Doctors must define their findings in a reproducible manner. International classification systems are attempts to share scientific data and clinical observations on the basis of defines descriptive symptoms. Since the ICD 10 offers no category at all with which a child's eating or feeding disorder could be characterized specifically, we have introduced the ZTTDC 0-3 system since nearly 20 years in our work. The heads of the "Graz feeding model and EAT Program" were engaged as pediatricians in the task force group which came up in 1994 with the first edition of the ZTTDC 0-3. Luckily since then the main category of "eating behavior disorder" has been subclassified, unfortunately still lacking an option for classifying tube dependency. But on a daily basis the 6 main categories are very helpful and offer specific directions for the therapeutic intervention to follow assessment.

Specific characteristics of the ZTT DC 0-3R categories:

3.1.: Feeding disorder of state regulation, DC 0-3R, 601

The presentation of a very young baby – mostly within the first 2 month of life - with this disorder is extremely specific: *if the baby wants to drink, is restless and hungry, will suck for 3 or 4 seconds, then divert its head from the breast or bottle and start screaming! This behavior will be repeated over and over, resulting in poor weight gain and exhaustion on all sides*. If the baby is described as being fussy, needing very little sleep, extremely challenging and almost never happy and relaxed. Feeding has never worked since birth and the problem tends to get worse with time.

The physician is advised to observe a feeding scene and actively withhold from organizing any further examinations. Since the feeding problems mirror the child's general difficulties in state regulation this fact needs to be addressed. Every kind of medical examination will affect the situation negatively and potentially harm the child. Treatment must commence immediately and will show success once the baby is supported in learning how to regulate and organize its states. The feeding problem will be solved as part of the coaching directed to the overall problem of state regulation. Physiotherapists with specific training will be of great help. The physician's role is to explain this transitory misbalance of states to the parents, offer literature and guide them as long as until the baby comes to rest. Since parents might misinterpret the child's difficulties and symptoms as being purposely directed against them, the situation holds a risk for child abuse and immediate intervention and effective help are crucial.

Summary ZTT DC 0-3, 601: A child who will eagerly start to feed, but then stop and become fussy is typical for regulatory disorder, in most cases the hypersensitive and/or disorganized type. Therapeutic task is to install specific guidance as soon as possible.

3.2. Feeding disorder combined with attachment problems, DC 0-3R, 602

Witnessing a feeding scene might result in an impression of exhaustion, depression, desperation, low frequency emission of communicational cues, lack of interest and reduced gaze expression on the child's part. This would be characteristic for a feeding disorder in which the atmosphere between the feeding caregiver and the child is more symptomatic than any specific symptom. Psychodynamic assessment needs to focus on the mother's emotional situation, her relationship and socio-economic situation and might show impressive deficits resulting in unspecific stress, which might present as lethargy, disinterest, frustration or insensitivity to the verge of anger and hostility in the feeding scene between the caregiver and the child. The infant, usually aged 3-4 month is brought because it seems not to be behaving normally. Breastfeeding has mostly been stopped after 2-3 weeks, feeding by bottle seems to work a bit better, but oral intake is slow, the baby will need to be woken up for meals and seems unable to emit clear hunger cues. The mother will appear quiet and worried more than anxious. Drinking from the bottle happens without enthusiasm and the whole situation is characterized by sadness and silent despair. There might be a history of psychiatric illness on the mother's part, and often the economic situation of the single mother or young family lacks resources of any kind.

Summary ZTT DC0-3 R, 602: The goal of intervention is to address the attachment problem, install a network and organize effective support and immediate help.

3.2. Individuation disorder, infantile anorexia, ZTTDC 0-3R, 603

This condition presents dramatically, often without being medically critical at first sight! A desperate mother comes in as emergency: *"My child has stopped eating completely"!* Saying this, an active, charming little kid enters the office. If you comment this by: *"well, please calm down, this cannot be absolutely true"* the mother will never talk to you again! The

correct answer would be: *"well, this must be devastating for you, come in and tell me all about it!"*

Here the feeding problem only starts after some month of uneventful feeding. The baby, now 6 or 7 months of age, is developing beautifully and starts to explore the world on its own. Sitting is stable, good muscular tone, the child is reaching out to touch food (especially the food on the other persons plate) and wants to hold the spoon on its own. Due to an increased and somewhat obsessive wish for control, time structure, cleanliness and order (which may be linked to a decreased sense of being exclusively needed by the baby and lack of academic input by former professional activity), the mum feels responsible for feeding exact amounts and contents of baby food (Chatoor et al., 2004). The infants growing world of exploration and autonomy clashes with mothers' stressful atmosphere of anxiety and specific pressure around the child's feeding scenes. The child will show growing opposition which again is answered by a closer grip of the child back onto mums lap. The feeding scene will soon becomes a nightmare for both. Fathers tend to add useful remarks like: *"I suppose you should just take it a bit more easily"* and grand-mothers and mothers in law offer further irritating comments. The result is an aggravating crisis of refusal behavior at the mere sight of food or the preparation of a meal. The infant clearly suffers from the repeated intrusive and non-sensitive feeding experiences. It might also show fear and anxiety and even look actively traumatized. These infants are usually smart and charming in any situation outside the feeding scene, strong in willpower, stubborn, show age appropriate motor milestones and will be determined to win the battle of interest between themselves and their mothers which seem to them intrusive to the degree of silent abuse. Any child eager to feed but demanding more self control will obviously start to combat against the frustrating constant offering of food. This category is the most common feeding disorder in well-to-do families who try especially hard to respect every wish of their mostly first born child (Chatoor, 1989; Chatoor et al., 1998; Chatoor et al. 2000). The infants are sometimes titled as "princes and princesses" or even "tyrants"; in psychiatric literature the conflict of interests is defined as "separation disorder" and may develop into the life threatening condition of infantile anorexia. The condition mostly starts quite unexpectedly during the well known "I want to do everything myself phase" of individuation and leads to a most characteristic flattening of the weight percentiles at the end of the first year of life (Chatoor, 1989; Chatoor et al 2001; Chatoor & Ganiban, 2003). A G-tube should only be recommended in the case of life

threatening malnutrition and is strictly contraindicated as basic solution for this disorder, since the tube is a non-specific intervention. The risk of the child developing tube dependency is great and continuation of the underlying conflict is likely to happen (Dunitz et al., 2001; Dunitz-Scheer et al., 2009).

Summary ZTT DC 0-3R, 603: is defined by the infants growing need for autonomy (often very active children with accelerated motor development consuming more energy) conflicting with the mothers need of control. The therapeutic task is to free the child from the cycle of increasing pressure, introduce self feeding by finger food and encourage the parents to transition from the task of active feeding to being only the providers of food.

604: Sensory food aversion

Drooling, gagging, coughing, choking are symptoms of dysphagia and impaired swallow function. They are frequent in children with sensory awareness problems, global developmental delay, infantile larynx, tracheomalacia, paralysis of the vocal cords or dysfunction of the epiglottis and are specifically symptomatic for all lesions of the brain. They are seen in infants who suffered from severe intra- or peripartal asphyxia, intraventricular hemorrhages, inborn chromosomal aberrations and other syndromes associated with impaired motor coordination, difficulties in adjusting their muscular tone to anticipated situations and also show impaired development of mirror neurons. Children suffering from PDD, pervasive developmental disorder must also be integrated in this group and need a highly specific and intensive therapeutic program to guide them to develop sufficient self feeding skills. These infants will all need a highly specialized diagnostic assessment of the swallow function with the goal of out ruling aspiration or – in the case of clear aspiration – will need the recommendation of feeding by gastrostomy as soon as possible. This category has been defined as specific for the presence of neurosensory and sensory awareness deficits in the context of feeding problems.

There are three main groups involved:

604.1. Physically healthy children whose main finding is a different oral sensory reaction to tastes, food textures and smells as seen in children with pervasive developmental disorder, childhood autism and Down syndrome. These children hardly react to the offering

of food, they often don't seem to understand the concept of feeding, will not imitate adults or feed dolls and show no playful feeding on a symbolic level.

604.2 Children with a clear developmental and neurological impairment whose impact on sucking and the swallow function has often been neglected until the feeding disorder is detected. Sucking might have been possible but the beginning of feeding mushy foods and solids will mostly be the time of presentation. Since eating development is an integrated part of all fine and gross motor development, there is often esophageal reflux involved and any delay or pathology associated with impairment of neurological and sensory innervations will become symptomatic as soon as food volumes are increased or a more complex swallow function is needed.

604.3: Picky eaters: Mostly of normal development and intelligence showing oral oversensitivity with very distinctive taste and texture preferences and a reduced list of accepted foods. Sometimes their habits seem to suggest the need for inappropriate attention of one caregiver but sometimes they will exhibit this highly selective behavior in all social groups and situations. A nutritional analysis and an estimation of social benefit versus social disadvantage is necessary to decide if and which treatment will be needed.

604.4.: mixed oral sensory perception and awareness problems with included neurological motor deficits in swallow function, developmental delay and possibly neurodegenerative outcome of the underlying medical condition.

Summary ZTT DC 0-3R, 604: This category will need specific analysis and evaluation of the sucking and swallow function and coordination. Speech therapists will be of great help and should work together with the radiologist and ENT specialist to determine the best possible and safest way of feeding each affected child. For children suffering from PDD, pervasive developmental disorder, a psychologist specialized on developmental and communicational issues will need to be involved into treatment planning.

605: Feeding disorder associated with medical condition

Any underlying medical condition can affect the child's appetite, motivation and sense of exploration in a negative way; this can happen during the phase of the illness and possibly also after physical recovery. This counts for children who suffer from any kind of severe underlying medical condition like BPD, other lung impairments, immune suppression after organ transplantation, impairment of kidney function, severe skin affections, burn injuries ect. If children have been through months of earlier hospitalizations, any cue of avoidance at the sight of food can be respected as positive signal of their luckily growing sense of self determination and recovery into normal life. Nevertheless, when poor appetite has led to weight stagnation or even a considerable weight loss, children must be told clearly that their body needs food to recover. Sufficient food might be the most important medication for the weakened body. Some children will catch up easily but children who have suffered from being on the low weight side before even falling ill might need nutritional supplements or even temporary tube feeding. Temporary tube feeding (by gastrostomy if the duration of severe illness is expected to extend 2 month) with coached tube weaning is definitely the better choice than weeks of nagging, urging, pushing and producing a secondary or chronic feeding or eating disorder. All feeding problems associated with a clear medical condition are classified by this diagnostic category. Whereas this subgroup was originally reserved for post-medical-episode feeding problems as can often be found after choking episodes, severe gastrointestinal infections, mouth infections ect., we also need to include children with feeding troubles after extreme prematurity, in association with organ transplants and oncological disorders, cardiac, pulmonary, renal and hepatic insufficiency or any rare metabolic disorders demanding a very badly tasting specific diet.

Summary ZTT DC 0-3R, 605: In all cases of an existing medical condition it is the task of the medical manager to distinguish parameters caused by the underlying illness or its specific treatment or point out that the main problem seems to be growing behavioral conflicts of feeding due to its basically positive medical progress. The psychologist will be the physician's closest partner in this challenge and offer play therapy or any kind of supportive nondirective psychotherapy

606 Feeding disorder associated with insults to the gastrointestinal tract

A child who will eagerly eat about one third of the expected portion but then start to scream and suddenly become unhappy is conspicuous of having pain due to reflux. Most disorders classified with this code are reactive behavioral problems after any kind of medical problems affecting tongue, mouth, larynx, esophagus, stomach, duodenum, gut and anal region. All 6 main diagnostic groups (601-606) can be associated with esophageal reflux, they will – if present - all show positive findings in any kind of specific reflux assessment but rarely react to medication alone if the core conflict of the feeding disorder is not addressed in the treatment plan. The most common problems of this group are children after surgery of cleft palates, esophageal atresia, duodenal stenosis, anal surgery ect.

Rare conditions not covered by the ZTT DC 0-3 R system:

3.7. A child who starts to feed but very soon becomes very pale and appears to be nearly shocked; showing increased heart beat and sweating probably has a dumping syndrome. This rare but very impressive clinical presentation is in most cases a medically induced problem, resulting from force feeding with to large volumes or tube feeding and wrong site of the tube ending within the stomach with immediate expulsion by the pyloric sphincter.

3.8. A number of conditions with feeding difficulties have a genetic basis. The genetic malformation can have anatomical, neuro-sensory or hormonal dysbalances which can be responsible for difficulties in feeding. A retrospective analysis of formerly exclusively tube fed children with chromosomal anomalies which could be weaned with no problem suggest that the impact on the parents is mostly responsible for the feeding problem more than the neurological or anatomical situation.

3.9. Posttraumatic feeding disorder needs to be considered after choking experiences and repeated oral traumas, independent of its possible clear cut medical indication. The faster the parents are supported to get over the situation emotionally, they easier they will be able to support their child in a similar way.