything at home is no longer possible or even desired, but it is important that parents expose their children to the everyday culture and experience of food preparation. Today many schools require that children visit farms and plant vegetable beds in the school gardens to learn how food is grown. This does not always continue at the same level when it comes to the preparation of food in the kitchen. However, the home was and is the best place to teach children about food preparation.

Every Child is Not the Same! The Influence of the Temperaments

Very early on it is possible to tell if a child is dreamy or alert, if she plays alone or needs stimulation from other children or adults. These differences stem more from the tendency to a certain temperament than from upbringing. Knowledge about the temperaments helps us develop understanding for a child's likes and dislikes when it comes to food.

Sanguine children (air) prefer sweet foods. Above all, they need warm food and will often reject "cold," raw food. They have trouble maintaining warmth in their organism. Little choleric (fire) prefer robust, spicy foods. They like pieces of raw vegetables and would prefer crunchy muesli or whole-wheat bread with a savory spread over warm breakfast porridge. Phlegmatic children (water) need quiet and repetition when it comes to eating. They prefer soft and warm foods. Melancholic children (earth), like choleric, prefer chewing sturdy foods.

It is very helpful to take these needs based upon a child's temperament into consideration. Naturally, it would be impossible to cook something different for every temperament in the family, but a meal usually has several components so it should be possible that everyone gets something to their liking. Here is an overview of likes and dislikes of the four temperaments:

- **Choleric:** The choleric loves firm foods that must be conquered, such as heavy, whole-wheat bread, crackers, crunchy grains, raw vegetables, and spicy foods. Sweet, "accommodating" foods are not well-loved. Oats is the grain that supports the choleric temperament. Rye is also appropriate because it requires digestive strength.

- **Sanguine:** Sanguine people love change and favor small, light meals. They do not enjoy chewing because they want the meal to be finished quickly. Millet is the grain that is supportive of the sanguine temperament. They love sweet foods and their sweet tooth can be easily satisfied by fruit and natural sweeteners. It is important that every meal have something warm since they easily feel cold and often do not like "cold" salads.

- **Phlegmatic:** Phlegmatic people favor soft foods and bread. A warm, cooked porridge for breakfast warms up the body and stimulates the metabolism whereas bread can "lie like a stone" in their stomachs. Phlegmatic children like to eat constantly and they can easily eat too much. Rice is the grain that supports the phlegmatic temperament.

- **Melancholic:** Melancholics like to chew and they love robust foods. They also require peace and quiet at mealtimes. Corn (polenta) is the grain that supports the melancholic temperament. On the whole, this temperament is supported by the warmth in the food.

Sample Menu

Breakfast:	Whole-wheat bread, butter, cheese (fresh cheese) and one glass of milk <i>or</i> muesli flakes with fruit, yogurt, one beverage (herb tea) <i>or</i> cooked porridge
Mid-morning Snack	Bread, butter, cheese, fresh fruit or raw vegetable pieces (cucumber, carrots, turnips, salad greens), one glass milk, yogurt drink, water, fruit tea, or herb tea
Lunch	Vegetables, salad, pasta (or rice or other grain like bulgur or spelt), sometimes potatoes, possibly eggs or meat, or fish, dessert such as curd cheese (good for vegetarian diets), compote, fresh fruit <i>or</i> a casserole <i>or</i> pizza or vegetable pie <i>or</i> a stew
Afternoon Snack	Fruit, milk beverage or bread with a sweet spread (honey marmalade, molasses) <i>or</i> yogurt <i>or</i> sometimes cookies, pie, or cake
Dinner:	Light soup, bread, salad, low-fat spread, and beverage

These recommendations should serve only as ideas. If milk is given in the morning, then it is not necessary in the afternoon. If curd cheese is eaten at lunch, then do not serve yogurt or a milk beverage in the afternoon. In general, it is beneficial to the liver's rhythm to eat savory foods in the morning and sweet foods in the evening. However, many children much prefer their morning bread with a sweet spread. In this case, you should consider a child's individual preferences.

Conclusion

This basic knowledge about children's nutrition should help parents in daily life. It shows that it is very possible to live well without the intense array of processed, ready-to-eat food products for children and thus avoid their harmful effects. It is important to prepare many things oneself. Convenient and quick to prepare highly processed foods nevertheless suffer in their quality. It is better to cook simply. This saves time as well as meeting the needs of most children. A lunch consisting of grain (rice or millet, for instance) and vegetables is complete; fresh cheese or yogurt will round out the protein requirement. A piece of fruit and crackers with butter are enough for a mid-morning snack and are usually gladly received.

Keeping staple foods on hand in one's pantry is a good idea. Vegetables, fruit, and milk products can be kept for a few days in the refrigerator. There you already have all the ingredients to prepare quick and economical meals that taste good and are wholesome.

Children's nutrition creates a foundation for their physical, mental, and spiritual development. It is important to begin with a healthy diet and healthy eating habits as early as possible in your children. A healthy diet must taste good; otherwise it cannot fulfill its purpose. There are many good cookbooks available with a wide variety of recipes. In addition, supporting eco-friendly and biodynamic food products promotes the health of the earth and its inhabitants. It is an investment in the *future of all children*.