



## Homemade Blended Formula

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Many families who nourish their children by feeding tube are asking if they can put “real “ food into the tube. Can they make homemade food to use with or instead of the commercial formula? These families want to nurture their tube fed children with meals just like their orally fed children. Many parents are providing some type of homemade formula successfully by tube every day.

What is homemade formula?

Homemade blended formula (HBF) is specially prepared food for the child who receives nutrition by tube. It can be a combination of commercial formula and pureed foods, or only a mixture of only pureed food in a recipe especially designed for the individual child’s growth and nutritional needs. The term “homemade” reminds us of the loving parental effort involved in making the formula.

Why HBF? Parents tell us they enjoy the relationship established through feeding their babies. That close time of togetherness sometimes gets lost in the procedural aspects of feeding children with tubes. Many parents are striving to regain that relationship. They feed their other children with food prepared with love and they want to provide that same loving preparation for their tube fed child. Research indicates that we all benefit from a varied diet for optimum nutrition. Commercial formula meets the energy and nutrient needs for the child, but long term use does not provide for dietary diversity. Families often describe very positive results when they introduced some type of HBF. The increased fiber offered in the HBF allows many children to have improved bowel movements. Parents describe improved growth, improved volume tolerance, and improved interest in tasting foods orally. Parents who provide this homemade food are pleased to be having input into their child’s diet and to be decisions about nutritional variation. How complicated is it? Making HBF can be simple, or complicated depending on the family. Homemade formula can be as simple as adding an ounce or two of baby food puree to the commercial formula, or it can be as labor intensive as blending a pot roast with the trimmings! Some families happily use commercial baby food once or twice a day with formula, and others eliminate the commercial formula completely. It’s the family’s choice, and it depends on how much time and effort the parents want to put into the process, coupled with the child’s health and tolerance. Get support All children need regular growth monitoring and adequate nutrition . A child receiving tube feedings needs the support of a Registered Dietitian (RD) and Primary Care Physician (PCP). Many RD’s and physicians, however, have little experience with HBF and are not yet comfortable because commercial formula has become the standard. All around the country, it is parents who are asking their teams, why not? Together parents and Medical teams are learning about HBF and discovering very positive results. Things to consider When considering HBF, parents rely on the knowledge they have about feeding orally fed children. Start with what you know about orally fed children. Children drink breast milk or formula and transition slowly to purees and table foods. Making the transition to any type of homemade food needs to be a slow one, monitoring the child carefully for tolerance and growth. We do not give orally fed children formula or breast milk one day and then completely change to solids the next, nor should we change tube fed children to HBF all at once. Children are introduced to one new food at a time to rule out allergies and rule in tolerance. HBF’s success relies on a gradual introductions of foods, one at a time with at least a 3-5 day trial before adding another new food. Oral eaters are

usually first introduced to fortified cereals, then pureed vegetables and fruits. With good tolerance and increased interest, the diet expands. HBF food choices tend to follow the same guidelines. As children get older, they can be offered beans, potatoes, meats and a variety of other foods that orally fed children would eat. Orally fed children have some control over meal sizes. Parents watch their children carefully to provide volumes that are comfortable. When tube feedings are offered, parents can watch for cues that the child is full. Over filling little tummies, or giving the food too quickly can lead to gagging, retching or vomiting. Presentation of foods changes for orally fed babies as their skills increase. They move from breast and bottles to cups, finger feeding, spoons, forks and straws. The method of presentation for HBF is more complicated. HBF is ideally offered through a syringe in a bolus “meal” at a “mealtime”. HBF mixtures tend to be too thick to easily flow through a gravity drip or pump feeding system. Additionally, it is not safe to hang pureed food in a bag at room temperature the several hours that may be needed for an extended drip feeding. Food for all children must be prepared under sanitary conditions to prevent food contamination. HBF must also be carefully prepared to ensure food safety. Washing hands and food surfaces is of the utmost importance with HBF. Getting started Families generally start by adding small amounts of commercial baby food to their child’s formula in a bolus, one time per day. This can be changed over time to add variety or increase the volume of the food. Later, when families want to puree home cooked meals, a heavy duty blender, such as a Vitamin™ is needed to enable the food to be completely pureed. After a variety of foods have been introduced, formula may be replaced by pureed foods. At this point the help of a Registered Dietitian is needed to ensure the child is meeting his energy and nutrient needs. HBF can be used successfully to allow children with tubes to grow and thrive. It is not the answer for all children and families, but for those who are excited by the possibilities, our hope is to inspire discussions with their child’s health care team.

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