UNDERSTANDING AND MANAGING EXTREME FOOD REFUSAL IN TODDLERS

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LEARNING POINTS

1. Some toddlers have an innate, or inborn, resistance to eating a wide range of foods. They may have extreme anxiety about trying new foods (strongly neophobic) or have an extreme reaction to the different senses, touch, taste and smell (sensory-sensitive).
2. Parents of these toddlers must be especially careful not to force-feed their children foods that they do not like.
3. With extreme food refusers, parents should make energy (calorie) intake the main priority.
4. A dietitian can advise on any supplements that may be necessary to ensure an adequate intake of vitamins and minerals despite a poor intake of food.
5. Messy play can help toddlers who are sensory-sensitive and who are worried about getting their hands and face dirty.
6. Some toddlers have not had the necessary early experience of food and may have difficulty accepting more difficult textures.
7. Parents of these toddlers will usually need to give softer textured food for good growth, while helping them to move on and learn to deal with differently textured foods.
8. Children and families with extreme food refusal should seek referral and therefore expert support from relevant professionals who are experienced in dealing with childhood feeding difficulties. These may include a paediatrician, clinical psychologist, dietitian and speech and language therapist.
9. These children may be diagnosed with the eating disorder ARFID (Avoidant and Restrictive Food Intake Disorder).

WHY SOME TODDLERS SHOW EXTREME FOOD REFUSAL

There are two main reasons for this:

- innate, or inborn, disposition
- lack of experience in trying different types of food

These causes of food refusal can be very difficult to cope with, and some parents have more problems than others in managing their child's behaviour. If the family is not coping well, and especially if food refusal begins to affect a child's growth, the family should be referred to appropriate healthcare professionals such as a child psychologist, dietitian, speech and language therapist or community paediatrician.

In these toddlers, the first priority must be to maintain a calorie intake sufficient to ensure adequate growth and weight gain. The introduction of new foods, that would help to give the child a more varied diet, should never be carried out at the expense of growth. If weight gain is good, then gradual attempts can be made to try and widen the child's dietary range; this can be a long and slow process. A dietitian can advise on any supplements that may be necessary to ensure an adequate intake of vitamins and minerals despite a poor intake of food.

These are children who eat only a small range of foods and textures, and whatever interventions you try, the diet that they eat can remain the same, sometimes for years.

AVOIDANT AND RESTRICTIVE FOOD INTAKE DISORDER

Some children have certain innate characteristics which mean that they are only able to accept a very restricted range of foods. They might only eat around five different foods, and are only able to accept specific food brands and food flavours[1].

These children do not grow out of the neophobic stage of development, See Factsheet 2.1 during which toddlers will not try new foods, and any food that doesn't look quite right will be refused. These children tend to be hyper-reactive to sensory information (an extreme reaction to touch, taste or smell).

Avoidant and restrictive intake disorder (ARFID) was included as a disorder in the DSMV in 2013[2]. It is described as an eating disorder in which there might be a persistent failure to meet nutritional needs, a lack of interest in eating, avoidance based on the sensory characteristics of the food, and concern about the aversive consequences of eating. Most importantly the eating disorder is described as interfering with psychosocial functioning.

Children with this eating disorder might continue to grow well and to be of an expected weight, but the range of foods that they eat is very narrow[3]. However, they will only grow well if they have been allowed to eat the range of foods that they can accept. Where they have been pressured to eat foods that they find disgusting or aversive then they are likely to lose weight and fail to grow along expected growth centiles.

Because of their sensory hyper-reactivity[4] these children might find it difficult to cope with the smell and sight of other people eating, this can be a problem both at home mealtimes, and at school mealtimes. Often these children cannot eat out because of the limited range of foods that they rely on.

The extent of this problem is not really known. There are no studies to date which have looked at the number of children with ARFID in the general population. Probably every healthcare professional will have seen a child like this during their career and nearly every school will have such a child in attendance. It has been estimated that at least one third of children attending a feeding clinic without any other medical problems could be diagnosed with ARFID[3].

These children also tend to be boys[5]; in a clinical sample there were approximately four boys to every one girl with this problem.

The beginning of the problem

Toddlers differ in how neophobic[6] they are and how sensory reactive they are to touch, smell and taste[7]. These differences are inborn traits.

Toddlers who have the extreme form of these traits can be very rigid about the food they eat. They will often eat only certain brands of food or specific flavours of a food (such as one brand of strawberry yogurt). The food has to look right or it will be rejected (for example if a biscuit is broken, or toast is too brown)[8]. If these toddlers do not grow out of these behaviours and they are:

- very rigid about the foods that they eat
- anxious about trying new foods
- anxious about being around new foods

then eventually they are likely to meet the criteria for ARFID.

The problem can often have begun around the time that the toddler was first introduced to more lumpy textured foods, the texture of which may have triggered a vomiting or gagging response. The extreme gagging response makes parents less likely to persevere with the introduction of textured foods. This means that some toddlers, who have the first signs of this disorder, might only be able to eat pureed or smooth foods (such as yoghurt) or bite and dissolve food textures (such as soft crisps). These are food textures that do not need to be moved to the side of the mouth before they are swallowed. Some children with ARFID are very sensitive to the feel of food in the sides of the mouth. Because of this, children with ARFID might be very difficult to move on from bottle feeds, which might still be given into later childhood. They might also be resistant to the move on from tube feeding, which might have been started because of worries about nutritional needs or growth.

Toddlers who are very rigid about the foods they eat tend to be more emotional in general, and less likely to be able to accept change[9]. They also tend to be very strong willed and may not do something just because someone else is doing it, or someone else wants them to do it. They will not copy other children, and so will not imitate others' eating behaviour. This does not mean that these toddlers are naughtier, or more attention seeking, than those who easily accept food, just that they have a different way of interacting with the world around them.

These toddlers may be sensory-sensitive in other ways as well. They may refuse to wear certain clothes, and want to stick to specific colours or textures. They may worry about getting their hands dirty and their face sticky; they may protest when they walk barefoot on grass or sand. Toddlers who are worried about getting their hands and face sticky find it very difficult to handle food and feed themselves.

As they get older, children may react to the smells of foods that they dislike, and have difficulties being around others who are eating food that they themselves do not like. They may gag or vomit if disliked foods are given to them or even if they see or smell a disliked food. This extreme form of the problem is seen more often, but not exclusively, in children with Asperger's Syndrome, or autism, or in children who have traits in common within this spectrum of disorders[10].

IDEAS TO HELP PARENTS OF EXTREME FOOD REFUSERS

- Encourage messy play. Some parents are reluctant to allow their toddler to get messy. Attending a playgroup may help these toddlers. Guided play with food away from mealtimes also helps[11].
- Encourage parents to be sensitive to their toddler's likes and dislikes. Toddlers should not be forced to eat disliked foods[12].
- Advise against putting disliked food on the same plate as liked foods. Some toddlers will simply refuse the whole plate of food.
- Advise against hiding a disliked food inside another liked food because these will lead to rejection of the liked food.
- Advise against the 'you can't have your pudding until you've eaten your dinner' type of strategy. Withholding accepted foods to encourage children to eat disliked foods may lead to weight loss.
- Advise against leaving long gaps between meals to make the toddler hungry. This will not work and may lead to weight loss.
- Tiny tastes, away from the mealtime, of foods that the child is happy to try, might help introduce some new foods[13], especially if this is associated with a non food reward.
- If the problem persists, refer the child to the GP, who may then refer the child to a:
  - clinical child psychologist to support the parents and help the child with food anxiety
  - dietitian for a nutritional assessment of the food eaten and advice on any dietary supplements that may be needed
  - a feeding team, if available, can provide a multidisciplinary assessment of the feeding difficulty.

LACK OF EXPERIENCE IN TRYING DIFFERENT FOODS

Lack of experience hinders food acceptance[14]. Another reason why toddlers refuse food is that they have not yet become accustomed to the food that the parent is trying to feed them. This could be because the child was ill during the first year of life and so was not introduced to a range of taste and textures at the appropriate time. Or, it could be that the parents did not introduce a wide enough range of tastes and textures in the first year[15]. Some parents get very anxious about introducing lumpy textured food to their infant[16]. Such toddlers may then reach the neophobic stage (from about one year, peaking at 18 months) while they are still only used to a few tastes and textures, such as pureed or soft foods.

This problem is often present in toddlers who will take only certain textures, and mostly sweet tastes[3]. These toddlers might eat:

- yogurts and commercial baby food because they are soft
- bite and dissolve foods such as chocolate and some soft crisps (like Quavers and Skips), as these are foods that easily break down in the saliva

They will not eat proper family dinners.

These toddlers differ from the toddlers with an innate resistance to eating new foods in that their problem is mainly with textures. So, if they do eat yogurt they will eat any flavour and any brand. They also find it difficult to process textures within the mouth, to chew and to move food from side to side with the tongue. They may also gag on foods, but will only gag and vomit when they are given a texture that is more difficult to cope with than a puree or a bite and dissolve food.

Table 1 gives examples of foods that can be given to help toddlers with lack of experience advance through the different stages of food textures. Moving through the following textures is a way of progressing with a small change at each step. Toddlers need to have enough time to gain confidence with each new texture before moving onto the next. It is better to use modified family foods to aid this process than revert to using baby foods, so that the toddler is moving towards the types of food eaten by the family. The time needed will vary from toddler to toddler and a specialist speech and language therapist can give expert advice.

IDEAS FOR PARENTS WITH TODDLERS THAT HAVE PROBLEMS ACCEPTING DIFFERENT FOOD TEXTURES DUE TO A LACK OF EXPERIENCE OF THEM

- Reassure parents that even if their toddler cannot cope with certain textures now, he or she will learn to do so eventually.
- Suggest giving most of the calories that toddlers need in foods that they can cope with, such as yogurts, or Weetabix and milk.
- Encourage parents to broaden their toddler's experience of new textures, beginning with easier textured foods such as biscuits or soft crisps.
- Later, parents can be encouraged to begin offering more difficult textures.
- Warn against foods with a 'mixed' texture such as yogurt with pieces of fruit in.
- Advise parents that they may need to offer a new taste more than ten times before a toddler gets used to it.
- Encourage the parents to engage with the child in messy play, getting hands and face sticky. Where possible to get the child to allow touch in the sides of the mouth, by using a toothbrush or playing touch games. See Factsheet 2.2
- If the problem persists refer to the GP who may then refer to:
  - a specialist speech and language therapist for help with the transition to firmer textured food
  - the community paediatrician who may be able to identify a muscular or neurological cause of the child's inability to cope with firmer textured food

The guidance and content in this Factsheet is based on a combination of evidence based research and practical clinical experience.

References and Further Reading

1. Bryant-Waugh R. Avoidant and restrictive food intake disorder: An illustrative case example. *The International Journal of Eating Disorders. 2013. 46: 5 p.420–423.*
2. Diagnostic and statistical manual of mental disorders. *American Psychiatric Association. 5th ed. 2013. Washington DC.*
3. Williams KE, Hendy H, Field DG, Belousov Y, Riegel K, Harclerode W. Implications of Avoidant/Restrictive Food Intake Disorder (ARFID) on children with feeding problems. *Children's Health Care. 2014. DOI: 10.1080/02739615.2014.921789.*
4. Harris G. Food refusal and the sensory sensitive child. *Paediatrics and Child Health. 2009. 19.9, 435–6.*
5. Nicely T, Lane-Loney S, Mascuiulli E, Hollenbeak C, Ornstein R. Prevalence and characteristics of avoidant/restrictive food intake disorder in a cohort of young patients in day treatment for eating disorders. *Journal of Eating Disorders. 2014. doi:101186/s40337-014-0021-3.*
6. Cooke LJ, Wardle J, Gibson EL. Relationship between parental report of food neophobia and everyday food consumption in 2-6 year old children. *Appetite. 2003. 41 (2), 205–206.*
7. Coulthard H, Blissett J. Fruit and vegetable consumption in children and their mothers. Moderating effects of child sensory sensitivity. *Appetite. 2009. Vol.52 (2), pp.410–415.*
8. Brown SD, Harris G. A Theoretical Proposal for a Perceptually Driven, Food-Based Disgust that Can Influence Food Acceptance During Early Childhood. *International Journal of Child Health and Nutrition. 2012. 1, 1–10.*
9. Galloway AT, Lee Y, Birch LL. Predictors and consequences of food neophobia and pickiness in young girls. *Journal of the American Dietetic Association. 2003. 103, 692–698.*
10. Schreck KA, Williams K, Smith AF. A comparison of eating behaviours between children with and without autism. *Journal of Autism and Development. 2004. 34(4): 433–438.*
11. Coulthard H, Sealy A. Play with your food! Sensory play is associated with tasting of fruits and vegetables in preschool children. *Appetite*. 2017;113:84-90.
12. Powell F, Farrow C, Meyer C. Food avoidance behaviours in children. The influence of maternal feeding practices and behaviours. *Appetite. 2011. 57, 3, 683–692.*
13. Fildes A, Van Jaarsveld C, Wardle J, Cooke L. Parent-Administered Exposure to Increase Children's Vegetable Acceptance: A Randomized Controlled Trial. *Journal of the Academy of Nutrition and Dietetics. 2014. Volume 114 Number 6.*
14. Williams KE, Paul C, Pizzo B, Riegel K. Practice does make perfect. A longitudinal look at repeated taste exposure. *Appetite. 2008. 51 739–742.*
15. Northstone K, Emmett P, Nethersole F, and the ALSPAC Study Team. The effect of age of introduction to lumpy solids on foods eaten and reported feeding difficulties at 6 and 15 months. *Journal of Human Nutrition and Dietetics. 2001. 14: 43–54.*
16. Coulthard H, Harris G. Early food refusal: the role of maternal mood. *Journal of Reproductive and Infant Psychology. 2003. 21,4,335–345.*

Table 1: Food Textures

Progress through food texture	Description	Examples
Smooth puree	Quite runny or smooth with no lumps	Pureed stewed fruit Pureed stewed vegetables Weetabix soaked in milk or fruit juice Fromage frais Smooth yogurt
Soft mash	Fairly smooth with small soft lumps. It is mashed with a fork rather than liquidised	Banana mashed with a fork Mashed potato Mashed baked beans Scrambled egg Steamed fish Dhal – well cooked lentils
Bite and dissolve finger foods	These dissolve in the mouth and do not need any chewing but do need enough control to hold food in the mouth until it dissolves	Wotsits Skips Quavers Meringue Weeny wotsits Monster munch Pink wafer biscuits Ice cream wafers Most sponge fingers Rice cakes
Bite and melt finger foods	These melt in the mouth, similar to bite and dissolve, but coat the mouth more	Maltesers cut in quarters Chocolate buttons
Bite and soft chew	These need some preparation or munching in the mouth before being swallowed	Very ripe peeled fruit e.g. pear, melon, avocado, peeled grapes cut in half Soft pieces of cooked potato, sweet potato, carrot, beetroot, soft chips, cooked florets of cauliflower/ broccoli Mini pasta shapes Soft biscuits e.g. malted milk, Rich Tea, digestive biscuits Sandwiches made with soft white bread (crusts cut off) and smooth fillings e.g. cheese spread, butter and marmite, hummus Soft cake e.g. Madeira cake Pancakes Cheese triangles, cubes of soft cheese Small pieces of well cooked fish, corned beef Fishcakes (you need to take the coating off)
Bite and splinter	Need a little more chewing before being swallowed	Bread sticks Cream crackers Crisps Poppadums Ryvita Hula hoops
Bite and lump	These need good chewing skills and are usually the last foods to be mastered by most children	Raw apple Chicken nuggets Whole grapes Crusty bread Pizza Sausages

HOW TO COPE WHEN YOUR CHILD SHOWS EXTREME FOOD REFUSAL

Infants learn to like foods that they are given in the first year of life. They learn to accept different tastes, and they learn to cope with different textures. As they move into their second year, however, all toddlers start to show a fear of trying new foods. This fear is a normal part of development.

Some children find it very difficult to move through this stage. They are very worried about trying new foods, and may begin to reject many of the foods that they used to accept. These children may also find it difficult getting used to different tastes, smells and food textures. They have an inborn reluctance to move on to taking new foods. They feel safer just eating the few foods that they are used to.

It can be extremely worrying if your toddler constantly refuses to eat anything but a small number of different foods. At this stage, calorie intake is more important than a varied diet. However, there are a number of ways you can improve your child's diet.

GUIDANCE & TIPS FOR PARENTS

Do	Reason
Encourage your child to experience different textures through 'messy' play every day. Your toddler may find some textures (like Playdoh) very difficult, so start with textures that they are happy to touch. This may need to be drier consistencies initially such as rice or lentils. Gradually progress to more messy/wet substances allowing them to gain confidence. Have plenty of fun and get messy. If you don't like touching certain textures yourself, or don't feel comfortable allowing your toddler to make a mess, then why not take them to a playgroup in your area.	Many children who are extreme food refusers are very sensitive to touch on the hands and mouth, and so will not even pick up new foods. Messy play helps them to get used to new textures.
Give small frequent meals of foods that your child accepts.	Some children become very anxious at mealtimes and are sometimes very slow eaters. Small frequent meals will help them to take in the calories that they need.
Remember, even children who are extremely fussy eaters usually grow and develop normally, if they are given the foods that they will accept.	It is important to keep your child growing well, and these extreme food refusers do grow as we would expect them to if they have enough of the food that they will eat.

Don't	Reason
Refuse to give high-energy foods, like ice cream, cakes, biscuits and chocolate, in the hope that your child will eat 'proper' meals and 'healthy' foods.	This is not a good way to get your child to eat new foods, and your child might lose weight if you withhold their safe foods.
Try to force your child to eat food.	This will make your child even more anxious at mealtimes, and may cause your child to vomit the food back up.
Leave long gaps between meals to try to make your child more hungry.	This will make your child less hungry over time, and may lead to weight loss.
Hide new foods inside foods that your child already likes. Your toddler may just stop eating the liked foods.	Some children can very easily detect new tastes and smells, even when hidden in other foods.

If the problem persists see your GP or health visitor who may refer you to:
- a specialist feeding team if one is available in your area
- a clinical psychologist

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How to broaden your child's food experience: the child with a lack of experience of different foods

Some children haven't had enough experience with solid textured foods in their first year. They may only eat pureed food or 'easy' bite and dissolve foods like Skips or Quavers. Because they have not learnt to move food around in their mouth, they get anxious about food that needs to be chewed. Some toddlers are wary of putting anything with a different texture into their mouth.

There are a number of things that you can do to broaden your child's experience of food textures.

GUIDANCE & TIPS FOR PARENTS

	Do	Reason
✓	Continue to give the pureed or soft food that your toddler likes.	This will ensure that your child takes the calories needed for growth.
	Gradually introduce more 'experiences' of slightly more solid foods. Toddlers only need small amounts of these foods so that they can learn how the food feels in their mouth, and how to move the food around in their mouth.	This will enable your child to learn the chewing skills needed for more solid textured foods.

	Do	Reason
✓	Start by introducing bite and dissolve foods.	These are foods that quickly dissolve in your mouth if you hold them there; like Quavers, Skips, Wotsits, meringue, and wafer biscuits. This will give your child confidence about having lumps in the mouth; these foods quickly become soft and they are less likely to cause a choke and gag reaction.
	As your toddler begins to accept some bite and dissolve foods, replace one of the spoon-fed pureed meals with bite and dissolve foods.	You need to balance your child's calorie needs with their need to learn new chewing skills.
	Gradually increase the firmness of the foods offered as your toddler becomes more used to them. Remember though that your toddler will still need some soft textured foods, such as yogurts or fromage frais.	This is to make sure that your child continues to take enough calories to grow.

	Don't	Reason
✗	Give very difficult solid foods at this stage. Avoid foods like meat, bread and uncooked apple.	Your child may not be able to cope with these textures. They may feel that they are choking when they try to swallow these foods, and be fearful of trying more difficult textures in the future.
	Worry about dietary balance at this stage.	It is more important at this stage to make sure that your child has enough calories to grow well. Dietary balance can come later.

If the problem persists see your GP or health visitor who may refer you to:
- a specialist speech and language therapist for help with the transition to firmer textured food
- the community paediatrician who may be able to identify the cause of your child's inability to cope with firmer textured food

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Note contact details for specialists in your area:

Specialist Feeding Clinic:

Child Psychologist:

Speech and Language Therapist:

Paediatric Dietitian:

Paediatrician with interest in feeding difficulties:

Specialist Health Visitor with interest in feeding difficulties:

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