**Appendix – Principles and techniques used in Role Reversal Therapy**

The following principles constitute the basis of the Role Reversal treatment method:

1. *Absolution*- Parents should be absolved of guilt, and the caretaker should start the program by stating that the child's feeding and weight gain are no longer the parents' responsibility. They are the child's responsibility and the therapists' responsibility. This simple process sets the stage for reducing parental anxiety over feeding or poor weight gain. Parents should understand that children won't starve if they are not fed intrusively, they have simply lost the will to feed in an appropriate manner. The goal of therapy is to restore this will.
2. *Stop all pathological feeding*- once the caregivers appreciate that the way their child is being fed augments a vicious cycle, they are instructed to completely halt those methods of feeding, even at the expense that the child will eat less, which might be observed at the initiation of the process of treatment. The responsibility to feed the child is transferred from the parent to the child; the parents are responsible only to allow the child access to food appropriate for his age, but not to feed him. The parents' concern with the child’s growth is undertaken by the physician, and parents are reinsured that the team will take responsibility to their child's health condition. This approach is often experienced as the most challenging and frustrating step in treatment, and may be associated with anxiety and distress. Our clinic provides behavioral and psychological support to parents experiencing these feelings, as this principle is the basis to breakage of the vicious cycle.

It is emphasized that all caregivers that are involved in the child's care should be given the treatment guidelines, including parents, grandparents and occasionally other professional caregivers.

1. *Respect refusal*- Parents need to respect the child's refusal to feeding or lack of interest in eating. In the instance in which the child prematurely ends his meal (including bottle feed), allow a second chance to feed within a few minutes; second refusal ends the meal, and the next meal will be served at the regular schedule. In younger infants, the next meal could be advanced but parents are instructed to allow an interval long enough for the child to develop hunger; i.e. at least 3 hours apart.
2. *Autonomy*-Allow feeding autonomy, according to the child's developmental ability. At the proper age, encourage the infant to self-hold the bottle to feed and control the rate of feeding. In 6-7 months old, offer finger food in large chunks and when the child can sit unsupported, encourage the parents to serve the meal on a high chair or a chair suited to fit the family's eating table. Allow self-feeding with hands or using the spoon, and use finger foods to encourage self-feeding.
3. *Cues*- Identify and respect hunger or satiety cues. Parents are instructed not to feed the child, even the young infant, according to schedule but according to hunger. Normal infants differ in hunger- satiety cycles, and as long as they are fed according to will, their total daily intake is balanced. We frequently encounter the note that "the child will fast for 5-6 hours if we don't feed him! He could go for a whole day without showing hunger cues!" We encourage the parents not to feed according to what the parent thinks is a proper schedule, but to be sensitive to their child's will and need. The normal hunger sensation is interrupted by frequent, small meals or snacks and an explanation of this phenomenon is provided to the parents. The child's natural hunger should be the only motivation to eat, and not the parents' expectancy.

On the other hand, when the infant loses interest in eating, the caregiver is instructed to cue that “meal is over”, and to discard any leftovers. The child leaves the table, and the meal is over and should not be served until the next meal.

1. *Regression*: The basic defense mechanism to anxiety in infancy and childhood is regression. In the case of traumatic feeding, the greatest source of anxiety is feeding, conversely anxiety is alleviated by not feeding. If the child refuses to feed from the bottle, attempts should be made to adapt regress to an earlier form of feeding that did not provoke anxiety. For a child who develops food refusal upon spoon feeding, and accepted the bottle willingly, caretakers should recommend a run in period where parents regress back to bottle feeding , before advancing to spoon feeding. In cases the child refuses to eat from the spoon, or seems to fear from the spoon, regress to bottle feeding for one month and re-introduce solids preferably by self-feeding, to alleviate fear or anxiety from being fed instrumentally (“transitional feeding disorder”). The same instructions are given for children refusing different textures: regression to textures (puree) with which the child feels comfortable prior to re-introduction of more complex textures, to be fed by the infant itself. Upon re-introdution and advancement, it is preferable to start with food the child likes and avoid food they selectively refuse.
2. *Attention:* In order to avoid secondary gain of attention through feeding or feeding refusal which leads to the vicious cycle of IFD, the parent should remain indifferent to the child's eating behavior, both positive and negative. Family meals are encouraged, although no attention should be paid to the child's action of eating. On the other hand, encourage the parents to increase attention in between feeds through other channels in order to compensate for the loss of attention around feeding.
3. *Remove crutches*: Infants with IFD develop adaptive techniques to alleviate hunger and oral needs. In the process of treatment, these crutches should be withdrawn. If the infant drinks copious amounts of fluids, allow only small amounts of water, preferably in a cup. Avoid snacking throughout the day and limit pacifier use which may replace oral feeds.

In addition to these 8 principles, several techniques can be employed to facilitate curiosity and confidence during feeding, while further reducing parental anxiety.

1. Food Play- parents are encouraged to enroll the infant in small eating groups, which are held in our clinic. The children sit at a round table with other infants, where food appropriate to age is served. The parents sit a small distance away. This situation allows the child to experience food in an informal and low pressure situation, both with playing with food and actually eating.
2. Modelling- Parents should be encouraged to sit down with the child at meal times, and eat from their own plate.
3. Meal size-The meal is served in the middle of the table, and small portions of 1-2 food types are placed on the child’s plate. If the child wants additions, he will either ask for more or independently serve himself.
4. Avoid weighing the child or discussing weight with the child or in his attendance.
5. Follow up- Follow up visits should be performed frequently, to assess parental compliance with the program, and if there is a problem with compliance, to identify the source of anxiety.
6. Avoid sensory aversion- Children may present with sensory aversion, which we believe is usually a complication of a long standing feeding disorder. If the smell or texture of certain foods is offensive, parents should avoid serving this food at the family table.

In cases in which we identify that the feeding refusal is secondary to an organic cause (ex: untreated GERD, food allergy, swallowing disorders) we initiate a dual treatment approach: addressing the medical condition according to diagnosis, along with providing instructions to treat the behavioral component. As the initial cause of feeding refusal may have been long standing, the behavioral part may occasionally dominate the clinical presentation.

Use of a structured feeding team

Optimal results can be obtained when a multidisciplinary feeding team is employed, and works together to discuss the obstacles and desired program. The team should always project optimism about the outcome, and deemphasize weight gain. Treatment of IFDs requires exclusion of GI disorders, the ability to confidently alleviate parental fears about weight loss, and identification of parental or infantile triggers for food refusal. In our setting this team consists of pediatric gastroenterologists, dieticians, nurse and a psychologist, as well as a speech therapist in cases of dysphagia. The initial expected response for an outpatient program is usually increasing interest in food, initiation of feeding by the infants, and increased intake. It may take several weeks for children to reach their required caloric intake, and we emphasize that weight loss may very well occur before weight gain or a response is seen.

Role Reversal therapy may have its limitation. This treatment is particularly effective in children younger than age 4, conversely it is less effective in older children, and in children with special needs such as PDD. Treatment is applied through parental cooperation, and if this is not present, treatment may fail.

Treatment of IFD should not be confined to children who have already developed this disorder or only to children with failure to thrive. Emesis, sensory aversion and failure to thrive are downstream events in many cases, and parents and physicians should be educated about the ramifications of pathological feeding.