Commentary

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Exploring Ready-to-Use Therapeutic Foods (RUTF) Components: An Energy-dense Paste for Children's Severe Acute Malnutrition Treatment

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Description

Therapeutic foods are dietary supplements made for specific, usually nutritional, therapeutic purposes. The majority of therapeutic foods are used to feed malnourished children in an emergency or to supplement the diets of people with special nutritional needs, like the elderly. Composition of ready-to-use therapeutic foods Protein, carbohydrates, lipids, and vitamins and minerals are typically included in therapeutic foods. Most of the time, therapeutic foods are made by mixing all of the ingredients together. The food's protein and carbohydrate components can be embedded in the lipid matrix thanks to the mixing process. For the mixture to maintain its consistency, the size of the particles must be less than 200 m. The therapeutic food is produced and packaged using this method without the use of water, thereby preventing spoilage. Before administering some therapeutic foods, water must be added, while others can be consumed as-is. Therapeutic foods are made and designed so that they can be eaten right out of the package. These foods don't get contaminated with bacteria and don't need to be cooked.

Blend of Carbohydrates and Necessary Micronutrients

Ready-to-Use Therapeutic Foods (RUTFs) a type of therapeutic food that is often made of peanuts, oil, sugar, and milk powder, are energy-dense, micronutrient-rich pastes that are used in inpatient therapeutic feeding programs. Their nutritional profile is similar to that of the traditional F-100 milk-based diet. Homogeneous mixture of lipid-rich and water-soluble foods is the RUTFs. The lipids used to make RUTFs are a liquid that is viscous. The lipid is used to mix the other ingredients, which are small particles. Protein, carbohydrates, vitamins, and minerals are the other components. In order for the mixture to be effectively consumed, it must be uniform. A specific mixing procedure is required to accomplish this. First, the RUTF's fat/lipid component is heated and stirred. In order for the lipid to remain in the ideal state for mixing in the other ingredients, the heat must be maintained. After that, the lipid is vigorously stirred as the powdered protein, carbohydrates, and vitamins and minerals are gradually added. The mixture is then stirred for several minutes at a faster speed after all the ingredients have been added and vigorous stirring has been maintained. The mixture begins to separate if the powdered ingredients have a particle size greater than 200 m; the particle size must stay below 200 m at all times. There are four components in the most typical RUTF: Oil, sugar, dried skim milk and a supplement of vitamins and minerals. RUTFs should also have a soft or crushable texture and a flavor that is acceptable and appropriate for young children. RUTFs ought to be prepared to eat without waiting be cooked. The fact that the RUTFs do not require costly packaging and that they are resistant to contamination by microorganisms and have a long shelf life is an extremely important feature. The liquid used to make RUTFs must be fat/lipid-based because the ingredients need to be suspended in it. Half of the protein framing RUTFs ought to come from dairy items. Dietary approach the typical approach to treating childhood malnutrition consists of two phases. The majority of children in phase one are severely malnourished and ill as a result. F-75, a milk-based liquid food with 75 kcal/100 mL and 0.9 g protein/100 mL of energy and protein, and parenteral antibiotics are the treatment options in this phase. Phase two of the treatment begins when the child's appetite and clinical condition show signs of improvement. F-100 is used in this phase. F-100 is a milk-based liquid food that is specially formulated high-energy, high-protein (100 kcal/100 mL, 2.9 g protein/100 mL). The child is in phase two until he or she no longer needs to be fed (weight-to-height Z score or WHZ). Phase two typically begins after the child returns home but begins while the child is still in the hospital. As a replacement for the milk-based foods used in phases one and two, the parent is responsible for feeding the child a cereal and legume-based flour supplement. The World Health Organization's guidelines for treating malnutrition in children call for the use of two formulas, F-75 and F-100, as the initial treatment. Powdered milk, sugar, and other ingredients are combined in these formulas to provide an easy-to-digest blend of carbohydrates and necessary micronutrients. They typically come in the form of water-reconstituted powdered mixes. Until the child reaches a normal weight, the WHO recommends using these formulas and gradually adding other foods. When compared to other dietary options, ready to use therapeutic food in the individual's own home for the treatment of severe acute malnutrition in children under the age of five may be more effective at

promoting weight gain and recovery. It is unclear whether ready-to-use therapeutic foods reduce overall mortality or the likelihood of relapse.

Mellitus and Gastrointestinal Issues

The treatment of binge eating disorder also involves the use of three additional classes of medications: Medications to treat obesity, convulsions, and depression. Stimulant prescriptions of the Specific Serotonin Reuptake Inhibitor (SSRI) have been found to really lessen episodes of gorging and diminish weight. Antidepressants, anticonvulsants and anti-obesity medications appear to be more effective than placebo in reducing binge eating, according to clinical trials. Because psychotherapeutic approaches, like Cognitive Behavioral Therapy (CBT), are more effective than medications for binge eating disorder, medications are not considered the treatment of choice. At six to twelve months after treatment, a meta-analysis found that taking medications did not reduce binge-eating episodes or BMI. This suggests a possibility of relapse following medication withdrawal. Psychotherapy is also not made more effective by medication; however, some patients may experience weight loss benefits from anticonvulsant and obesity-fighting medications like phentermine and topiramate. When opioid receptors are blocked, people eat less. Additionally, taking naltrexone and bupropion together may result in weight loss. Better BED outcomes may result from combining these with psychotherapies like cognitive behavioral therapy. Surgery Bariatric surgery has also been suggested as a way to treat BED. A recent meta-analysis found that roughly two-thirds of people who seek this kind of surgery to lose weight have BED. Prior to having bariatric surgery, people who had BED are more likely to continue the eating patterns that are characteristic of BED and have less success losing weight. Lifestyle Interventions Weight training, peer support groups, and investigation of hormonal abnormalities are additional treatments for BED. Prognosis People with BED typically have social difficulties and a lower quality of life overall. Remission of symptoms in the future is accurately predicted by early behavioral change. Other comorbidities, including major depressive disorder, personality disorder, bipolar disorder, substance abuse, body dysmorphic disorder, kleptomania, irritable bowel syndrome, fibromyalgia and an anxiety disorder, are frequently present in BED patients. Additionally, individuals may experience varying degrees of panic attacks and a history of suicide attempts. While people of a normal weight may occasionally overeat, a consistent pattern of eating a lot of food in a short amount of time may eventually result in obesity and weight gain. The weight gain caused by calorie-rich bingeing episodes is the primary physical health consequence of this eating disorder. Social weight stigma and emotional loss of control are mental and emotional effects of binge eating disorder. Obesity-associated diseases like high blood pressure, coronary artery disease, type 2 diabetes mellitus and gastrointestinal issues like gallbladder disease, high cholesterol levels, musculoskeletal issues, and obstructive sleep apnea may also be present in up to 70% of people with BED.