COMPLETE, NUTRITIONALLY BALANCED COFFEE DRINK

CROSS-REFERENCE TO RELATED APPLICATION

This application is a Continuation-in-Part of prior application Ser. No. 08/456,559, filed Jun. 1, 1995.

BACKGROUND OF THE INVENTION

The present invention relates generally to the treatment and nutritional support of patients. More specifically, the present invention relates to providing nutrition to a patient in need of same in a variety of compositional forms.

Patients suffering from a loss of nutrients require adequate nutritional support. The lack of adequate nutritional support can result in malnutrition associated complications, such as prolonged negative nitrogen balance and depletion of somatic and visceral protein levels. Thus, the goal of nutritional support is to maintain body mass, provide nitrogen and energy in adequate amounts to support healing, meet metabolic demands characterized by the degree of stress, and support immune function.

A traditional form of nutritional support is administering whole protein liquid feedings to the patient. Whole protein feedings are offered as a dietary supplement that typically can be consumed as partial or total meal replacements in hospitals, nursing homes and by home patients. Dietary supplements are generally useful for patients who are able to eat spontaneously but, for various reasons, do not consume enough nutrients. For instance, dietary supplements are often utilized in nursing homes as well as hospitals to treat elderly patients suffering from or at risk for protein-calorie malnutrition due to illness or age.

Dietary supplements are also useful for patients who do not absorb adequate nutrition from a routine diet. For instance, individuals who have high energy needs, fluid restriction or fat malabsorption can benefit from the use of dietary supplements. For persons who have an isolated deficiency, supplements can increase the total quantity of carbohydrate, fat or protein consumed.

The use of complete oral formulas as dietary supplements for patients who are deficient in their intake of protein, carbohydrate and/or fat is frequently a temporary measure. The temporary nature of such dietary supplements often stems from the patient's resistance to continually ingest such formulas over time as opposed to the continued need for the supplements. The great majority of medical food supplements are liquids intended for consumption at room or refrigerated temperatures.

Variety with these products currently means different flavors of the same form. However, research on sensory-specific satiety shows that consumption of foods and nutritional supplements with an almost identical hedonic profile, regardless of flavor differentiation, results in a sense of satiety and boredom. As a result, a progressive drop in compliance of the use of the supplements arises. Moreover, some carry-over satiety that affects the intake of other food as well as a lower caloric intake/day arises.

Moreover, in addition to taste variety, the nutritional supplement must also contain a nutritionally complete profile of needed nutrients to provide the required nutritional support. An assortment of meal supplements and snacks exist on the market, such as many weight loss and sports supplements. However, these supplements tend to stress low fat or high protein without providing nutritional balance and

completeness in the form of the full component of vitamins and minerals. Patients consuming such products fail to obtain the required nutrients needed for adequate nutritional support.

Therefore, a need exists for a complete nutritional supplement that can be offered in a variety of forms and flavors. In order to provide the same nutritional value irrespective of the form or flavor, such a nutritional supplement should preferably provide a nutritionally consistent profile irrespective of the form selected. Moreover, to increase patient compliance, the composition should be provided in a variety of tastes, forms, smells and temperatures, resulting in a family of products that are nutritionally interchangeable.

SUMMARY OF THE INVENTION

The present invention provides a reconstitutable powder coffee composition that, when reconstituted with hot water, provides a nutritionally complete, balanced coffee drink which may be used to provide caloric and protein support to a patient in need of nutritional support. The coffee composition and coffee drink prepared therefrom are especially useful as an enterally administered component in a program of nutritional care and management which utilizes a number of carefully designed nutritional products in various forms, i.e., in shake, soup, fruit drink, snack bar and coffee forms, which can be mixed and matched over a period of nutritional care to provide more attractive and, therefore, more effective nutritional support to a patient, particularly those in extended care situations.

In an embodiment, the present invention provides a coffee composition in an agglomerated, dissolvable powder comprising: coffee powder; from about 16% to about 30% of calories of a protein component; from about 40% to about 60% of calories of a carbohydrate component; and from about 15% to about 33% of calories of a lipid component.

In an embodiment, the present invention provides a method for providing nutritional support to a long term care patient. The method includes providing nutrition to a patient in need of nutritional support comprising enterally administering to the patient a balanced, nutritionally complete coffee drink in the form of an aqueous solution of coffee; from about 15% to about 30% of calories of a protein component; from about 40% to about 60% of calories of a carbohydrate component; and from about 15% to about 33% of calories of a lipid component. The coffee drink of the present invention is especially well suited to provide additional calories and protein to an elderly patient.

In an embodiment, a method for making a nutritionally balanced and complete reconstitutable powdered coffee composition is provided comprising the steps of: dry blending a protein component and a carbohydrate component, each in powder form to form a first mixture. While the first mixture is dry blended, an aqueous salt solution is sprayed thereon and agglomerated to form a second mixture. The second mixture is sprayed with atomized oil having a fine particle size and agglomerated to form a third mixture. The third mixture is dry blended with coffee powder to form a fourth mixture. The fourth mixture is sprayed while being dry blended with an aqueous carbohydrate solution and agglomerated to provide a rapidly dissolvable reconstitutable powdered coffee composition.

In yet another embodiment, the coffee composition further comprises at least 1/2000 of US RDA of vitamins and minerals per calorie of the composition.

An advantage of the present invention is that it provides another form of nutritional composition that can be admin-