Recognizing Balanced Diets for Children

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Abstract

The objectives of this study are (1) to describe adequate diets that children can have, (2) to explain knowledge about diets for children, and (3) to find out various types of diets for children. This research used a descriptive-qualitative research method. The data collection was undertaken through data observation. The results of this study show that some informants do not know various diets for children, and some respondents' informants apply diets that nutritional counselors have provided. In short, it is necessary to consider balanced intakes and eating patterns to avoid obese or skinny children. If there is an overweight child, apply a low-energy diet or a dietary balance, and a skinny child can use a High Protein and High Energy Diet (HPHED).

Keywords: Diet, Overweight, Lack of body weight, Child

1. Introduction

Everyone wants children to stay healthy, especially those who have become parents. Children are healthy both mentally and physically. Clinical nutrition specialist at the Tangerang General Hospital (RSUD), Dr. Dian Permatasari, Sp. GK highlights that children's ideal growth and development are appropriate for specific ages, and children's health is mainly concerned with several characteristics. One of them is physical health, and there are some indicators to ponder: a child has clear and clean eyes, shiny hair, fresh lips, and energy when doing every activity. Psychologically, according to the Indonesian health department, healthy children's souls develop naturally, their minds get smarter, their feelings become more sensitive, and their willingness to socialize is better than that of other children.

Children need a dietary balance to help them grow and fulfill their nutritional needs. Problems arise when children experience growth. One striking problem that many parents face is a disruption of growth in children. This problem emerges in children who end up experiencing obesity and emaciation. Parents should avoid this problem so their children can grow well [1].

Every parent will try to provide good food and drinks to help children grow optimally. Good nutrition will energize children to develop social skills with peers and others. The

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desire to see healthy children makes every parent obey whatever their children want, starting with food, drinks, snacks, etc. As a result, parents need control over maintaining their children's food and drink intake. This is because the child's appetite is good and is imbalanced with the diet and nutrition required, so the child is overweight or obese [2]. Then, what if the child is too thin?

The deformity is a sign that children have problems processing nutrients in the body. However, this does not become an accurate benchmark because each child has a different weight and length at birth, so, say, thin, each child is different. Children undergoing emaciation have the following characteristics: skin is less tight, nails experience initial fragility, pale eyes, mouth thrush, and dull hair.

Several causes make a child experience emaciation, one of which is the difficulty of feeding or eating. According to Fimele Famely on Kapanlagi.com, the causes of eating disorders include physical illness, changes in diets, or psychological problems. Other problems arise, namely gastrointestinal function disorders, skin disorders, etc. For this reason, parents should take care of their children who experience developmental disorders like TB and genetic diseases in the family storyline. These concerns will increase if the child is shorter than his peers, the weight does not increase, and so forth. In addition, children will also experience a disruption of self-confidence, resulting in fewer adjusted behaviors in their environment. As previously reviewed, children are healthy if their growth and development align with their ages. Parents must have sufficient knowledge about adequate nutrition for children to make children's nutrients better for the body. Not excessively, however, intense efforts are needed to encourage overweight or obese children to become thin because the children's diet is strongly regulated, so their lack of nutrition results in emaciation. If things happen, parents need to start a balanced diet for their children in a way that is based mainly on guidelines. Therefore, the author considers the title "Recognizing Adequate Diets for Children" to explain the solution that can be used as a reference for readers.

The rest of this paper is organized as follows. Section 2 describes the discussion. Section 3 describes the nutrients in the body. Finally, Section 4 concludes this work and follows a suggestion.

2. Discussion

People become obese by consumption of excess calories, the imbalance between calorie intake and calories outgoing, leading a sedentary life, lack of sleep, disturbances in lipid metabolism, and intake of medications that put on obese. After one year, the HP effects were mainly maintained. Putative genes have been identified that suggest this diet to be particularly effective in 67% of the population. In conclusion, the DioGenes diet is effective in preventing weight regain and reducing weight in overweight children under ad libitum conditions [3]. In an international Journal of Nursing Sciences, Syahrul's research states that the lowest calcium intake was found in children of the regular group. In contrast, no significant difference in calcium intake was observed between underweight and overweight children. In addition, no significant differences in the intake of Ferrum, vitamin C, and vitamin A were observed among the three groups [4].

2.1. Diets for obese children

Obesity in children usually occurs because of uncontrolled intake of food, irregular eating patterns, and a less mobile body. The excess food fat is stored into fat in the children's bodies. To overcome obesity in children, children can go on a diet controlled by parents and a

nutritionist. On kompas.com, Sari's mother shares an opinion about the principle of a good diet for children, namely the dietary principle of keeping balance with the diet or eating varied foods with portions according to the body's needs. The way to do it is to consume complex carbohydrates, reduce fat/fried consumption, avoid sweet foods, add portions of fruits and vegetables, and increase activities for children by at least 60 minutes per day. A study by Khory Afifah Iriantika and Ani Margawati in [5] shows that the change would improve the attitude and behavior of eating choices after nutritional counseling. Diet in terms of food groups (e.g., fruit and vegetables) or its content of a single nutrient (e.g., dietary fat or fiber) or single food could have been related to overweight/obesity. The relationships could not reflect human diet complexity, high correlations between intakes of various nutrients or food items, and various nutrient-to-nutrient biochemical interactions and overweight/obesity [6]. In addition, children can have a low-energy diet, a diet whose energy content is below standard requirements, adequate vitamins and minerals, and more valuable fiber for weight loss [7]. Children should eat foods low in carbohydrates and fats, such as cakes, snacks, and fried foods. However, the children have enough minerals, vitamins, and fiber. Besides, parents provide children with fruits and vegetables. The social practices of food choice that contributed to the formation of proper nutritional status of children under five years of age were (1) Monitoring children's intake of healthy food, (2) Ensuring that children ate and used food services, which contributed to the increased frequency of fruit and vegetable consumption, (3) Creating dishes and snacks, which contributed to reduced consumption of snacks that are high in sugar and carbohydrates and (4) Forming appropriate food choices [8].

The general cause of obesity is if we eat more than the body needs with a less mobile body. The excess of this food will be converted and stored into fat in our bodies. His advice for overcoming obesity in children: The principle of keeping a balanced diet or eating varies with portions according to body needs, with a note of consuming complex carbohydrates, reducing fat/fried foods, avoiding sweet foods, adding portions of fruits and vegetables on the ananda menu and increase physical activity to a minimum of 60 minutes per day. Children should eat snacks between meals, preferably healthy snacks such as dairy products, fruits, and vegetables. In contrast, children should be discouraged from eating fast foods as a meal since they may eat a large amount of fast food rather than eating fast food as a snack. Thus, diet and exercise programs similar to obesity control programs could help reduce underweight among elementary school children [9]. Reducing energy input: Choosing a filling meal (choose a complete meal: brown rice, whole wheat bread, and side dishes and vegetables) is recommended. (Keep in mind: side dishes or food sources of protein and vegetables have a more prolonged filling effect, so children are not easily hungry) Consume more complex and high-fiber complex carbohydrates (whole wheat bread, brown rice, oats), and consume lots of vegetables and fruits for sources of vitamins, minerals, fiber, and satiation. Eating regularly according to schedule, given in small portions. Healthy: cut fruit (papaya, pier, apple, melon, mango, grape). Choose low-fat milk. Include children in choosing and preparing food. Choose cooking techniques that do not add fat by steaming, boiling, roasting, or stir-frying. However, these foods that are fried or fatty should be avoided or restricted, and fat or fat should be set aside on meat and chicken skin because of their high-fat content. Coconut foods because they contain high fat. Don't use margarine to spread bread.

Do not consume fast food or fast food because it is usually high in fat and calories. Do not consume sugary and sweet foods because they are high in calories and make children hungry fast, such as snacks or snacks with high energy but low nutrition (donuts, french fries, potato/cassava chips). Sugar, sweet foods, and sweetened condensed milk increase energy output through physical activity, such as inviting children to play outside the house, walking,

playing football, and riding on bicycles to burn fat on their bodies. Reducing relaxing activities: reducing watching TV and playing games and engaging the family in activities - swimming, cycling, and walking in the morning with the family. The recommended food the children can consume is a balanced diet viewed from carbohydrates, namely brown rice, wheat bread, oats, etc.

Regarding minerals and vitamins, children can eat papayas, pears, apples, melons, grapes, etc. As for the fat supply, children can take low-fat milk. In kompas.com, Sari argues that balanced nutritional patterns determine the consumption of varied foods and appropriate portions. As a guide, the number of dietary adequacies for Indonesian children, on average, aged 4-6 years old, and the nutrient data are described as follows.

- Energy: 1.550 kcal
- Protein: 39 grams
- Calcium: mg
- Iron: 9 mg

The feeding guide takes into account 3J and 1A, namely:

The amount according to the portion of the children's needs

- Various types of foods
- Schedule large meals three times a day and 2-3 times healthy snacks
- Safe from chemicals such as artificial dyes, bleach, and preservatives

How Children Can Gain Weight Healthily. Whatever the reason, some general tips for healthy weight gain can include:

2.2. Not skipping meals

Consider eating four or five small meals a day instead of trying to eat three bigger meals since your child likely won't eat all of them anyway. Avoiding low-nutrient, energy-dense foods, such as junk foods with empty calories, including candy, chips, and soft drinks. Eating high-nutrient, energy-dense foods, which are high in calories but also have vitamins, minerals, and other nutrients, such as whole milk, yogurt made with whole milk, peanut butter, etc.

Avoiding low-energy or non-energy-containing drinks, such as diet soda and fruit drinks. Limit drinks at mealtimes so your child doesn't fill up and may want to eat more food. Consult a registered dietician for extra help, especially if your child has malabsorption or a chronic illness causing him to be underweight. Foods with a good amount of protein and fat and other nutrients in a small package, such as Whole milk or 2% milk, Cheese or yogurt made with whole milk or 2% milk, Fried eggs, Peanut butter, Cereal with whole milk, Orange juice, Trail mix with dried fruit, seeds, and nuts. You could also list the foods your child likes to eat and then find more nutrient-dense and energy-dense versions of those foods. This should include fruits and vegetables and a variety of foods from all of the food groups.

2.3. Supplements to gain weight

Although nutrition experts usually don't recommend giving kids supplements to help them gain weight, it can often help to supplement the food they are eating and drinking with extra calories, such as by adding the following nutrient-dense foods to certain other foods: Powdered milk, Margarine, Cheese, Wheat germ, Peanut butter, Instant breakfast mix, Honey, Avocados, Sour cream, Mayonnaise, Salad dressing. For example, adding 1 to 2 tablespoons

of powdered milk to 8 ounces of whole milk (150 calories) can add 30 to 60 calories to your child's glass of milk. Or you could add a packet of Carnation Breakfast Essentials to a glass of whole milk and an extra 130 calories to that glass for a total of 280 calories [10]. Based on DR. Sunita Almatster's research in [6], a low-energy diet aims to achieve and maintain the nutritional status according to age, gender, and physical needs; achieve an average BMI of 18.5-25 kg / m2 and reduce the energy intake, so that children lose weight. A low-energy diet requires energy, protein, fat, carbohydrates, vitamins, and minerals (DR. Sunita Almatster, in [7], elaborated below.

- Low energy is intended for weight loss. The reduction is managed in stages by considering eating habits and quality aspects of the quantity. To reduce weight by 12-2 kg/week, the energy intake should be reduced by 500-1000 kcal / day, and this is a normal requirement. The calculation of normal energy requirements is based on the ideal body weight.
- Protein is slightly higher, at 1-1 / 5 g / kg/pound/day or 15% to 20% of total energy requirements.
- Medium fat is 20-25% of total energy requirements. Try a source of fat from high-polyunsaturated fats.
- Carbohydrates account for slightly less than 55-65 percent of the total energy requirements. Use more complex carbohydrates to provide satiety and prevent constipation. You can substitute sugar for simple sugar.
- Vitamins and minerals are sufficient according to needs.
- It is recommended to eat three times and 2-3 times interlude.
- Sufficient liquid, i.e., 8-10 glasses/day.

Foods that must be avoided or restricted to children during the obesity diet are fried or fatty foods such as chicken meat or skin, coconut milk that has high fat, and sugary and sweet foods that are high in calories. The first key finding was that about one-third of mothers of low-income 4- to 8-year-old children expressed concern that their child doesn't or might not eat enough. Analysis of mothers' elaboration of this concern through qualitative analysis revealed a focus on inadequate quantity of intake, but with links made to the child being "too skinny," "picky," consuming insufficient vitamins, protein, fruits, and vegetables, or wasting food [11]. In addition, increasing activities outside the home, such as running, walking, playing football, and others, encourage children to move more for more sweat so that children get healthier.

2.4. Diets for thin children

In kompas.com, Dr. Widodo Udarwanto SpA [12] explains that children's growth and development are health problems to consider early. Growth failure or failure to thrive often occurs within six months and is not detected correctly. This disorder emerges from malnutrition and lack of iron, calcium, minerals, vitamins, etc. This is influenced by the quality and amount of calorie intake in children. To meet the energy and protein needs of the body, children can carry out a high-protein energy diet. This is intended to prevent and reduce damage to body tissues. In addition, it is essential to gain weight to reach an average body weight. In DR. Sunita Almatster's research in [7], a High-Protein, High-Energy (HPHE) diet

contains energy and protein above standard requirements. This diet is given to children in terms of ordinary food and added high-protein food ingredients such as milk, eggs, meat, etc. Depkes in [13], "Diets for underweight children are given to adolescents 6-18 years of age who are malnourished, namely weight and height that are not according to their age." Achieve ideal body weight and help with nutrients that require protein and calories high, food that meets balanced nutrition, type, and composition of foods suitable for the age and taste of individuals, using natural and self-processed ingredients—various diets.

A diet that includes weight cannot be done with the proper diet. First, eat small portions and often. In addition, it provides an exciting variety of foods so that children have a good interest in eating. Second, eat enough vegetables and fruit and lots of minerals and nutrientrich foods. Food tips that are recommended for less-weight diets. Sources of charcoal hydrates: rice, porridge, bread, wheat, corn, potatoes, cassava, etc. Sources of protein can be obtained from animal protein and vegetable protein. Animal protein, namely meat, chicken, eggs, fish, shellfish, shrimp, squid, and others. Vegetable protein can be obtained from tempeh, tofu, green beans, kidney beans, soybeans, and others.

In addition, vegetables that contain vitamins and minerals can be obtained from kale, cabbage, cauliflower, and others. Sources of vitamins, fruits, or fruit juices are also needed by the body and are obtained from oranges, papaya, apples, melons, guava, and others. Fat is obtained from oil, coconut milk, margarine, and other sources. Additional complement to food is obtained from fresh milk, full cream milk, yogurt, ice cream, and others. Then, foods that should be avoided by someone who needs a low-weight diet, less clean snacks can cause diarrhea, and drinks that contain alcohol or soda can cause children to fill up quickly. On the solusisehatku.com page, Desi Sintia Kresnawati gives insights into several ways to help parents gain their children's weight. Eating healthy heart fat, making a diet plan, giving children a snack or smoothies snack, and reducing giving children fast food, as stated below.

2.4.1. Eating healthy heart fat

Eating healthy heart fat can add calories to increase body weight, such as butter, avocado, and nuts, which are suitable for children's bodies.

2.4.2. Making a diet plan

Making a diet plan is effective for children to eat, and it will be more fun if children get involved in making foods so that they know what and how foods are processed and managed to be consumed. Moreover, parents become aware of what foods children like so that they are more excited when eating and make children have a happy and relaxed mood.

2.4.3. Giving children a snack or smoothies snack

The calories in shakes and smoothies are very high, and the mixture of fresh milk, sugar, and fruit makes children enjoy these snacks without fear of being dangerous. Parents ensure that the ingredients in their foods are safe and nutritional. A mixture of strawberries, bananas, milk, chocolate, yogurt, and children's vegetables makes the children gain weight.

2.4.4. Reducing giving children fast food

Remember that fast food has high levels of salt, sugar, and saturated fats, so it is unsuitable for children. Junk food has empty calories, which are unsuitable for children's health. It does not make the children fat and healthy; they become thin and prone to illnesses.

DR. Sunita Almatster in [7] mentions the requirements of a high-protein, high-energy diet, namely:

- High energy, 40-45 kcal / kg bw
- High protein, 2.0-2.5 g / kg bw
- Adequate fat, 10-25% of total energy requirements
- Enough carbohydrates, the rest of normal needs
- Enough vitamins and minerals, according to normal needs
- Food is given in the form of digestibility

A high-protein, high-energy diet helps children maintain a normal weight and enough appetite to consume a full meal.

3. Nutrients in the body

It takes the nutrients contained in the food to support the needs required by the body. Examples of food are fish, eggs, rice, and so on. Foodstuffs generally contain nutrients, namely carbohydrates, proteins, fats, vitamins, and minerals. Carbohydrates, proteins, fats, vitamins, minerals, and water are required for good health. Carbohydrates, fat, protein, and vitamins are called organic substances (substances that contain carbon structure), while water is a mineral and inorganic substance.

Family environment: emphasis on parental role and strategies to improve children's eating behaviors; highlights early feeding experiences and later food choices; describes obesogenic environments, in particular, media inputs, as well as socioeconomic and educational status. These factors can influence the quantity of children's food intake and preferences, contributing to dietary quality [14].

Energy is one of the glazed products of the metabolism of carbohydrates, proteins, and fats. Energy serves as energy substances for metabolism, growth, control of temperature, and physical activity [15]. These substances function as an energy source or energy (carbohydrates, protein, and fat), a source of a builder mainly to continue to grow and develop, and to replace cells damaged (proteins, fats, and vitamins), and a source regulator (vitamins, minerals, and water). Source regulating substances the body needs in small amounts are also called macro-nutrients, i.e., less than 100mg per day.

The body requires daily nutrients, namely carbohydrates, proteins, fats, vitamins, minerals, fiber, and water plants.

(1) Carbohydrate

Carbohydrates are the primary source of energy needed by the body. The body converts simple sugars and complex starches into glucose to be used as the energy source of the body's cells. Excess carbohydrates will increase weight because the body stores them as fat. Excess carbohydrates can lead to diseases such as obesity or being overweight or obese. However, it can be prevented by replacing white rice with wheat/oatmeal, sorghum, quinoa, carrots, beets, and beans, which are high in fiber and full of vitamins and minerals. That is because high-fiber carbohydrate sources make it fuller and fuller of nutrients. For example, 40% of calories come from carbohydrates.

(2) Protein

Proteins are useful for growth and cell repair. However, excess protein is also not good for the body. Excess protein will typically suffer from gout, high cholesterol, weight gain, etc. Generally, the body needs 0.8 gr of protein for every 1 kg body weight. Protein sources such as chicken and fish are replaced with vegetable proteins such as nuts, seeds, tempeh, and green vegetables.

(3) Fat

Fat is a rich source of energy that helps the absorption of vitamins A, D, E, and K and the formation of hormones in the body. Avocados, nuts, green vegetables, and fruits are the best fat sources. Excess fat can make the body suffer from various diseases. Diseases resulting from excess fat, namely increased risk of cancer, obesity, constipation, damage to the walls of arteries and brain, and high cholesterol. The average adult should consume 30% fat, 30% protein, and 40% carbohydrates.

(4) Vitamin

Vitamins can help increase metabolism and care for the body's cells. Each cell in the body requires vitamins for metabolism, maintenance, and replacement of damaged cells. However, in food processing, there is a need for good handling so that vitamins are not damaged. Vitamin C and B Complex are very susceptible to temperature, so they often break when cooked at high temperatures. Vitamin deficiency can cause diseases of the eye, anemia, hypertension, kidney disease, premature aging, eczema, cancer, cough, colds, osteoporosis, and pain when menstruation/menses. Vitamins can be found in fruits and vegetables such as spinach, apples, tomatoes, beans, avocado, beetroot, lemon, and orange.

(5) Mineral

Minerals are essential for the growth and metabolic processes in cells. Various body members require water intake, ranging from hair, skin, and bone to blood cells that need minerals daily. In addition, minerals increase nerve function and help convert food into energy. Mineral deficiency can lead to many metabolic processes being interrupted and the resulting health problems such as osteoporosis, anemia, fatigue, dry skin, and hair loss until the issue is hormonal balance. Mineral idapatkan is made up of plants that grow in the soil. For example, ginger, turmeric, carrot, beet, beans, cashews, and dark green vegetables like kale.

(6) Fiber plants

Plant fibers, also called dietary fiber, are part of the food that is not broken down by the body and help keep the digestive system functioning better. Beneficial fiber helps the absorption of nutrients in the gut, maintaining optimum gut activity, controlling immunity and the balance of gut bacteria, and protecting body cells to prevent constipation, hemorrhoids, heart disease, and colon cancer. Tubuhan fibers can be obtained from the consumption of green vegetables such as spinach, celery, and other green vegetables. In addition, plant fibers found in foods high in carbohydrates and protein also contain high levels of fiber, such as wheat, sorghum, edamame, and tempeh.

(7) Water

Water must be made of 65% of the body weight. The water content in the body is reduced through the digestive and respiratory, sweat, and urine. The body needs to recharge its water content by drinking mineral water or vegetables and eating fruit with high water content, such as cucumbers, watermelon, and grapefruit. Lack of water can cause irritation and damage

cells and organs such as the brain, eyes, blood, and digestive tract. Drinking eight glasses of water per day (2-3 liters) is advisable.

(8) Magnesium and selenium

Magnesium and selenium are needed for the body to maintain a person's mood. It contained oysters, clams, sardines, and processed whole grains like oatmeal.

(9) Omega-3 fatty acids

Omega 3 dibutuhakan for brain growth. Omega-3 fatty acid deficiency can cause advanced depression. This substance was found in fatty fish, such as mackerel, salmon, sardines, tuna, and beans.

(10) Antioxidants

Antioxidants serve to fight free radical damage that can affect brain function.

(11) Beta carotene

Beta carotene is required for the body and brain. Kandunagn, the substance is present in apricots, broccoli, carrots, pumpkin, spinach, and sweet potatoes.

The combination according to the fulfillment of nutrients in the body, namely:

(1) Protein and fat

The combination of these foods becomes mismatched for not being given extra fat. For example, meat and beans are two types of food that combine protein and fat. Elements of the fat contained in the food served to melamabatkan protein digestion to have enough time to interact with stomach acid. But if the existing fat is combined with other fat, such as meat fried in oil, automatically the fat contained in the oil will give extra fat in the meat, then it could result in fat digestion in the stomach being imperfect. Examples of foods with a combination of protein and fat are meat (chicken, beef, fish) roasted, baked, boiled, or steamed. Nuts are roasted, boiled, or steamed.

(2) Starch and fat

In foods containing protein and fat, starch and fat will be a combination of matching foods to avoid extra fat. For example, for sweet potatoes or yams, do not add coconut milk as when we make a compote. Use fats in moderation as a flavor enhancer. Examples of foods with a combination of starch and fat are:

(3) Bread with a little butter

- Mashed potatoes with a bit of cream
- Rice boiled with a bit of coconut oil
- The fries (protein and fat contained in the potato are very low, making it safe when fried with unsaturated oils and new, not used oil which is used).

(4) Sugar and acid

This combination is found in many fresh fruits and plain yogurt. Examples of foods with sugar and sour combinations are:

- Plain yogurt + pure honey.
- Plain yogurt + fruit sweet.
- Sour fruit + sweet fruit.
- Sweet and sour sauce.
- Vegetable fat and vegetable protein

Fat is a food component that serves as a medium for fat-soluble vitamins. Heating will give a sweet and savory smell as short-chain fat evaporates stronger. If the heating is too high, it can produce cancer-causing free radicals—for example, the charred skewers from burning. Fat and protein in vegetables tend to be low, so it is safe when combining foods containing vegetable protein. Because the digestive process is lighter when we consume animal protein. Examples of foods with a combination of vegetable protein with vegetable proteins are brown rice + soybean, rice + red bean cakes, and soup content of various grains and legumes.

4. Conclusion and suggestion

4.1. Conclusion

Parents want children who are healthy, intelligent, and friendly with the environment. Therefore, paying attention to the nutrient intake and pattern of children's eating habits is necessary to avoid being overweight or underweight. However, children who are overweight or underweight can have a balanced diet called low-energy for fat bodies and a high-energy high protein diet (HEHP) to maintain thin body postures.

4.2. Suggestion

Parents are expected to pay attention to good food for children's consumption. Healthy food is better for children's ideal health. This is an excellent step to avoid disrupting children's health and emotions so that their growth and development undergo considerable progress.

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