

Avoidant restrictive food intake disorder (ARFID)

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Abstract

Avoidant/restrictive food intake disorder (ARFID) was introduced in DSM-5 and has more recently been included in ICD-11. It presents with restrictive eating patterns but the diagnosis hinges on the subsequent health problems and functional impairment, either physical or psychological, related to the restriction. Critically, the restricted eating is not associated with concerns about body image, weight or shape, in contrast to other restrictive eating disorders. This article provides an educational overview of ARFID, its presentation and subtypes, known comorbidities, and assessment and treatment options. ARFID-specific cognitive behavioural therapy and family therapy approaches have been developed but no randomised intervention studies have yet been undertaken. Case scenarios demonstrate how the diagnostic criteria may apply in clinical practice.

Keywords: ARFID, avoidant/restrictive food intake disorder, eating disorders, assessment, therapy

Introduction

Although it is a single diagnosis, avoidant/restrictive food intake disorder (ARFID) is an umbrella term for restrictive eating patterns that result in significant health problems, which may include weight loss, poor growth, nutritional deficits or poor emotional wellbeing. The restriction may relate to the quantity or range of foods consumed and the presentations of ARFID can be quite different. Those with ARFID are at risk of severe acute and chronic medical complications and, because of the heterogeneous presentations, may first present in a diverse range of physical or mental health settings. ARFID can affect children, adolescents and adults.

ARFID was introduced in DSM-5 and has more recently been included in ICD-11, replacing previous terms such as Feeding Disorder of Infancy and Early Childhood and Eating Disorder Not Otherwise Specified. While it shares restrictive eating patterns in common with other eating disorders such as anorexia nervosa or bulimia nervosa, the key difference with ARFID is that the restrictive eating is not associated with concerns about body image, weight or shape.

The reported incidence and prevalence of ARFID differs according to country and type of study. In a German community sample of 8- to 13year-olds, prevalence rates (the percentage of a particular population affected at a particular time) were 3.2% (1). However, this was based solely on child self-report, with no other sources of data such as parental reported information or clinical observations. In Australia, Hay et al. reported ARFID in 0.3% of older adolescents and adults, based on two screening questions (2). Among a large sample of 2,231 paediatric gastroenterology patients in the USA, in which high rates of restrictive eating might be expected, only 1.5% were classified as having ARFID and a further 2.4% had some features (3). Among young people presenting with clinically significant malnutrition, rates were higher. Two national surveillance studies of children and adolescents have been completed, with Canadian data showing the incidence of ARFID in those 5 to 18 years of age was 2.02 (95% confidence interval [CI], 1.76-2.31) per 100,000 patients (4), and data from the UK and Ireland showing an incidence of 3.09 (95% CI, 2.77-3.45) per 100,000 young people aged 5 to 17 years (5). There is far less in the way of robust data relating to adults with ARFID.

Diagnostic criteria

The DSM-5 diagnostic criteria for ARFID (6) are as follows.

- An eating or feeding disturbance (e.g., apparent lack of interest in eating or food; avoidance based on the sensory characteristics of food; concern about aversive consequences of eating) as manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with one (or more) of the following:
 - Significant weight loss (or failure to achieve expected weight gain or faltering growth in children).
 - Significant nutritional deficiency.
 - Dependence on enteral feeding or oral nutritional supplements.
 - Marked interference with psychosocial functioning.
- The disturbance is not better explained by lack of available food or by an associated culturally sanctioned practice.
- The eating disturbance does not occur exclusively during the course of anorexia nervosa or bulimia nervosa, and

there is no evidence of a disturbance in the way in which one's body weight or shape is experienced.

- The eating disturbance is not attributable to a concurrent medical condition or not better explained by another mental disorder. When the eating disturbance occurs in the context of another condition or disorder, the severity of the eating disturbance exceeds that routinely associated with the condition or disorder and warrants additional clinical attention.

The DSM-5 criteria do not specify the threshold for "significant" weight loss or nutritional deficiency, or "marked" interference with psychosocial functioning, presenting additional challenges in subjective clinical assessment and consistency in research.

ARFID has, to date, been excluded from the scope of the NICE (National Institute for Health and Care Excellence) guidelines on eating disorders (7) for all ages, and therefore also from commissioning guidance. Community and inpatient services differ in whether they have chosen or been commissioned to include ARFID in referral criteria. Therefore, those with ARFID may receive starkly different levels of care depending on where they live.

How does ARFID present?

The DSM-5 diagnostic criteria (6) suggest three primary ARFID subtypes, including lack of interest in food, avoidance based on sensory characteristics of food, and concern about aversive consequences of eating.

Lack of interest

Those with a lack of interest in food typically present with low appetite, limited intake and prolonged mealtimes, or mealtimes which are only possible with distraction (e.g., television).

Sensory

Those with sensory sensitivity tend to present with a limited range of food intake, or avoidance of whole food groups (e.g., fruit, meat, vegetables), which may be based on sensitivities to temperature, texture or appearance. Avoidance of mixed textures or mixed foods may also be seen, along with gagging or retching at the smell or sight of particular foods. Those in this group tend to restrict themselves to a limited number of "safe" foods.

Fear

Concern about aversive consequences of eating tend to be associated with high anxiety levels, for example, fear of vomiting or choking. This may be based on a previous negative experience.

More recently, research has empirically derived and supported the validity of these three proposed subtypes, in addition to identifying a fourth "combined" subtype, which was the most common presentation in a large representative sample of children and adolescents with ARFID (8). This combined subtype includes a combination of symptoms from the sensory and "fear" subtypes.

What are the comorbidities and complications of ARFID?

Those with ARFID are at risk of similar physical health complications as those with other restrictive eating disorders and those who are underweight. Acute risks may include dehydration, cardiovascular instability, hypothermia and syncope, but with more longstanding symptoms, chronic complications relating to underweight or malnutrition, such as constipation, amenorrhoea, reduced fertility, low bone mineral density and greater risk of fractures may be seen, as well as complications relating to specific nutritional deficiencies (e.g., fatigue due to iron-deficiency anaemia or osteomalacia or rickets resulting from vitamin D deficiency), even in those who are not underweight. This may differ from nutritional deficiencies seen in the general population due to the severity of restriction of a range of foods in some cases of ARFID. In children and young people with restrictive eating disorders, impaired growth and delayed puberty can be long-term complications of being underweight (9).

ARFID is often associated with a comorbid mental health difficulty (anxiety disorders being most common [9.1–72% of clinical samples]), neurodevelopmental disorder (prevalence of autism spectrum disorder in children with ARFID was found to be up to 55% in a clinical sample of referrals to a tertiary care paediatric feeding clinic), and/or a physical health problems, particularly gastrointestinal symptoms or disorders, such as gastroesophageal reflux, constipation, abdominal pain or vomiting (10).

Picky eating (interchangeably described as fussy or selective eating) is commonly seen in young children and is regarded as a phase of typical development (11). It is also commonly associated with autism spectrum disorder (12), although it is important to differentiate ARFID from picky eating or the rigid eating patterns associated with autism spectrum disorder. Critically, the emphasis in ARFID is on the consequences of the eating patterns, such as a significant negative impact on physical or mental wellbeing or nutritional status, as per diagnostic criteria.

Assessment and treatment

A full assessment with multidisciplinary team input should take place and a biopsychosocial formulation produced.

Physical and mental health should be assessed and monitored, including a review of centiles on growth charts for young people. Clinical interviews, such as the semi-structured Pica, ARFID, and Rumination Disorder Interview, which has an internal consistency of ≥ 0.77 and moderate ($\kappa = 0.75$) inter-rater reliability for ARFID diagnosis, can be used to support assessment and diagnosis for all ages (13) as part of a wider clinical process. However, this assessment was based on a small sample size and further validation studies are in progress, in addition to the development of briefer screening tools (14).

Treatments for all feeding and eating disorders aim to address the specific thoughts, feelings and behaviours with which they present. Because in ARFID there is no anxiety about weight gain, in contrast to anorexia nervosa, and the psychopathology varies between subtypes, this alters the motivations of patients to engage in treatment. Consequently, ARFID must be managed with a patient-centred approach, with early identification and intervention to provide the most optimistic long-term outcomes. A holistic assessment will then determine the subtype and psychopathology of ARFID, which directs treatment options. For all those with ARFID, these may include the following.

- A review of physical health needs.
- A review of wider psychological needs (comorbidities may require concurrent treatment).
- Dietetic intervention and nutritional supplementation.
- Weight restoration, if appropriate.
- In severe cases, hospitalisation and alternative/additional methods of feeding, e.g., nasogastric or percutaneous endoscopic gastrostomy tube feeding.
- Behavioural interventions (e.g., graded exposure therapy/desensitisation/setting goals and expectations).
- "Tasting times" (offering new or less familiar foods outside of mealtimes to reduce pressure).
- Reward charts to increase motivation.
- Specific cognitive behavioural therapy for ARFID has been developed, incorporating psychoeducation, regular eating patterns and increasing food variety or quantity (15).
- For young people, family-based therapy (FBT) for ARFID is a manualised treatment based on FBT for adolescents with anorexia nervosa; it uses a similar approach, but specific targets depend on the maintaining mechanism, for example, those with the lack of interest subtype may have a goal of shortened mealtimes (15).

This is not an exhaustive list. For those with lack of interest in eating, clear mealtime structure and routine can be highly effective. There is emerging evidence to suggest that a variety of medications can be helpful, for example off-label use of cyproheptadine, an antihistamine, can stimulate appetite and result in weight gain, and is generally well-tolerated (16). The off-label use of the antidepressant mirtazapine may have similar beneficial effects (17). For those with sensory sensitivities contributing to restricted eating, food chaining (introducing new foods that are similar to those already eaten) may be effective. For those with an aversive/anxiety-driven presentation, typical anxiety management strategies such as graded exposure therapy and cognitive behavioural therapy can be effective. Anxiolytic medication may be indicated. For all presentations, there is often an important role of reassurance and psychoeducation in the assessment and management of ARFID.

In terms of treatment pathways and service provision, depending on the presentation and any complications or comorbidities, young people may be best suited to treatment by paediatrics, child and adolescent mental health services, feeding and eating disorder services or a combination of these. Adults may benefit from treatment by specialist eating disorder services, general mental health services, general physicians, specialist physicians or their general practitioner.

Conclusion

The diagnosis of ARFID represents a broad spectrum of presentations relating to restricted eating and associated negative physical or psychosocial consequences. People of all ages with ARFID may present in a range of physical or mental health settings, at all levels of care. A robust assessment will determine appropriate treatment options, the best location of care provision and the different disciplines required within a multidisciplinary team. All healthcare professionals have a role in identifying those with ARFID and raising awareness of this disorder.

Case scenarios

Case 1

Lucy is a 13-year-old female who had a severe choking incident on a piece of chicken 10 weeks ago. Since then, she has had high levels of anxiety about eating any food and is terrified of choking, even on small pieces of food. She has only been drinking water, juice and milkshakes. She has lost 5kg in weight since the onset of these anxieties. She has no concerns about her weight or shape and prior to the choking incident she was well and had no difficulties with eating. She is able to continue with education but her friendships have been affected as she does not want to go out with her friends to eat and is feeling isolated as a result.

Lucy has:

- fear of aversive consequences of eating (choking)
- significant weight loss
- interference with psychosocial functioning
- no lack of available food
- no culturally sanctioned practice
- no other known diagnosis.

She meets the diagnostic criteria for ARFID.

Key point: there is no specified time period for symptoms to be present for a diagnosis of ARFID to be made.

Case 2

Ajay is a 6-year-old male with autism spectrum disorder. He has always been a fussy eater and eats only crisps, bread, potatoes and chicken. He does not eat fruit or vegetables and becomes distressed when offered any other foods. He will only eat two brands of crisps and refuses potatoes if they are overcooked or undercooked. Ajay is able to eat with other people, in all settings, but has to take a packed lunch to school and whenever the family go away they have to take all his food with them, particularly if they cannot buy his preferred brand of crisps. He is tracking on weight and height centiles. He has no other medical problems. His blood tests show iron deficiency, so based on this result and his food intake, he is prescribed iron and calcium supplements.

Ajay has:

- a limited variety of food intake
- rigid eating behaviour
- nutritional deficiency
- interference with psychosocial functioning (distress about eating and need to take preferred foods when out of the home)
- no lack of available food
- no culturally sanctioned practice
- a diagnosis of autism spectrum disorder, but this does not fully explain his food restriction and his presentation requires additional clinical attention

He meets the diagnostic criteria for ARFID.

Key point: fussy or restrictive eating is commonly associated with younger children and with autism spectrum disorder. The key differentiator for a diagnosis of ARFID is the impact of the restrictive eating, and in this case, the severity of the eating restriction has impacted on his physical health and psychosocial wellbeing.

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