

Multivitamin & Mineral Supplement Options and Advice for those with ARFID

Essential Reminders

This resource has been created for dietitians. You must always check the manufacturers packaging and guidelines for instructions on use, dosage, ingredients, age appropriateness and to determine any contraindications. Consult an appropriate prescribing professional (such as a GP or pharmacist) for advice if required.

Always check you do not exceed the recommended doses of any vitamin or mineral. This applies to single supplements, or if you are using several in combination. Some vitamins and minerals can be damaging in high volumes. Total micronutrient load should include fortified foods (such as some breads, yoghurts/fromage frais, milks and breakfast cereals).

If the patient is prescribed an oral nutritional supplement (e.g., Fortini, Paediasure, Fortisip, Ensure Plus etc.) then high levels of vitamins and minerals can be reached quickly. Consequently, an additional supplement may not be required. In some cases, isolated nutrients (such as iron or calcium supplementation) may still be nutritionally necessary and appropriate.

Supplement specific information was correct at the time of publication.

Preparations are routinely subject to change.

You must always ensure that your advice is current and up to date.

Preparation Tips

Sprinkle Preparations

Tip: Sprinkles should be added to semi solid foods such as butter/margarine, custard, angel delight, peanut butter, chocolate spread, jam, mashed potato, yoghurts, icing etc. They should be consumed within 30mins or the enteric coating dissolves and will be tasted.

Powder Preparations

Tip: Start using a pinch in drinks and increase gradually until the desired dosage is achieved. Leaving prepared powder preparations in the fridge overnight helps to ensure that the grainy texture is lost. Powder preparations can also be mixed into a paste and added to foods (follow the manufacturers instructions).

Infant formula (dairy and non-dairy) can also be used as a cow's milk alternative. You should consider adding 1-2 scoops to cow's (or alternative) milk as tolerated and mix well to increase the calorie, protein and micronutrients.

Tablets

Tip: It may be helpful to try crushing the tablet and mixing it with a drink. Milk is preferable for this (if tolerated) as this adds a coating to the mouth and prevents an aftertaste. This is equally true of using a spoon of yoghurt, chocolate spread, peanut butter, or jam.

Adult tablets are often smaller and can be halved or given every other day as an alternative option for a young person.

Any complete A-Z multivitamin and mineral is appropriate. Those listed in the table at the end of this document are only a small representation of those available. Complete A-Z preparations do not need to be bought from branded companies as these can be prohibitively expensive for the same quality as a store-branded option. Please note however, that in most cases, adult A-Z preparations only contain 25%DRV Calcium and may therefore require further supplementation to support calcium needs.

Ideas to support multi-vitamin and mineral introduction for those with Avoidant Restrictive Food Intake Disorder (ARFID)

It is very important that you remain mindful of the pace of change and also support the individual or their family in their expectations. It is more helpful to take more time gaining acceptability than rushing into it. Poor pace-matching is more likely to lead to supplement rejection whereby alternative options then start to diminish quickly.

The following advice explores strategies to support the introduction of multivitamin and mineral supplements to maximise success:

1. Be consistent – offer/take the supplement at the same time of day and presented in the same way.
2. Link it to a routine – making it part of a routine can really help. For example, if it is always before brushing teeth, or always before you put socks on in the morning. Writing out the routine in detail (including with pictures if helpful) or using prompts (such as alarms or visual cues) can also help.

Additional ideas for children and young people:

3. Avoid hiding supplements in safe foods – this can lead to mistrust. It is likely that the taste change will be detected leading to the further loss of a safe food.
4. Stay calm – pressure and anxiety increase the probability that supplements are not accepted.
5. Model safety – assuming it is safe/appropriate for the parent to do so (e.g. a parent routinely takes their own tablet/chewy multi-vitamin or has a placebo option they are comfortable with) then getting them to demonstrate that swallowing a tablet, or taking something from a

syringe, is harmless can help reduce anxiety about doing it themselves. Modelling can be successful for those who struggle to understand spoken instructions as seeing and doing is an effective way to learn.

6. Include them in the process – understanding what is happening, why, and feeling in control of these changes can really help.
7. Avoid anxious parental responses – instead hold the hope of a positive outcome, validate any challenges and encourage trying again another time. Maintaining a positive attitude is essential.
8. Using positive reinforcement (rewards) - can be valuable. What this means varies depending on the child, but it doesn't need to be an expense. It could mean time playing, watching TV, receiving a sticker etc. Rewards should focus on effort and not the final outcome.

Specific advice for introducing spray preparations to children:

1. Start by spraying the supplement onto a plate and work slowly through exposure stages. Start by being in the same room and then build up to touching it and then smelling it.
2. Next work up to dabbing a finger in it to taste it
3. Slowly move up the tolerated oral volume, increasing from a few finger dabs, to tolerating one spray initially and then overtime increasing slowly to the recommended number of sprays.

Note: If the young person struggles with the oral sensation of a spray, you may need to concurrently work on 'spray' exposure.

1. Use an oral spray device ideally of a similar size, shape and 'spray dose' (oral sensation).
2. Start exposures with holding the container and begin feeling familiar with it, then moving it closer to the face and mouth.
3. Work up to tolerating holding the device at an open mouth.
4. Start exposures to spray sensation by starting with a tolerated liquid (like water or juice). Start with one spray then build up tolerance to the same number of sprays.
5. As the tolerance to the spray and tolerance to the supplement taste increase, the supplement spray can then replace the oral fluid spray.

Specific advice for introducing tablets to children:

According to [singlecare.com](https://singlecare.com/autism/teaching-children-with-autism-to-take-medication/) "*Sensory Overload: teaching children with autism to take medication*" – If the child can follow instructions and is able to manage swallowing chunky textures without gagging or choking, and swallows mouthfuls of liquid without it spilling or causing coughing/gagging then they should be ready to learn pill swallowing.

1. **Shaping** – this is like food chaining. You find the easiest possible introduction to a task and build from there according to tolerance and success. For example – start by swallowing water only on command. Then add in very small 'candy' pills (e.g cake decoration sprinkles) to swallow. Gradually increase the size of these until the necessary size is reached. This could include half or quarter pill sizes. From here it is possible to start introducing the idea of swapping the sugar 'pill' for a tablet supplement.

Specific advice for introducing liquids for children:

1. Start by introducing small amounts of a liquid that the child is already familiar with (like water, milk or juice). Once the volume of this safe liquid is up to the required dosage, mix in or swap for the supplement.
2. Alternatively, if the supplement is orange flavoured but the child doesn't tolerate orange (juice or cordial) then you could use a food chaining approach to achieve this. This means working towards the desired flavour/texture in small and manageable steps from the current safe food options. Using this approach, you would then build up to the correct volume. Once up to the required dosage, mix in or swap for the similar-tasting supplement. Any mixing in should be with the young persons awareness and consent to avoid damaging the trusting relationship and support their sense of control.
3. **Stimulus fading** – this is a graded exposure method with many 'fading' or 'grading' steps. To do this with a liquid supplement:
 - a. Present the child with an empty syringe.
 - b. The child then opens their mouth with the syringe present (it does not need to be close to them).
 - c. Slowly reduce the distance of the empty syringe and open mouth until it is less than an inch from their face.
 - d. Next, ingest water (or another safe fluid) from the syringe in increasing volumes.
 - e. Introduce the supplement by gradually adding very small amounts until the required volume is reached. Any mixing in should be with the young persons awareness and consent to avoid damaging the trusting relationship and support their sense of control.

Acknowledgements

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This table shows you at quick glance which micronutrient preparation may be suitable for your patients' needs. It does not specify the appropriate age range, %DRV, or the necessary dose. The supplements below are not endorsed by the dietetic creators of this resource and other versions are available. These are example preparations which may help dietitians in determining suitable options.

SPRINKLES	Age	Ve	Veg	B1	B2	B3	B5	B6	B7	B12	D	C	A	E	K	Na	K+	Iron	Folate	Folic	Cal	Zinc	Cu	Mg	Phos	Sel	Iodine	Chl	Mang	Moly	Chr	L.ly	Flavour			
Nutrigen Ferromixin	6 m											X	X					X		X		X											U			
Nutrigen Vitamixin	2-12y	X	X	X	X	X		X		X	X	X	X	X				X		X		X	X				X							U		
POWDER	Age	Ve	Veg	B1	B2	B3	B5	B6	B7	B12	D	C	A	E	K	Na	K+	Iron	Folate	Folic	Cal	Zinc	Cu	Mg	Phos	Sel	Iodine	Chl	Mang	Moly	Chr	L.ly	Flav			
Paediatric Seravit	3y +		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			U, PA		
DROPS	Age	Ve	Veg	B1	B2	B3	B5	B6	B7	B12	D	C	A	E	K	Na	K+	Iron	Folate	Folic	Cal	Zinc	Cu	Mg	Phos	Sel	Iodine	Chl	Mang	Moly	Chr	L.ly	Flav			
Baby D Drops	0-12m		X								X																							U		
Nutriadvanced D3	A		X								X																							O		
Nutrigen Babytamin	0-12m			X	X	X	X	X	X	X	X	X	X	X	X					X		X	X			X	X		X		X			U		
Natures aid minidrops	3m-5y	X	X	X	X	X	X	X		X	X	X	X																						O	
Natures aid minidrops iron	3m-5y	X	X							X		X						X		X															U	
Wellbaby Multi V&M	0-4y		X	X	X	X	X	X	X	X	X	X	X	X				X		X											X			U		
LIQUID / SYRUP	Age	Ve	Veg	B1	B2	B3	B5	B6	B7	B12	D	C	A	E	K	Na	K+	Iron	Folate	Folic	Cal	Zinc	Cu	Mg	Phos	Sel	Iodine	Chl	Mang	Moly	Chr	L.ly	Flav.			
Centrum Liquid MV	A			X	X	X	X	X	X	X	X	X	X	X				X				X					X		X	X	X				O	
Floradix B Complex	3-12y+/A	X	X	X	X	X		X	X	X																									F	
Floradix Liquid Iron	3-12y+/A		X	X	X			X		X		X						X																	U	
Haliborange baby/toddler liquid	1m +		X	X	X	X	X	X			X	X	X																						O	
Holland&Barrett Iron, B, C & M	3y+/A		X	X	X	X	X	X		X		X						X		X		X	X				X		X			X			O	
Nutrigen Supra	6m+			X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X		X	X	X	X			U	
Nutrigen Vegy Syrup	12m+	X	X	X	X	X	X	X		X	X	X	X	X	X					X		X				X	X								U	
Osteocare calcium liquid	3y+/A		X								X										X	X		X											O	
Spatone original	2+	X	X															X																	U	
Vitabiotics Feroglobin Liquid	3y+		X	X	X	X	X	X		X		X						X		X	X	X	X				X		X			X			U	
Wellkid calcium liquid	4-12y		X								X										X	X	X	X											O	
Wellkid MV Liquid	4-12y		X	X	X	X	X	X		X	X	X	X	X				X		X		X	X				X									O

GUMMY	Age	Ve	Veg	B1	B2	B3	B5	B6	B7	B12	D	C	A	E	K	Na	K+	Iron	Folate	Folic	Cal	Zinc	Cu	Mg	Phos	Sel	Iodine	Chl	Mang	Moly	Chr	L.Iy	Flav
Alive! B complex	A		X	X	X	X	X	X	X	X		X								X													Tr
Alive! Calcium+D	A		X								X										X				X								S
Alive! Childrens chewable MV&M	3-12y		X	X	X	X	X	X	X	X	X	X	X	X				X		X		X	X	X		X	X		X	X	X		B
Boots kids daily health	3y+					X	X	X		X	X	X	X	X																			S
Haliborange MV calcium+ iron	3y+			X	X	X		X			X	X	X					X			X												O
Hariborange softies	3-12y					X		X		X	X	X	X	X																			S
Hariborange softies vegan	3-12y	X	X								X	X	X	X												X							Bl
Mr Men & Little Miss Sunshine MV	3-7y					X		X		X	X	X	X	X																			S
Novomins kids iron gummies	3y	X	X									X						X															S
Wellwoman MV	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X		X	X			X	X				X		U
CHEWY	Age	Ve	Veg	B1	B2	B3	B5	B6	B7	B12	D	C	A	E	K	Na	K+	Iron	Folate	Folic	Cal	Zinc	Cu	Mg	Phos	Sel	Iodine	Chl	Mang	Moly	Chr	L.Iy	Flav
Centrum chewable tablet	A			X	X			X		X							X	X		X	X	X		X		X			X				F
Super stars bone support	4-12y	X	X								X										X												SM
Super stars daily MV+M	4-12y	X	X	X	X	X	X	X		X	X	X	X	X						X		X					X						C
Wellkid MV + iron	4-12y		X	X	X	X	X	X	X	X	X	X	X	X				X		X		X	X	X		X	X		X		X		F
TABLET	Age	Ve	Veg	B1	B2	B3	B5	B6	B7	B12	D	C	A	E	K	Na	K+	Iron	Folate	Folic	Cal	Zinc	Cu	Mg	Phos	Sel	Iodine	Chl	Mang	Moly	Chr	L.Iy	Flav
Boots A-Z	A	X		X	X			X		X	X	X	X	X				X		X	X	X		X		X	X		X	X	X		U
Forceval Capsule	12y+/A			X	X	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X		X	X	X		U
Sanatogen A-Z	12y+/A			X	X	X	X	X	X	X	X	X	X	X	X		X	X		X		X	X	X	X	X	X		X		X		U
Wellteen her	13-19y		X	X	X	X	X	X	X	X	X	X		X				X		X		X	X	X		X	X		X		X		U
Wellteen him	13-19y		X	X	X	X	X	X	X	X	X	X	X	X				X		X		X	X	X		X	X		X		X		U
EFFERVESCENT	Age	Ve	Veg	B1	B2	B3	B5	B6	B7	B12	D	C	A	E	K	Na	K+	Iron	Folate	Folic	Cal	Zinc	Cu	Mg	Phos	Sel	Iodine	Chl	Mang	Moly	Chr	L.Iy	Flav
Forceval junior	6y+		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X		X	X	X		X	X		X	X	X		F
Nickelodeon MV fizzy drink sachet Spongebob	2-12y	X	X	X	X	X	X	X	X	X	X	X	X	X				X		X	X	X				X	X				X		Tr
Vitabooost kids	3y+		X	X	X	X	X	X	X	X	X	X	X	X	X			X			X	X				X	X		X		X		O

[illegible]

Table Key	
Age	A - Adult 18 years and above Number- Age in years e.g. 12y+ represents 12 years and over Months- Age in months e.g. 3m+ represents 3months and over
Ve	Vegan
Veg	Vegetarian
B1	Vitamin B1 (Thiamine)
B2	Vitamin B2 (Riboflavin)
B3	Vitamin B3 (Niacin)
B5	Vitamin B5 (Pantothenic Acid)
B6	Vitamin B6 (Pyridoxine)
B7	Vitamin B7 (Biotin)
B12	Vitamin B12 (Cobalamin)
D	Vitamin D
C	Vitamin C
A	Vitamin A
E	Vitamin E
K	Vitamin K
Na	Sodium
K+	Potassium
Iron	Iron
Folate	Folate
Folic	Folic Acid
Cal	Calcium
Zinc	Zinc
Cu	Copper
Mg	Magnesium
Phos	Phosphorus
Sel	Selenium
Iodine	Iodine
Chl	Chlorine
Mang	Manganese
Moly	Molybdenum
Chr	Chromium
L.ly	L. Lysine
Flavours Key	
AB	Apple and Blackcurrant
Bl	Blueberry
BP	Blackcurrant and Plum
Br	Berry
C	Cherry
CM	Chocolate and Marshmallow
F	Fruit
G	Grape
O	Orange
P	Peppermint
PA	Pineapple
PO	Pomegranate
PR	Pomegranate and Raspberry
R	Raspberry
SM	Strawberry Milkshake
Tr	Tropical
U	Unflavoured