Claims

[Claim 1]

A nutrition calculation system for a complete nutritious food product comprising:

an information acquisition unit configured to acquire information on user attributes;

a user information storage unit configured to store the information on user attributes;

a Dietary Reference Intake (DRI)-storing unit configured to store DRIs of a complete nutritious food product in which intake standards for first and second nutrients are set for each user attribute, wherein the DRIs of the complete nutritious food product are any of intake standards derived from the "Dietary Reference Intakes (DRIs) for Japanese" published by the Ministry of Health, Labour and Welfare of Japan, the "Dietary Reference Intakes (DRIs)" in the US, and the "Dietary Reference Intakes for Chinese" in China; and

a nutrition calculation unit configured to calculate the intake standard for the first nutrient and the second nutrient in a standard food forming the complete nutritious food product, so that the standard food can satisfy the intake standard for the first nutrient and the second nutrient of all users, wherein

the first nutrient is at least one of vitamins and minerals,

the second nutrient is at least one of protein, lipid, and carbohydrate,

the information on user attributes includes at least information on gender, age, or physical activity level, and

in the case where a tolerable upper intake level (UL) of the first nutrient is set in the DRIs, a normalized nutrient amount in each category to which the user belongs is calculated by the following formula:

Normalized nutrient amount = UL of first nutrient × (energy amount of standard food/EER in each category), and the smallest normalized nutrient amount is set as the upper limit of the first nutrient intake in the standard food,

wherein the complete nutritious food product is prepared by adjusting the amount of the standard food,

the energy amount of the complete nutritious food product is the estimated energy requirement (EER) in the category of the DRIs to which each user belongs, and the energy amount of the standard food is the EER in the category with the lowest EER among the categories of DRIs to which all users belong, and

wherein the dietary reference intakes are classified based on the gender, age, and physical activity level of the users.

[Claim 2]

A nutrition calculation system for a complete nutritious food product comprising:

an information acquisition unit configured to acquire information on user attributes;

a user information storage unit configured to store the information on user attributes;

a Dietary Reference Intake (DRI)-storing unit configured to store DRIs of a complete nutritious food product in which intake standards for first and second nutrients are set for each user attribute, wherein the DRIs of the complete nutritious food product are any of intake standards derived from the "Dietary Reference Intakes (DRIs) for Japanese" published by the Ministry of Health, Labour and Welfare of Japan, the "Dietary Reference Intakes (DRIs)" in the US, and the "Dietary Reference Intakes for Chinese" in China; and

a nutrition calculation unit configured to calculate the intake standard for the first nutrient and the second nutrient in a standard food forming the complete nutritious food product, so that the standard food can satisfy the intake standard for the first nutrient and the second nutrient of all users, wherein

the first nutrient is at least one of vitamins and minerals,

the second nutrient is at least one of protein, lipid, and carbohydrate,

the information on user attributes includes at least information on gender, age, or physical activity level, and

in the case where an adequate intake (AI) or a recommended dietary allowance (RDA) of the first or the second nutrient is set in the DRIs, the maximum value of the AI or the RDA of the first or the second nutrient in each category of the

DRIs is set as the lower limit of the first nutrient intake or the second nutrient intake in the standard food,

wherein the complete nutritious food product is prepared by adjusting the amount of the standard food,

the energy amount of the complete nutritious food product is the estimated energy requirement (EER) in the category of the DRIs to which each user belongs, and the energy amount of the standard food is the EER in the category with the lowest EER among the categories of DRIs to which all users belong, and

wherein the dietary reference intakes are classified based on the gender, age, and physical activity level of the users.

[Claim 3]

The nutrition calculation system for a complete nutritious food product according to claim 1 or claim 2, wherein

the range of the intake standard for the first nutrient or the second nutrient in the standard food is narrower than the range of the DRI for the first nutrient or the second nutrient in the complete nutritious food product.

[Claim 4]

The nutrition calculation system for a complete nutritious food product according to any one of claims 1 to 3, wherein

the ratio of the amount of the complete nutritious food product to the amount of the standard food is equal to the ratio of the energy amount of the complete nutritious food product to the energy amount of the standard food.

[Claim 5]

The nutrition calculation system for a complete nutritious food product according to any one of the preceding claims, wherein

the upper limit of the DRIs for preventing life-style related diseases (DG) of protein in the category with the lowest EER among the categories of the DRIs to which the users belong is set as the upper limit of protein intake in the standard food, and the RDA with the largest value among the categories to which the users belong is

set as the lower limit of protein intake in the standard food that is provided to the users.

[Claim 6]

The nutrition calculation system for a complete nutritious food product according to any one of the preceding claims, wherein

the upper limit of the DG of lipid in the category of standard energy amount with the lowest EER among the categories of the DRIs to which the users belong is set as the upper limit of lipid intake in the standard food, and the lower limit of the DG of lipid for the users belonging to the category of the "standard energy amount" is set as the lower limit of lipid intake in the standard food.

[Claim 7]

The nutrition calculation system for a complete nutritious food product according to any one of the preceding claims, wherein

the upper limit of the DG of carbohydrate in the category of standard energy amount with the lowest EER among the categories of the DRIs to which the users belong is set as the upper limit of carbohydrate intake in the standard food, and the lower limit of the DG of carbohydrate for the users belonging to the category of the standard energy amount is set as the lower limit of carbohydrate intake in the standard food.

[Claim 8]

The nutrition calculation system for a complete nutritious food product according to any one of the preceding claims, wherein

the vitamins include one or more of vitamin A, vitamin D, vitamin E, vitamin K, vitamin B_1, vitamin B_2, niacin, vitamin B_6, vitamin B_{12}, folic acid, pantothenic acid, biotin, and vitamin C, and

the minerals include one or more of sodium, potassium, calcium, magnesium, phosphorus, iron, zinc, copper, manganese, iodine, selenium, chromium, and molybdenum.

[Claim 9]

A nutrition calculation device for a complete nutritious food product, comprising:

an information acquisition unit configured to acquire information on user attributes;

a user information storage unit configured to store the information on user attributes;

a DRI-storing unit configured to store DRIs of a complete nutritious food product in which intake standards for first and second nutrients are set for each user attribute, wherein the DRIs of the complete nutritious food product are any of intake standards derived from the "Dietary Reference Intakes (DRIs) for Japanese" published by the Ministry of Health, Labour and Welfare of Japan, the "Dietary Reference Intakes (DRIs)" in the US, and the "Dietary Reference Intakes for Chinese" in China; and

a nutrition calculation unit configured to calculate the intake standard for the first nutrient and the second nutrient, which is satisfied regardless of attributes of each user, in the standard food forming the complete nutritious food product, wherein

the first nutrient is at least one of vitamins and minerals,

the second nutrient is at least one of protein, lipid, and carbohydrate,

the information on user attributes includes at least information on gender, age, or physical activity level, and

in the case where a tolerable upper intake level (UL) of the first nutrient is set in the DRIs, a normalized nutrient amount in each category to which the user belongs is calculated by the following formula:

Normalized nutrient amount = UL of first nutrient × (energy amount of standard food/EER in each category), and the smallest normalized nutrient amount is set as the upper limit of the first nutrient intake in the standard food,

wherein the complete nutritious food product is prepared by adjusting the amount of the standard food,

the energy amount of the complete nutritious food product is the estimated energy requirement (EER) in the category of the DRIs to which each user belongs, and the energy amount of the standard food is the EER in the category with the lowest EER among the categories of DRIs to which all users belong, and

wherein the dietary reference intakes are classified based on the gender, age, and physical activity level of the users.

[Claim 10]

A nutrition calculation program for a complete nutritious food product, comprising:

a step of acquiring information on user attributes;

a step of storing the information on user attributes;

a step of storing DRIs of the complete nutritious food product in which the intake standards for the first and second nutrients are set for each user attribute, wherein the DRIs of the complete nutritious food product are any of intake standards derived from the "Dietary Reference Intakes (DRIs) for Japanese" published by the Ministry of Health, Labour and Welfare of Japan, the "Dietary Reference Intakes (DRIs)" in the US, and the "Dietary Reference Intakes for Chinese" in China; and

a step of calculating the intake standard for the first nutrient and the second nutrient, which is satisfied regardless of attributes of each user, in the standard food forming the complete nutritious food product, wherein

the first nutrient is at least one of vitamins and minerals,

the second nutrient is at least one of protein, lipid, and carbohydrate,

the information on user attributes includes at least information on gender, age, or physical activity level, and

in the case where a tolerable upper intake level (UL) of the first nutrient is set in the DRIs, a normalized nutrient amount in each category to which the user belongs is calculated by the following formula:

Normalized nutrient amount = UL of first nutrient × (energy amount of standard food/EER in each category), and the smallest normalized nutrient amount is set as the upper limit of the first nutrient intake in the standard food,

wherein the complete nutritious food product is prepared by adjusting the amount of the standard food,

wherein the energy amount of the complete nutritious food product is the estimated energy requirement (EER) in the category of the DRIs to which each user belongs, and the energy amount of the standard food is the EER in the category with the lowest EER among the categories of DRIs to which all users belong, and

wherein the dietary reference intakes are classified based on the gender, age, and physical activity level of the users.

[Claim 11]

A nutrition calculation device for a complete nutritious food product, comprising:

an information acquisition unit configured to acquire information on user attributes;

a user information storage unit configured to store the information on user attributes;

a DRI-storing unit configured to store DRIs of a complete nutritious food product in which intake standards for first and second nutrients are set for each user attribute, wherein the DRIs of the complete nutritious food product are any of intake standards derived from the "Dietary Reference Intakes (DRIs) for Japanese" published by the Ministry of Health, Labour and Welfare of Japan, the "Dietary Reference Intakes (DRIs)" in the US, and the "Dietary Reference Intakes for Chinese" in China; and

a nutrition calculation unit configured to calculate the intake standard for the first nutrient and the second nutrient, which is satisfied regardless of attributes of each user, in the standard food forming the complete nutritious food product, wherein

the first nutrient is at least one of vitamins and minerals,

the second nutrient is at least one of protein, lipid, and carbohydrate,

the information on user attributes includes at least information on gender, age, or physical activity level, and

in the case where an adequate intake (AI) or a recommended dietary allowance (RDA) of the first or the second nutrient is set in the DRIs, the maximum value of the AI or the RDA of the first or the second nutrient in each category of the DRIs is set as the lower limit of the first nutrient intake or the second nutrient intake in the standard food,

wherein the complete nutritious food product is prepared by adjusting the amount of the standard food,

the energy amount of the complete nutritious food product is the estimated energy requirement (EER) in the category of the DRIs to which each user belongs, and the energy amount of the standard food is the EER in the category with the lowest EER among the categories of DRIs to which all users belong, and

wherein the dietary reference intakes are classified based on the gender, age, and physical activity level of the users.

[Claim 12]

A nutrition calculation program for a complete nutritious food product, comprising:

a step of acquiring information on user attributes;

a step of storing the information on user attributes;

a step of storing DRIs of the complete nutritious food product in which the intake standards for the first and second nutrients are set for each user attribute, wherein the DRIs of the complete nutritious food product are any of intake standards derived from the "Dietary Reference Intakes (DRIs) for Japanese" published by the Ministry of Health, Labour and Welfare of Japan, the "Dietary Reference Intakes (DRIs)" in the US, and the "Dietary Reference Intakes for Chinese" in China; and

a step of calculating the intake standard for the first nutrient and the second nutrient, which is satisfied regardless of attributes of each user, in the standard food forming the complete nutritious food product, wherein

the first nutrient is at least one of vitamins and minerals,

the second nutrient is at least one of protein, lipid, and carbohydrate,

the information on user attributes includes at least information on gender, age, or physical activity level, and

in the case where an adequate intake (AI) or a recommended dietary allowance (RDA) of the first or the second nutrient is set in the DRIs, the maximum value of the AI or the RDA of the first or the second nutrient in each category of the DRIs is set as the lower limit of the first nutrient intake or the second nutrient intake in the standard food,

wherein the complete nutritious food product is prepared by adjusting the amount of the standard food,

wherein the energy amount of the complete nutritious food product is the estimated energy requirement (EER) in the category of the DRIs to which each user belongs, and the energy amount of the standard food is the EER in the category with the lowest EER among the categories of DRIs to which all users belong, and

wherein the dietary reference intakes are classified based on the gender, age, and physical activity level of the users.

Abstract

Different nutritional intake standards are set according to age, gender, and physical activity level in the Dietary Reference Intakes (DRIs) set in each country, for example, the "Japanese DRIs". Therefore, in order to provide meals satisfying the DRIs to a plurality of users with different attributes, for example, in a company staff canteen or the like, not only adjustment of the amounts of meals but also fine adjustment of nutritional components of meals for each category has been required. The present invention proposes a complete nutritious food product that eliminates the need for adjustment of nutrients according to each category of age, gender, and physical activity level, and enables eating of a complete nutritious food product satisfying the DRIs only by adjusting the amount (calories) of foods, and a providing system thereof. As a result, users who receive meals can easily take the complete nutritious food product, are freed from the trouble of nutrition management, and can improve their health.