



Care of the child with allergic conditions

For Children's Nurses, Health Visitors and

School Nurses

Paediatric Allergy Nurse Specialist
Adele Durge

**FLORENCE
NIGHTINGALE
FOUNDATION**

**Nursing
Times
Awards
2022
WINNER**

Children's Allergy - 'The Unmet Need'



Multi - system

- Immediate and delayed reactions
- Eczema
- Asthma
- Hay fever
- Gastrointestinal

Quality of Life

- 1 in every 5 children are affected
- Whole family is severely impacted

Poor & inaccessible care

- Misinformation on Social media
- 12 Health Professional encounters before referral

Learning Objectives:

- Non-IgE mediated (delayed) food allergy
 - Identification and Management
- IgE mediated allergies
 - Symptoms
 - First Aid
 - Management in hospital, nursery and school settings
- Eczema update
- Risk Factors & Prevention
- Atopy Q&A





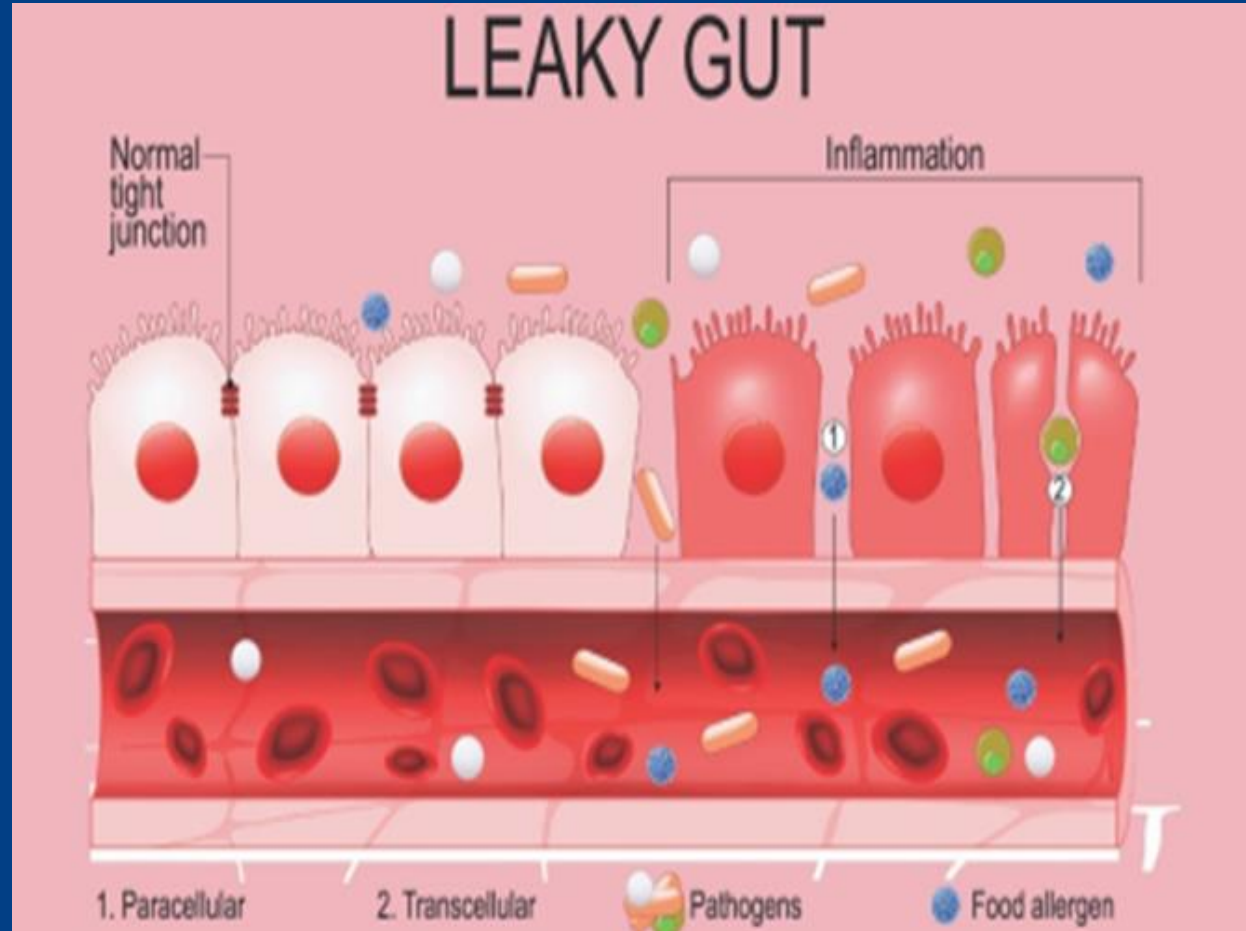
Non-IgE (delayed) Allergy

Identification and management

Origins of Allergy

Where can you stop the allergic march?

- Babies born with a depleted gut biome
- Gut immune system cannot process milk protein
- Intestinal wall becomes inflamed
- Reflux, enterocolitis, proctocolitis
- Skin becomes inflamed (eczema)
- Skin barrier breaks – further sensitisations
- Allergens drive eczema
- More food allergies
- Asthma
- Rhinitis



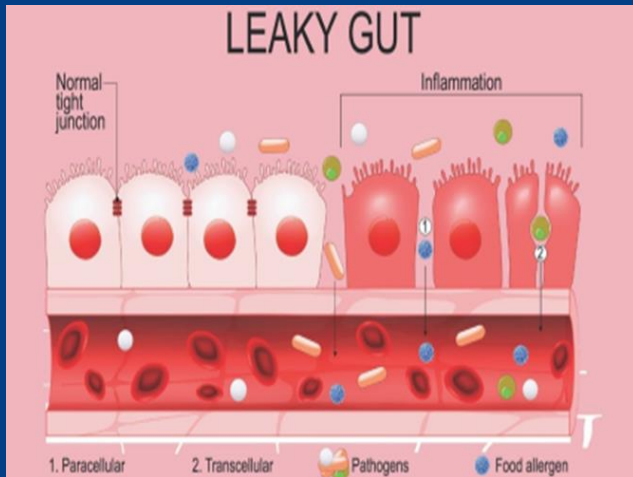
Symptoms of non-IgE (delayed) CMPA

Intestinal wall becomes inflamed

- Reflux
- Enterocolitis (constipation and / or diarrhea)
- Proctocolitis (mucus and / or blood on stool)
- Malabsorption (further sensitisations)
- Faltering Growth

Skin becomes inflamed/itchy/broken

- Further sensitisations
- Poor sleep, irritability, mental health
- Faltering growth
- Chronic changes in skin quality



Management of non-IgE CMPA

Step 1: Strict dairy exclusion from mother and baby's diet for 4-6 weeks (check labels)

Breastfeeding Mother:

- Soya (if no gut symptoms) or Oat milk
- Calcium and Vitamin D supplements

Formula or Mixed fed infant <1yr:

- Mild-Moderate symptoms - Extensively Hydrolysed (EHF)
- Severe symptoms / Faltering growth - Amino Acid Formula (AAF)

Child >1yr:

- Soya (if no gut symptoms) or Oat <300ml/day (not growing up or organic varieties)
- Vitamin D supplement

 BDA The Association of Dietitians
Food Allergy
Specialist Group

**Cow's Milk Free Diet
for Infants and Children**



Patient Name:

Dietitian:

Management of non-IgE CMPA

Step 2: Treat symptoms

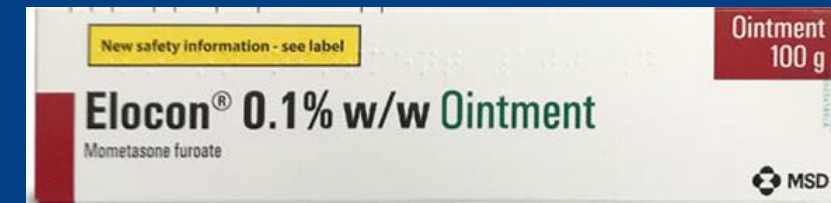
Reflux:

- Conservative measures (education)
- Gaviscon, thickener
- PPIs eg Lansoprazole / Omeprazole (can increase risk of allergy)



Eczema:

- Topical Steroids
- Topical Calcineurin Inhibitors
- Emollients



Faltering growth:

- Increase calories (oatly barrista, extra puddings, fortification)
- Refer to dietician (concentrate formula)



Management of non-IgE CMPA

Step 3: Reintroduction of dairy after 4-6 weeks

Breastfeeding Mother:

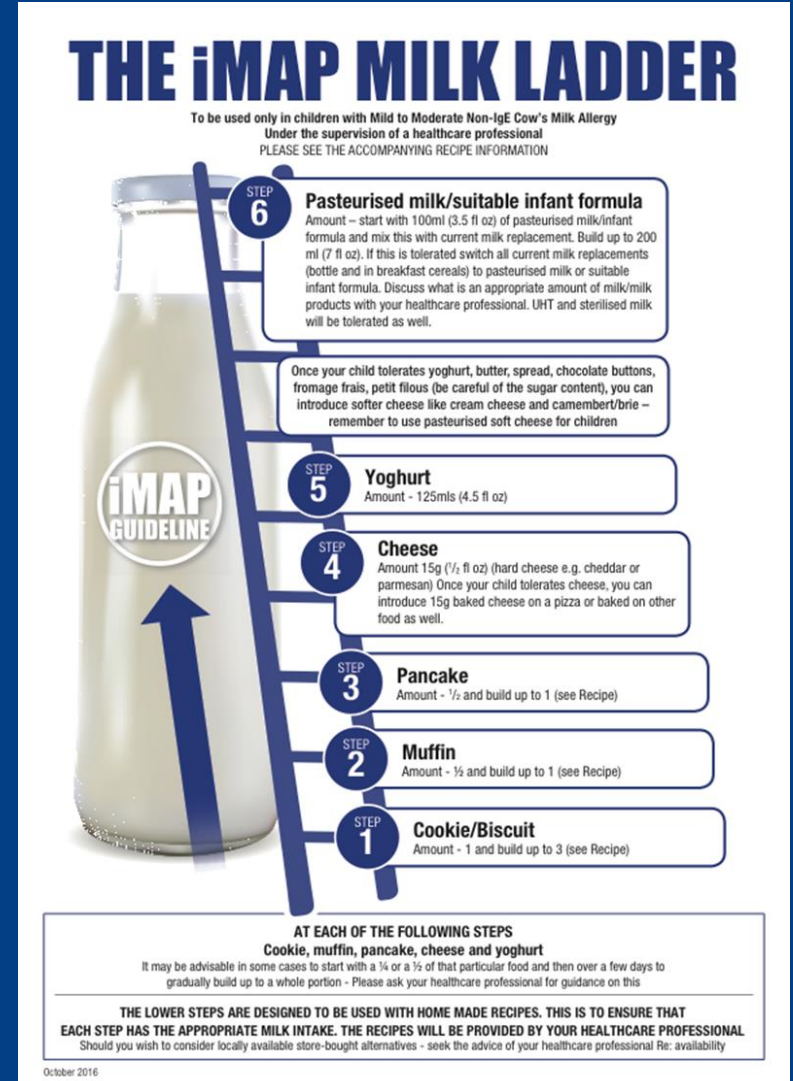
- iMAP – each step to mother first

Formula or Mixed fed infant <1yr:

- Add 30ml cow's milk formula to prescription formula bottle, first bottle of each day only, increasing by 30ml each day (1oz).

Child >1yr:

- iMAP



THE iMAP MILK LADDER

To be used only in children with Mild to Moderate Non-IgE Cow's Milk Allergy
Under the supervision of a healthcare professional
PLEASE SEE THE ACCOMPANYING RECIPE INFORMATION

STEP 6 **Pasteurised milk/suitable infant formula**
Amount – start with 100ml (3.5 fl oz) of pasteurised milk/infant formula and mix this with current milk replacement. Build up to 200 ml (7 fl oz). If this is tolerated switch all current milk replacements (bottle and in breakfast cereals) to pasteurised milk or suitable infant formula. Discuss what is an appropriate amount of milk/milk products with your healthcare professional. UHT and sterilised milk will be tolerated as well.

Once your child tolerates yoghurt, butter, spread, chocolate buttons, fromage frais, petit filous (be careful of the sugar content), you can introduce softer cheese like cream cheese and camembert/brie – remember to use pasteurised soft cheese for children

STEP 5 **Yoghurt**
Amount - 125mls (4.5 fl oz)

STEP 4 **Cheese**
Amount 15g (1/2 fl oz) (hard cheese e.g. cheddar or parmesan) Once your child tolerates cheese, you can introduce 15g baked cheese on a pizza or baked on other food as well.

STEP 3 **Pancake**
Amount - 1/2 and build up to 1 (see Recipe)

STEP 2 **Muffin**
Amount - 1/2 and build up to 1 (see Recipe)

STEP 1 **Cookie/Biscuit**
Amount - 1 and build up to 3 (see Recipe)

AT EACH OF THE FOLLOWING STEPS
Cookie, muffin, pancake, cheese and yoghurt
It may be advisable in some cases to start with a 1/4 or 1/2 of that particular food and then over a few days to gradually build up to a whole portion - Please ask your healthcare professional for guidance on this

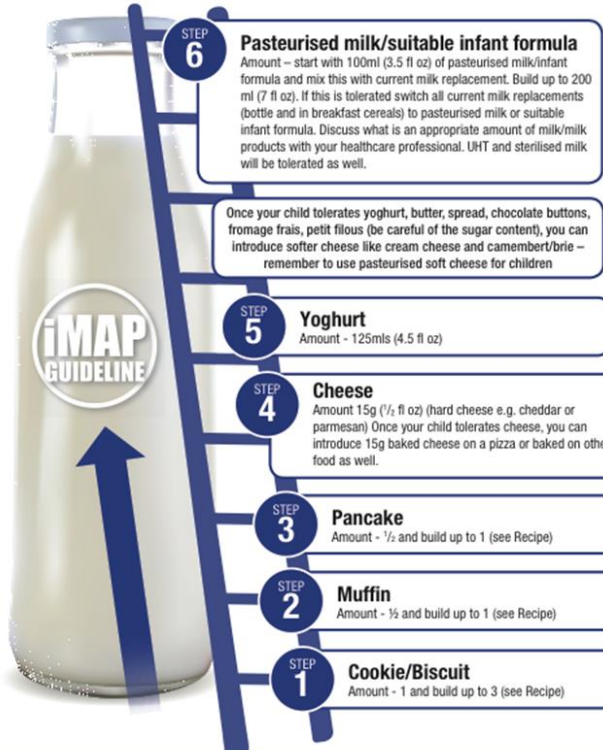
THE LOWER STEPS ARE DESIGNED TO BE USED WITH HOME MADE RECIPES. THIS IS TO ENSURE THAT EACH STEP HAS THE APPROPRIATE MILK INTAKE. THE RECIPES WILL BE PROVIDED BY YOUR HEALTHCARE PROFESSIONAL
Should you wish to consider locally available store-bought alternatives - seek the advice of your healthcare professional Re: availability

October 2016

Management of non-IgE CMPA

Step 4: Observe for recurrence of symptoms with reintroduction

- If symptoms mild: treat symptoms and press on with iMAP
- If symptoms troublesome: Take a step back on ladder and continue to offer what was tolerated for 3-4 months, before trying to step up again.
- Total exclusion ↑ risk of developing immediate allergy



THE iMAP MILK LADDER

To be used only in children with Mild to Moderate Non-IgE Cow's Milk Allergy
Under the supervision of a healthcare professional
PLEASE SEE THE ACCOMPANYING RECIPE INFORMATION

STEP 6 **Pasteurised milk/suitable infant formula**
Amount – start with 100ml (3.5 fl oz) of pasteurised milk/infant formula and mix this with current milk replacement. Build up to 200 ml (7 fl oz). If this is tolerated switch all current milk replacements (bottle and in breakfast cereals) to pasteurised milk or suitable infant formula. Discuss what is an appropriate amount of milk/milk products with your healthcare professional. UHT and sterilised milk will be tolerated as well.

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STEP 5 **Yoghurt**
Amount - 125mls (4.5 fl oz)

STEP 4 **Cheese**
Amount 15g (½ fl oz) (hard cheese e.g. cheddar or parmesan) Once your child tolerates cheese, you can introduce 15g baked cheese on a pizza or baked on other food as well.

STEP 3 **Pancake**
Amount - ½ and build up to 1 (see Recipe)

STEP 2 **Muffin**
Amount - ½ and build up to 1 (see Recipe)

STEP 1 **Cookie/Biscuit**
Amount - 1 and build up to 3 (see Recipe)

AT EACH OF THE FOLLOWING STEPS
Cookie, muffin, pancake, cheese and yoghurt
It may be advisable in some cases to start with a ¼ or a ½ of that particular food and then over a few days to gradually build up to a whole portion - Please ask your healthcare professional for guidance on this

THE LOWER STEPS ARE DESIGNED TO BE USED WITH HOME MADE RECIPES. THIS IS TO ENSURE THAT EACH STEP HAS THE APPROPRIATE MILK INTAKE. THE RECIPES WILL BE PROVIDED BY YOUR HEALTHCARE PROFESSIONAL
Should you wish to consider locally available store-bought alternatives - seek the advice of your healthcare professional Re: availability

October 2016

IgE Mediated (immediate) Allergy

Keeping Children Safe



Why is this important?

1 in 5 children in UK have an allergic condition

Many children are not aware they have food allergies

20% of serious reactions happen at school

17% fatal anaphylaxis happen at school in UK

Anaphylaxis is time critical

Delay giving adrenaline common in fatal reactions



No peace: Nigel, Martha, Dylan and Jack Baptiz, with photos of Alex.

Parents of boy who died after school dinner allergic reaction say staff 'failed' their son

THE parents of a boy killed by an allergic reaction to his school dinner have hit out at staff after an inquest heard he may have survived if given his EpiPen as he lay dying on the floor.

By ALLISTER HADGER

PUBLISHED: 16:11, Fri, May 12, 2017 | UPDATED: 16:37, Fri, May 12, 2017



itv NEWS

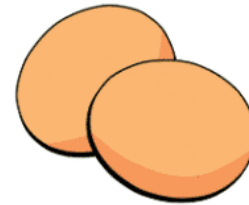


'MY WORLD HAS ENDED'

What causes reactions?

- 90% of reactions in children are caused by....
- Milk (dairy) dangerous for teens!
- Latex
- Medicines
- Insect stings
- Spontaneous urticaria / angioedema

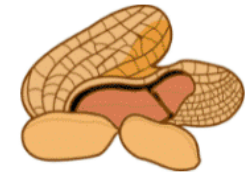
Top 9 Food Allergens



EGG



WHEAT



PEANUT



MILK



SOY



TREE
NUTS



FISH

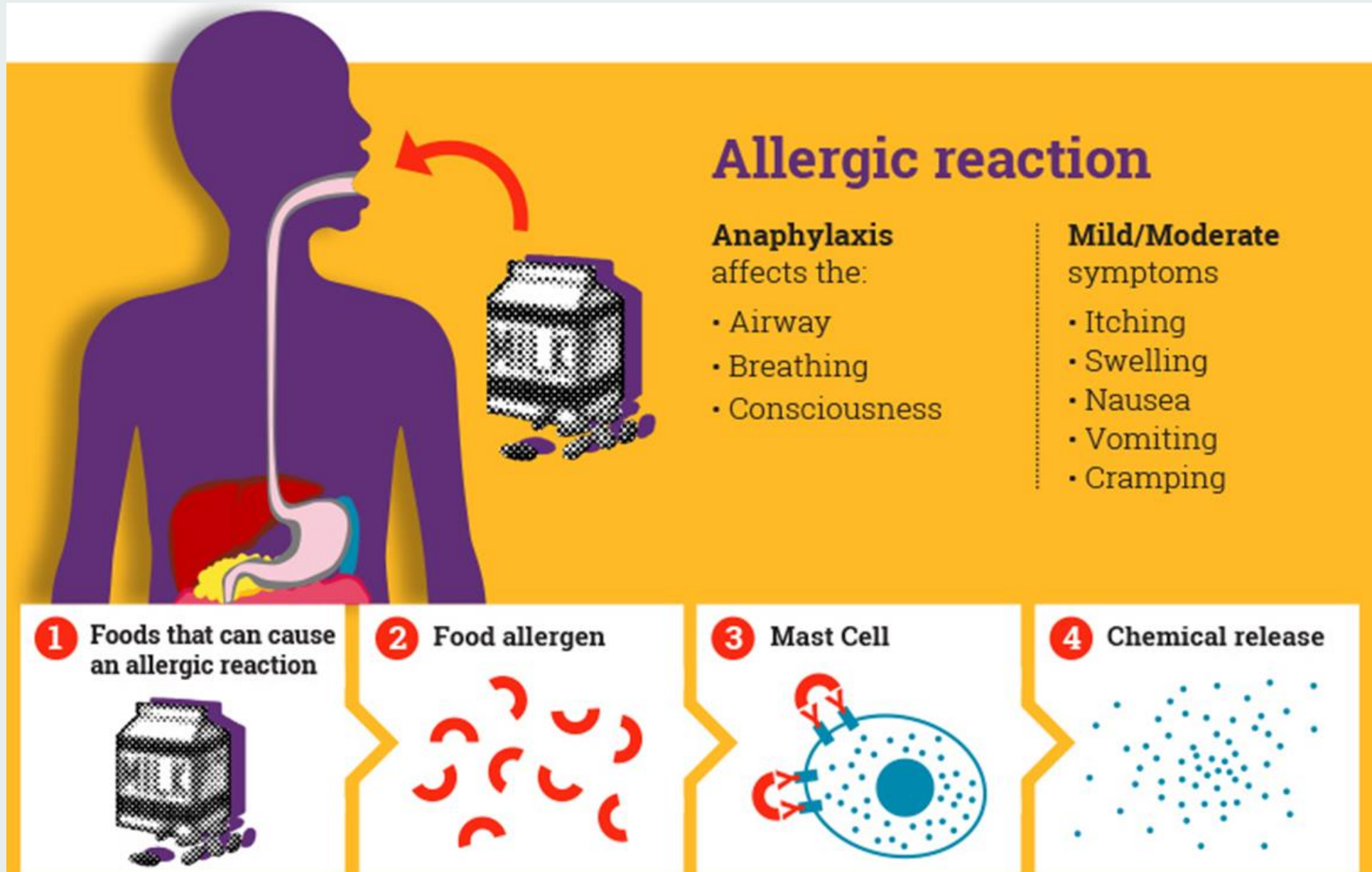


SHELLFISH



SESAME

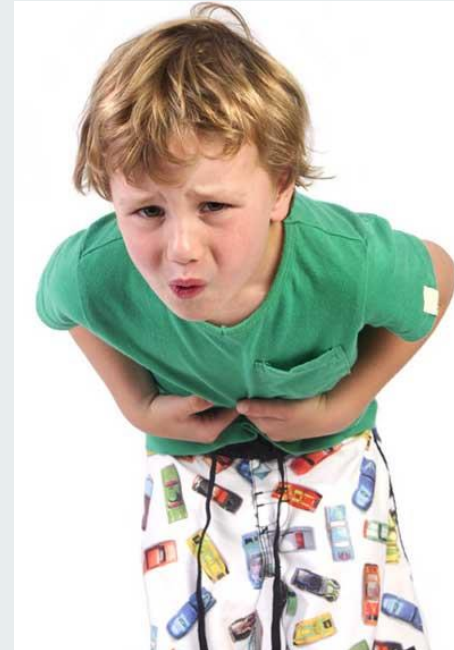
Pathophysiology of reactions



Identifying a reaction?

Symptoms of a mild to moderate allergic reaction:

- Hives / Urticaria, Itchy rash
- Facial Swelling – eyes & lips
- Abdominal pain, vomiting +/- diarrhoea
- “I don’t feel right” – Impending doom



When does it become anaphylaxis?

Anaphylaxis – a life-threatening reaction

- Time critical
- Early recognition and treatment essential
- Onset within seconds, minutes, or rarely, hours of exposure to allergen



AIRWAY

- Persistent cough
- Voice changes
- Difficulty swallowing
- Swollen tongue

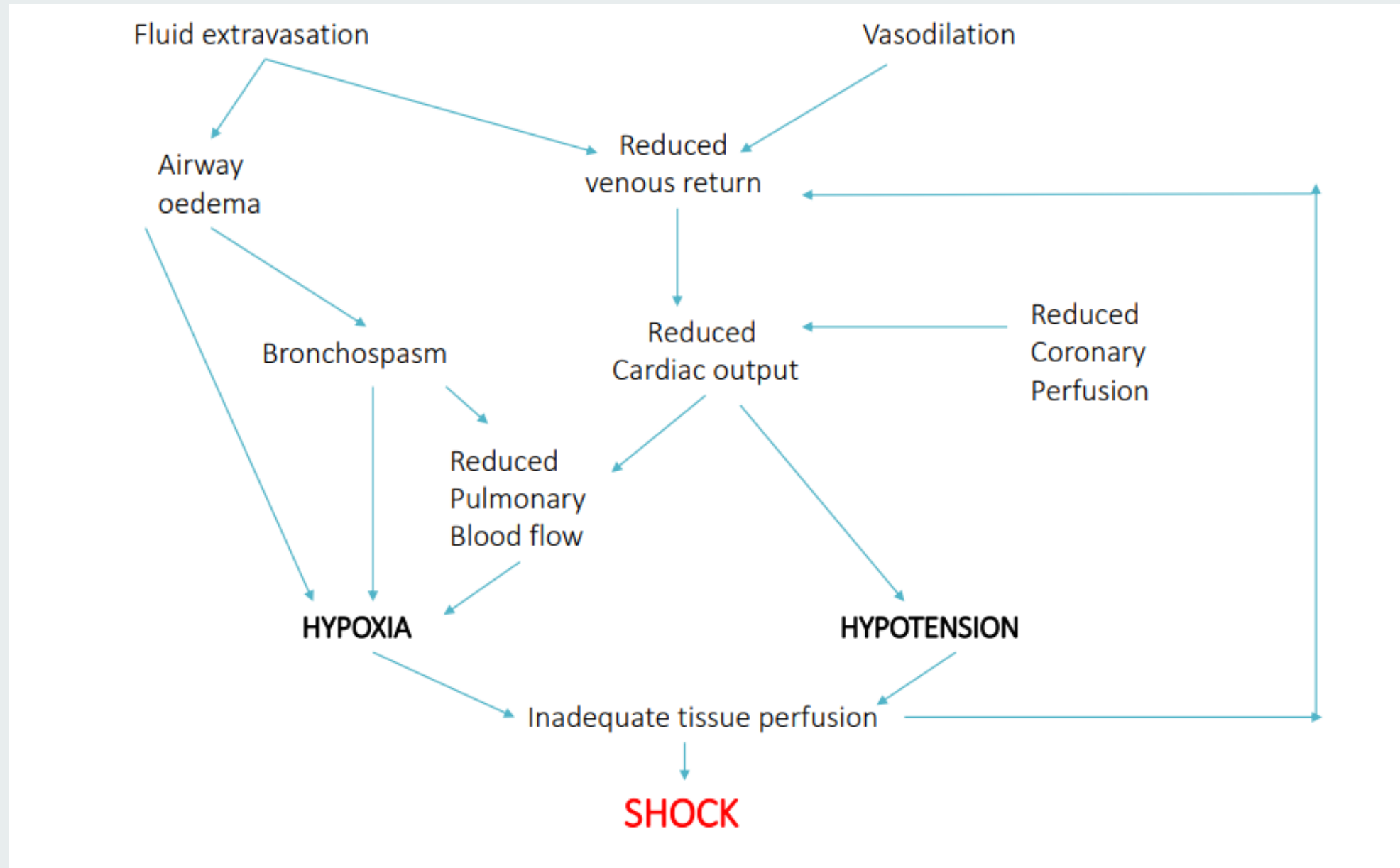
BREATHING

- Difficult or noisy breathing
- Wheezing or persistent cough

CONCIOUSNESS

- Persistent dizziness
- Pale or floppy
- Suddenly sleepy
- Collapse / Unconscious

Pathophysiology of Anaphylaxis



What to do?

Follow Allergy Action Plan

bsaci ALLERGY ACTION PLAN RCPCH Allergy UK

This child has the following allergies:

Name: _____
DOB: _____

Photo: _____

● Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction)

Anaphylaxis may occur without skin symptoms. ALWAYS consider anaphylaxis in someone with known food allergy who has **SUDDEN BREATHING DIFFICULTY**

A AIRWAY	B BREATHING	C CONSCIOUSNESS
• Persistent cough • Hoarse voice • Difficulty swallowing • Swollen tongue	• Difficult or noisy breathing • Wheeze or persistent cough	• Persistent dizziness • Pale or floppy • Suddenly sleepy • Collapse/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

- 1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)
- 2 Immediately dial 999 for ambulance and say ANAPHYLAXIS (ANA-PIL-AX-IS)
- 3 In a school with "spare" back-up adrenaline autoinjectors, ADMINISTER the SPARE AUTOINJECTOR if available
- 4 Commence CPR if there are no signs of life
- 5 Stay with child until ambulance arrives, do NOT stand child up
- 6 Phone parent/emergency contact

***** IF IN DOUBT, GIVE ADRENALINE *****

You can dial 999 from any phone, even if there is no credit left on a mobile. Medical observation in hospital is recommended after anaphylaxis. For more information about managing anaphylaxis in schools and "spare" back-up adrenaline autoinjectors, visit sparepennschools.uk

● Mild/moderate reaction:

- Swollen lips, face or eyes
- Itchy/tingling mouth
- Hives or itchy skin rash
- Abdominal pain or vomiting
- Sudden change in behaviour

Action to take:

- Stay with the child, call for help if necessary
- Locate adrenaline autoinjector(s)
- Give antihistamine:

CETIRIZINE 2.5mg (if needed, see repeat dose)

- Phone parent/emergency contact

Emergency contact details:

1) Name: _____
2) Name: _____

Additional instructions:

This BSACI Action Plan for Allergic Reactions is for children and young people with mild food allergies, who need to avoid certain allergens. For children at risk of anaphylaxis and who have been prescribed an adrenaline autoinjector device, there are BSACI Action Plans which include instructions for adrenaline autoinjectors. These can be downloaded at bsaci.org

For further information, consult NICE Clinical Guidance CG116 Food allergy in children and young people at guidance.nice.org.uk/CG116

This is a medical document that can only be completed by the child's healthcare professional. It must not be shared without their permission. This document provides medical authorisation for schools to administer a "spare" adrenaline autoinjector in the event of the above named child having anaphylaxis as permitted by the Human Medicines (Amendment) Regulations 2017. The healthcare professional named below confirms that there are no medical contra-indications to the above named child being administered an adrenaline autoinjector by school staff in an emergency. This plan has been prepared by:

Sign & print name: _____
Hospital/Clinic: **North Middlesex Hospital Paediatric Allergy Team**
0208 887 3301 Date: _____

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AHx only

bsaci ALLERGY ACTION PLAN RCPCH Allergy UK

This child has the following allergies:

Name: _____
DOB: _____

Photo: _____

● Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction)

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A AIRWAY	B BREATHING	C CONSCIOUSNESS
• Persistent cough • Hoarse voice • Difficulty swallowing • Swollen tongue	• Difficult or noisy breathing • Wheeze or persistent cough	• Persistent dizziness • Pale or floppy • Suddenly sleepy • Collapse/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

- 1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)
- 2 Use Adrenaline autoinjector **without delay** (eg EpiPen®) (Dose: _____ mg)
- 3 Dial 999 for ambulance and say ANAPHYLAXIS (ANA-PIL-AX-IS) ***** IF IN DOUBT, GIVE ADRENALINE *****

AFTER GIVING ADRENALINE:

- 1 Stay with child until ambulance arrives, do NOT stand child up
- 2 Commence CPR if there are no signs of life
- 3 Phone parent/emergency contact
- 4 If no improvement after 5 minutes, give a further adrenaline dose using a second autoinjectable device, if available

You can dial 999 from any phone, even if there is no credit left on a mobile. Medical observation in hospital is recommended after anaphylaxis.

● Mild/moderate reaction:

- Swollen lips, face or eyes
- Itchy/tingling mouth
- Hives or itchy skin rash
- Abdominal pain or vomiting
- Sudden change in behaviour

Action to take:

- Stay with the child, call for help if necessary
- Locate adrenaline autoinjector(s)
- Give antihistamine:

(if needed, see repeat dose)

- Phone parent/emergency contact

Emergency contact details:

1) Name: _____
2) Name: _____

How to give EpiPen®

- 1 PULL OFF BLUE SAFETY CAP and grasp EpiPen. Remember "blue to sky, orange to the thigh"
- 2 Hold leg end and PLACE ORANGE END against mid-thigh "soft or without clothing"
- 3 PUSH DOWN HARD until a click is heard or felt and hold in place for 3 seconds. Remove EpiPen.

Additional instructions:

If wheezy, GIVE ADRENALINE FIRST, then asthma reliever (blue puffer) via spacer

Parental consent: I hereby authorise school staff to administer the adrenaline autoinjector (AAI) if available, in accordance with Department of Health Guidance on the use of AAI in schools

Sign & print name: _____
Hospital/Clinic: **North Middlesex Hospital Paediatric Allergy Team**
0208 887 3301 Date: _____

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EpiPen

bsaci ALLERGY ACTION PLAN RCPCH Allergy UK

This child has the following allergies:

Name: _____
DOB: _____

Photo: _____

● Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction)

Anaphylaxis may occur without skin symptoms. ALWAYS consider anaphylaxis in someone with known food allergy who has **SUDDEN BREATHING DIFFICULTY**

A AIRWAY	B BREATHING	C CONSCIOUSNESS
• Persistent cough • Hoarse voice • Difficulty swallowing • Swollen tongue	• Difficult or noisy breathing • Wheeze or persistent cough	• Persistent dizziness • Pale or floppy • Suddenly sleepy • Collapse/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

- 1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)
- 2 Use Adrenaline autoinjector **without delay** (eg Jext®) (Dose: _____ mg)
- 3 Dial 999 for ambulance and say ANAPHYLAXIS (ANA-PIL-AX-IS) ***** IF IN DOUBT, GIVE ADRENALINE *****

AFTER GIVING ADRENALINE:

- 1 Stay with child until ambulance arrives, do NOT stand child up
- 2 Commence CPR if there are no signs of life
- 3 Phone parent/emergency contact
- 4 If no improvement after 5 minutes, give a further adrenaline dose using a second autoinjectable device, if available

You can dial 999 from any phone, even if there is no credit left on a mobile. Medical observation in hospital is recommended after anaphylaxis.

● Mild/moderate reaction:

- Swollen lips, face or eyes
- Itchy/tingling mouth
- Hives or itchy skin rash
- Abdominal pain or vomiting
- Sudden change in behaviour

Action to take:

- Stay with the child, call for help if necessary
- Locate adrenaline autoinjector(s)
- Give antihistamine:

(if needed, see repeat dose)

- Phone parent/emergency contact

Emergency contact details:

1) Name: _____
2) Name: _____

How to give Jext®

- 1 Firm fist around JEXT and PULL OFF YELLOW SAFETY CAP
- 2 PLACE BLUE END against outer thigh (with or without clothing)
- 3 PUSH DOWN HARD until a click is heard or felt and hold in place for 10 seconds
- 4 REMOVE JEXT. Massage injection site for 10 seconds

Additional instructions:

If wheezy, GIVE ADRENALINE FIRST, then asthma reliever (blue puffer) via spacer

Parental consent: I hereby authorise school staff to administer the adrenaline autoinjector (AAI) if available, in accordance with Department of Health Guidance on the use of AAI in schools

Sign & print name: _____
Hospital/Clinic: **North Middlesex Hospital Paediatric Allergy Team**
0208 887 3301 Date: _____

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Jext

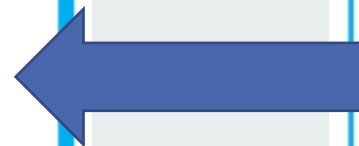
First aid for mild & moderate

Mild/moderate reaction:

- Swollen lips, face or eyes
- Itchy/tingling mouth
- Hives or itchy skin rash
- Abdominal pain or vomiting
- Sudden change in behaviour

Action to take:

- Stay with the child, call for help if necessary
 - Locate adrenaline autoinjector(s)
 - Give antihistamine:
- CETIRIZINE 10mg** (if vomited, can repeat dose)
- Phone parent/emergency contact



bsaci ALLERGY ACTION PLAN RCPCH AllergyUK

This child has the following allergies:

Name: _____

DOB: _____

Photo: _____

Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction)

Always consider anaphylaxis in someone with known food allergy who has **SUDDEN BREATHING DIFFICULTY**

A AIRWAY	B BREATHING	C CONSCIOUSNESS
• Persistent cough	• Difficult or noisy breathing	• Persistent dizziness
• Hoarse voice	• Wheeze or persistent cough	• Pale or floppy
• Difficulty swallowing		• Suddenly sleepy
• Swollen tongue		• Collapse/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

- 1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)
- 2 Use Adrenaline autoinjector **without delay** (eg EpiPen®) (Dose: mg)
- 3 Dial 999 for ambulance and say ANAPHYLAXIS (ANA-TL-AX-37)

***** IF IN DOUBT, GIVE ADRENALINE *****

AFTER GIVING ADRENALINE:

- 1 Stay with child until ambulance arrives. **do NOT stand child up**
- 2 Commence CPR if there are no signs of life
- 3 Phone parent/emergency contact
- 4 If no improvement **after 5 minutes**, give a further adrenaline dose using a second autoinjectable device, if available

Visions of 999 does not replace this. If there is no credit left on a mobile, medical observations is suggested in circumstances other than this.

Mild/moderate reaction:

- Swollen lips, face or eyes
- Itchy/tingling mouth
- Hives or itchy skin rash
- Abdominal pain or vomiting
- Sudden change in behaviour

Action to take:

- Stay with the child, call for help if necessary
- Locate adrenaline autoinjector(s)
- Give antihistamine: If vomited, use repeat dose
- Phone parent/emergency contact

Emergency contact details:

1) Name: _____

2) Name: _____

Parental consent: Having read this and understood that it is intended for use in schools and "spare" back-up adrenaline autoinjectors (EpiPen®), I agree to the use of Adrenaline autoinjectors in my child's school.

Signed: _____

Print name: _____

Date: _____

How to give EpiPen®

- 1 PULL OFF BLUE SAFETY CAP and grasp EpiPen. Remember "blue to sky, orange to the thigh"
- 2 Hold leg still and PLACE ORANGE END against mid-outer thigh, "with or without clothing"
- 3 PUSH DOWN HARD until a click is heard or felt and hold in place for **2 seconds**. Remove EpiPen.

Additional instructions:

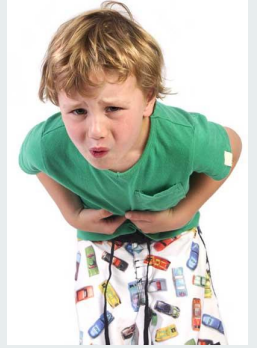
If wheezy, GIVE ADRENALINE FIRST, then asthma reliever (blue puffer) via spacer

This is a standard document that can only be completed by the child's healthcare professional. It must not be altered without their permission. This document provides certified autoinjector schools to administer a "spare" back-up adrenaline autoinjector if needed, supported by the Department of Health Guidance (DAG) on the use of Adrenaline autoinjectors in schools. It is not intended for use in the home. This action plan and autoinjector is used with emergency medications that have separate instructions.

Sign & print name: _____

Specialist/Chair: **North Middlesex Hospital Paediatric Allergy Team**

0208 887 3301



First aid for anaphylaxis

Anaphylaxis – a life-threatening reaction

- Time critical
- Early recognition and treatment essential
- Onset within seconds, minutes, or rarely, hours of exposure to allergen

● Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction)

Anaphylaxis may occur without skin symptoms: ALWAYS consider anaphylaxis in someone with known food allergy who has **SUDDEN BREATHING DIFFICULTY**

The image shows a form titled "bsaci ALLERGY ACTION PLAN" from RCPCH. It includes fields for Name, DOB, and Photo. A red box highlights the "Watch for signs of ANAPHYLAXIS" section, which lists symptoms under three categories: AIRWAY, BREATHING, and CONSCIOUSNESS. Below this, it provides instructions on what to do if any of these signs are present, including lying the child flat, using an adrenaline autoinjector, and dialing 999. The form also includes sections for "Mild/moderate reaction", "Emergency contact details", "How to give EpiPen", and "Additional instructions".

A AIRWAY

- Persistent cough
- Hoarse voice
- Difficulty swallowing
- Swollen tongue

B BREATHING

- Difficult or noisy breathing
- Wheeze or persistent cough

C CONSCIOUSNESS

- Persistent dizziness
- Pale or floppy
- Suddenly sleepy
- Collapse/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

- 1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)
 - 2 Use Adrenaline autoinjector **without delay** (eg. Jext®) (Dose: . . . mg)
 - 3 Dial 999 for ambulance and say ANAPHYLAXIS ("ANA-FIL-AX-IS")
- *** IF IN DOUBT, GIVE ADRENALINE ***

AFTER GIVING ADRENALINE:

1. Stay with child until ambulance arrives, do **NOT** stand child up
2. Commence CPR if there are no signs of life
3. Phone parent/emergency contact
4. If no improvement **after 5 minutes**, give a further adrenaline dose using a second autoinjectable device, if available.

First aid for anaphylaxis

Anaphylaxis – a life-threatening reaction

bsaci ALLERGY ACTION PLAN RCPCH Allergy UK

This child has the following allergies:

Name: _____ DOB: _____ Photo: _____

Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction)

Anaphylaxis may occur without skin symptoms. ALWAYS consider anaphylaxis in someone with known food allergy who has **SUDDEN BREATHING DIFFICULTY**

A AIRWAY

- Persistent cough
- Hoarse voice
- Difficulty swallowing
- Swollen tongue

B BREATHING

- Difficult or noisy breathing
- Wheeze or persistent cough

C CONSCIOUSNESS

- Persistent dizziness
- Pale or floppy
- Suddenly sleepy
- Collapse/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

- Lie child flat with legs raised (if breathing is difficult, allow child to sit)
- Use Adrenaline autoinjector without delay (eg. Jext®) (Dose: . . . mg)
- Dial 999 for ambulance and say ANAPHYLAXIS ("ANA-FIL-AX-IS")

***** IF IN DOUBT, GIVE ADRENALINE *****

AFTER GIVING ADRENALINE:

- Stay with child until ambulance arrives, **do NOT stand child up**
- Commence CPR if there are no signs of life
- Phone parent/emergency contact
- If no improvement **after 5 minutes**, give a further adrenaline dose using a second autoinjectable device, if available.

Mild/moderate reaction:

- Swollen lips, face or eyes
- Hives/itching rashes
- Itchy or watery eyes
- Abdominal pain or vomiting
- Sudden change in behaviour

Action to take:

- Stay with child, call for help if necessary
- Locate adrenaline autoinjector(s)
- Give autoinjector (if needed, see separate sheet)
- Phone parent/emergency contact

Emergency contact details:

1) Home: _____

2) Work: _____

Parental consent: I hereby authorise school staff to administer adrenaline autoinjector to my child in the event of anaphylaxis. I understand that adrenaline autoinjector is a life-saving medicine and I agree to the use of this medicine in accordance with the school's policy on the use of medicines.

How to give EpiPen®

- PULL OFF BLUE SAFETY CAP and grasp EpiPen. Remember: "blue to ring, orange to thigh"
- Hold by end and PLACE ORANGE END against mid-outer thigh "with or without clothing"
- PUSH DOWN HARD: use a click to bend or felt and hold in place for 2 seconds. Remove EpiPen.

Additional instructions:

If wheezy, GIVE ADRENALINE FIRST, then asthma reliever (give puff) via spacer

Sign & print name: _____

Hospital of choice: North Middlesex Hospital Paediatric Allergy Team

Phone: 0208 887 3301

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)



2 Use Adrenaline autoinjector without delay (eg. Jext®) (Dose: . . . mg)

3 Dial 999 for ambulance and say ANAPHYLAXIS ("ANA-FIL-AX-IS")

***** IF IN DOUBT, GIVE ADRENALINE *****

Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction)

Anaphylaxis may occur without skin symptoms: ALWAYS consider anaphylaxis in someone with known food allergy who has **SUDDEN BREATHING DIFFICULTY**

- A AIRWAY**
- Persistent cough
 - Hoarse voice
 - Difficulty swallowing
 - Swollen tongue
- B BREATHING**
- Difficult or noisy breathing
 - Wheeze or persistent cough
- C CONSCIOUSNESS**
- Persistent dizziness
 - Pale or floppy
 - Suddenly sleepy
 - Collapse/unconscious

AFTER GIVING ADRENALINE:

- Stay with child until ambulance arrives, **do NOT stand child up**
- Commence CPR if there are no signs of life
- Phone parent/emergency contact
- If no improvement **after 5 minutes**, give a further adrenaline dose using a second autoinjectable device, if available.

Early Adrenaline

Reverses peripheral vasodilation

Reduces tissue oedema

Dilates bronchial airways

Improves myocardial contraction

Suppresses histamine and leukotriene release

Inhibits mast cell activation

Peak absorption 5-10mins after injection



Giving adrenaline

Anaphylaxis – a life-threatening reaction

If in doubt, give adrenaline!

bsaci ALLERGY ACTION PLAN #RCPCB #AllergyUK

This child has the following allergies:

Name: _____

DOB: _____

Photo: _____

Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction)

Anaphylaxis may occur without skin symptoms. ALWAYS consider anaphylaxis in someone with known food allergy who has **SUSPICIOUS BREATHING DIFFICULTY**

1 AIRWAY

- Persistent cough
- Hoarse voice
- Difficulty swallowing
- Swollen tongue

2 BREATHING

- Difficult or noisy breathing
- Wheeze or persistent cough

3 CONSCIOUSNESS

- Persistent dizziness
- Pale or floppy
- Suddenly sleepy
- Collapsing/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)

2 Use Adrenaline autoinjector without delay (eg. Jext®) (Dose: . . . mg)

3 Dial 999 for ambulance and say ANAPHYLAXIS (ANA-FIL-AX-IS) *** IF IN DOUBT, GIVE ADRENALINE ***

AFTER GIVING ADRENALINE:

- Stay with child until ambulance arrives, do **NOT** stand child up
- Continue CPR if there are no signs of life
- Phone parent/emergency contact
- If no improvement **after 5 minutes**, give a further adrenaline dose using a second autoinjectable device, if available.

Action to take:

- Stay with the child, call for help if necessary
- Locate adrenaline autoinjector(s)
- Give autoinjector: If needed, use repeat dose
- Phone parent/emergency contact

Emergency contact details:

1) _____

2) _____

Parental consent: I hereby authorize school staff to administer the medicines listed on this prescription to my child in accordance with the instructions of the doctor. I understand that it is my responsibility to ensure that the medicines are used in accordance with the instructions of the doctor. I understand that the medicines are used in accordance with the instructions of the doctor. I understand that the medicines are used in accordance with the instructions of the doctor.

Signature: _____

Date: _____

For more information about managing anaphylaxis in schools and "spare" back-up adrenaline autoinjectors, visit www.nhs.uk

North Middlesex Hospital Paediatric Allergy Team
0208 887 3301

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)

2 Use Adrenaline autoinjector without delay (eg. Jext®) (Dose: . . . mg)

3 Dial 999 for ambulance and say ANAPHYLAXIS (ANA-FIL-AX-IS) *** IF IN DOUBT, GIVE ADRENALINE ***

How to give Jext®



Form fist around Jext® and PULL OFF YELLOW SAFETY CAP



PLACE BLACK END against outer thigh (with or without clothing)

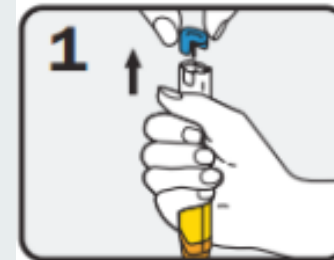


PUSH DOWN HARD until a click is heard or felt and hold in place for 10 seconds

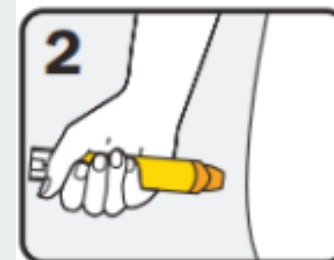


REMOVE Jext®. Massage injection site for 10 seconds

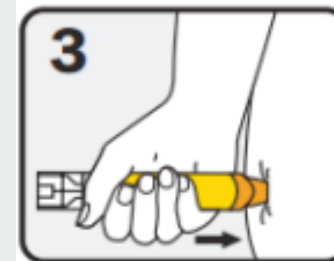
How to give EpiPen®



PULL OFF BLUE SAFETY CAP and grasp EpiPen. Remember: "blue to sky, orange to the thigh"



Hold leg still and PLACE ORANGE END against mid-outer thigh "with or without clothing"



PUSH DOWN HARD until a click is heard or felt and hold in place for 3 seconds. Remove EpiPen.

First aid for anaphylaxis

Anaphylaxis – a life-threatening reaction

bsaci ALLERGY ACTION PLAN RCPCH Allergy UK

This child has the following allergies:

Name: _____
DOB: _____
Photo: _____

Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction)

Anaphylaxis may occur without skin symptoms. ALWAYS consider anaphylaxis in someone with known food allergy who has **SUDDEN BREATHING DIFFICULTY**

A AIRWAY

- Persistent cough
- Hoarse voice
- Difficulty swallowing
- Swollen tongue

B BREATHING

- Difficult or noisy breathing
- Wheeze or persistent cough

C CONSCIOUSNESS

- Persistent dizziness
- Pale or floppy
- Suddenly sleepy
- Collapse/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

- 1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)
- 2 Use Adrenaline autoinjector **without delay** (eg. Jext®) (Dose: . . . mg)
- 3 Dial 999 for ambulance and say ANAPHYLAXIS ("ANA-FIL-AX-IS")

***** IF IN DOUBT, GIVE ADRENALINE *****

AFTER GIVING ADRENALINE:

- 1 Stay with child until ambulance arrives, do **NOT** stand child up
- 2 Commence CPR if there are no signs of life
- 3 Phone parent/emergency contact
- 4 If no improvement **after 5 minutes**, give a further adrenaline dose using a second autoinjectable device, if available.

Mild/moderate reaction:

- Swollen lips, face or eyes
- Itchy/hives/itchy
- Mouth or itchy skin rash
- Abdominal pain or vomiting
- Sudden change in behaviour

Action to take:

- Stay with the child, call for help if necessary
- Locate adrenaline autoinjector(s)
- Give autoinjector (if needed, see separate sheet)
- Phone parent/emergency contact

Emergency contact details:

1) Name: _____
2) Name: _____

Parental consent: I hereby authorise school staff to administer the adrenaline autoinjector which is contained in this pack up to the maximum number of doses if available in accordance with Department of Health guidance on the use of adrenaline autoinjectors.

Parent: _____
Date: _____

How to give EpiPen®

- 1 PULL OFF BLUE SAFETY CAP and press EpiPen. Remember: "blue to the thigh, orange to the thigh"
- 2 Hold by end and PLACE ORANGE END against mid outer thigh "with or without clothing"
- 3 PUSH DOWN HARD: until a click is heard or felt and hold in place for 2 seconds. Remove EpiPen.

Additional instructions:

If wheezy, GIVE ADRENALINE FIRST, then asthma inhaler (give puff) via spacer

Sign & print name: _____
Hospital of issue: **North Middlesex Hospital Paediatric Allergy Team**
0208 887 3301

● Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction)

Anaphylaxis may occur without skin symptoms: ALWAYS consider anaphylaxis in someone with known food allergy who has **SUDDEN BREATHING DIFFICULTY**

- A AIRWAY**
 - Persistent cough
 - Hoarse voice
 - Difficulty swallowing
 - Swollen tongue
- B BREATHING**
 - Difficult or noisy breathing
 - Wheeze or persistent cough
- C CONSCIOUSNESS**
 - Persistent dizziness
 - Pale or floppy
 - Suddenly sleepy
 - Collapse/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

- 1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)
 - 2 Use Adrenaline autoinjector **without delay** (eg. Jext®) (Dose: . . . mg)
 - 3 Dial 999 for ambulance and say ANAPHYLAXIS ("ANA-FIL-AX-IS")
- *** IF IN DOUBT, GIVE ADRENALINE *****

AFTER GIVING ADRENALINE:

1. Stay with child until ambulance arrives, do **NOT** stand child up
2. Commence CPR if there are no signs of life
3. Phone parent/emergency contact
4. If no improvement **after 5 minutes**, give a further adrenaline dose using a second autoinjectable device, if available.

Case example 1 – Amy, 3yrs

- Amy was given a cheesy nacho by her friend at lunch
- She is known milk allergic
- She developed hives
- 5 minutes later, she starts wheezing

bsaci ALLERGY ACTION PLAN RCPCH

This child has the following allergies:

Name: _____ DOB: _____

Watch for signs of ANAPHYLAXIS
(See Generalising allergic reactions)

Anaphylaxis may occur without skin symptoms. ALWAYS consider anaphylaxis in someone with known food allergy who has **RUDDEN BREATHING DIFFICULTY**.

AIRWAY <ul style="list-style-type: none">Swollen lipsHoarse voiceDifficulty swallowingSwollen tongue	BREATHING <ul style="list-style-type: none">CoughingWheezingStridorGeneralised wheezingStridorGeneralised wheezing	CONSCIOUSNESS <ul style="list-style-type: none">Generalised drowsinessLoss of consciousnessGeneralised drowsinessGeneralised drowsiness
--	--	---

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

1. **Stay with the child, call for help if necessary.**
2. **Give adrenaline autoinjector as soon as possible.** (See page 2 for more information)
3. **Call 999 for ambulance and take child to hospital.**

AFTER GIVING ADRENALINE:

1. Stay with the child, call for help if necessary.
2. Give adrenaline autoinjector as soon as possible.
3. Call 999 for ambulance and take child to hospital.
4. If an ambulance is not available, take child to hospital as soon as possible.

Action to take:

- Stay with the child, call for help if necessary.
- Give adrenaline autoinjector as soon as possible.
- Call 999 for ambulance and take child to hospital.

Emergency contact details:

1) _____

2) _____

Additional instructions:

If wheezing, GIVE ADRENALINE FIRST, then additional medicine (like a puffler) via spacer.

CETIRIZINE 2.5mg (If vomited, can repeat dose)

North Middlesex Hospital Paediatric Allergy Team
0208 887 2301

Mild/moderate reaction:

- Swollen lips, face or eyes
- Itchy/tingling mouth
- Hives or itchy skin rash
- Abdominal pain or vomiting
- Sudden change in behaviour

Action to take:

- Stay with the child, call for help if necessary
- Locate adrenaline autoinjector(s)
- Give antihistamine:

CETIRIZINE 2.5mg (If vomited, can repeat dose)

- Phone parent/emergency contact

How to give Jext®

- 1 Form fist around Jext® and PULL OFF YELLOW SAFETY CAP
- 2 PLACE BLACK END against outer thigh (with or without clothing)
- 3 PUSH DOWN HARD until a click is heard or felt and hold in place for 10 seconds
- 4 REMOVE Jext®. Massage injection site for 10 seconds

Case example 1 – Amy, 3yrs

Anaphylaxis – a life-threatening reaction

bsaci ALLERGY ACTION PLAN RCPCH **medpac** **allergyUK**

This child has the following allergies:

Name: _____

DOB: _____

Photo: _____

Watch for signs of ANAPHYLAXIS
(Life-threatening allergic reactions)

Anaphylaxis may occur without skin symptoms. ALLERGY ACTION PLAN considers anaphylaxis to occur in someone with known food allergy who has **SUSACED BREATHING DIFFICULTY**.

A AIRWAY
• Persistent cough
• Hoarse voice
• Difficulty swallowing
• Swollen tongue

B BREATHING
• Difficult or noisy breathing
• Wheeze or persistent cough

C CONSCIOUSNESS
• Persistent dizziness
• Pale or floppy
• Suddenly sleepy
• Collapse/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)

2 Use Adrenaline autoinjector without delay (eg. EpiPen®) (Dose: _____)

3 Dial 999 for ambulance and say ANAPHYLAXIS (A&A-FL-A&A-99)

***** IF IN DOUBT, GIVE ADRENALINE *****

AFTER GIVING ADRENALINE:

1 Stay with child until ambulance arrives, do **NOT** stand child up
2 Continue CPR if there are no signs of life
3 Phone parent/emergency contact
4 If no improvement **after 5 minutes**, give a further adrenaline dose using a second autoinjectable device, if available.

Mild/moderate reaction:

- Swollen lips, face or eyes
- Itchy/ringing mouth
- Itches on body/ skin rash
- Abdominal pain or vomiting
- Sudden change in behaviour

Action to take:

- Stay with the child, call for help if necessary
- Loose adrenaline autoinjector(s)
- Give antihistamine: (if available, use repeat dose)
- Phone parent/emergency contact

Emergency contact details:

1) Name: _____
Phone: _____

2) Name: _____
Phone: _____

Parental consent: I hereby authorise school staff to administer the medicines listed on this plan, including a spacer back up adrenaline autoinjector (EpiPen) if available, in accordance with Department of Health guidance on the use of auto-injectors.

Signed: _____

Print Name: _____

Date: _____

For more information about managing anaphylaxis in schools and "spare" back-up adrenaline autoinjectors, visit: sparemedpac.co.uk

How to give EpiPen®

1 PULL OFF BLUE SAFETY CAP and grasp EpiPen. Remember: "blue to the trigger" (pointing to the trigger)

2 Hold leg end and PLACE ORANGE END against mid-outer thigh "with or without clothing"

3 PUSH DOWN HARD until a click is heard or felt and hold in place for **3 seconds**. Remove EpiPen.

Additional instructions:

If wheezy, GIVE ADRENALINE FIRST, then asthma reliever (blue puffer) via spacer

Sign & print name: _____

Hospital/clinic: North Middlesex Hospital Paediatric Allergy Team

Phone: 0208 887 3301

Additional instructions:

If wheezy, GIVE ADRENALINE FIRST, then asthma reliever (blue puffer) via spacer



Case example 2 – Hattie, 16yrs

- Hattie was leaving the school yard
 - She started itching, developed hives all over
 - She is known to be allergic to wheat
 - You administer cetirizine
 - She vomits
 - Re-dose cetirizine
-
- 10 minutes later, she becomes very agitated, cyanosed, then collapses

Mild/moderate reaction:

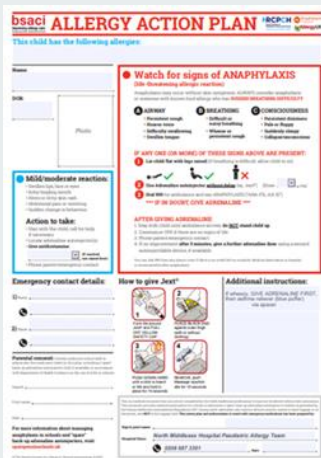
- Swollen lips, face or eyes
- Itchy/tingling mouth
- Hives or itchy skin rash
- Abdominal pain or vomiting
- Sudden change in behaviour

Action to take:

- Stay with the child, call for help if necessary
- Locate adrenaline autoinjector(s)
- Give antihistamine:

CETIRIZINE 10mg (If vomited, can repeat dose)

- Phone parent/emergency contact



IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:

- 1 Lie child flat with legs raised (if breathing is difficult, allow child to sit)



 - 2 Use Adrenaline autoinjector without delay (eg. Jext®) (Dose: . . mg)
 - 3 Dial 999 for ambulance and say ANAPHYLAXIS ("ANA-FIL-AX-IS")
- *** IF IN DOUBT, GIVE ADRENALINE ***

How to give Jext®



1 Form fist around Jext® and PULL OFF YELLOW SAFETY CAP



2 PLACE BLACK END against outer thigh (with or without clothing)



3 PUSH DOWN HARD until a click is heard or felt and hold in place for 10 seconds



4 REMOVE Jext®. Massage injection site for 10 seconds

Keeping children with allergies safe

1) Avoidance

- Nut free?
- Allergen aware
- Catering staff identify who's allergic and to what?
- Prevent cross contamination during preparation and serving
- Discourage food sharing
- Top 14 allergens must be listed on dishes



Keeping children with allergies safe

2) First Aid

- Up to date Allergy Action Plans
- Correct storage of medications
 - Central location <5mins
 - Not locked away
 - Protocol for checking expiry dates
 - Correct temperature range
 - External trips
- Annual staff training



3) Spare Pens in Schools

- Purchase extra pens
- Can be used on children where consent for use is signed
- Or under direction from a HCP e.g. 999



Keeping children with allergies safe

Resources for School Nurses, Heads, Teachers, First Aiders, Parents and Pupils!

[Anaphylaxis UK Homepage](#) | [Anaphylaxis UK](#)


[Spare Pens in Schools](#) | [Homepage](#)

[Schools](#) | [The Allergy Team](#)




Allergy support, information and training.

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- FOR HEALTHCARE
- FOR BUSINESS
- NEW SCHOOL TRAINING WITH ALLERGY UK




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Take allergy off your 'to-do' list, train staff and test competency with tailored support from experts.

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Staff Allergy Training
'Gold-standard' online allergy and anaphylaxis training in partnership with Allergy UK. CPD accredited.

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Allergy Awareness Week resources
Start a conversation about allergy and build awareness with our free resources.

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AllergyWise for Schools (including certificate)

[Enrol Now](#)

Schools Parents School Pupils Healthcare Professionals Pharmacists E-Training

SPARE PENS IN SCHOOLS

A one-stop resource for anyone who wants to know about anaphylaxis and adrenaline auto-injector "pens" in schools.

[Access the BSACI Allergy Action Plans Here](#)

[Click here to find your nearest BSACI Allergy Service](#)

- FOR SCHOOLS
- FOR SCHOOL PUPILS
- FOR PARENTS
- FIVE MYTHS
- FOR HEALTHCARE PROFESSIONALS
- FOR PHARMACISTS
- ABOUT US

Management in hospital

Avoidance - Alerts on admission

Recognition – Remove trigger - Call for help

Position patient (lie down if decreased LOC or hypotensive)

IM adrenaline (Delay in giving most common finding in fatal reactions)

ABCDE (start CPR with adrenaline (IV, IO, IM))

Oxygen – NRBM, High flow/concentration, Sats >94%

Fluids – Bolus child 10ml/kg, or adult, 500-1000ml

Monitoring – BP on minutely cycles, Pulse oximetry, ECG



Refractory Anaphylaxis

IV adrenaline infusion via IVC or IO needle until central access

Continue IM adrenaline 5 minutely until infusion started

Consider level of airway management, oxygenation, circulatory support

Consider critical care



Management of anaphylaxis in hospital

Resuscitation Council UK **GUIDELINES** ✓ 2021

Anaphylaxis

A = Airway **B** = Breathing **C** = Circulation **D** = Disability **E** = Exposure

Anaphylaxis?

Diagnosis – look for:

- Sudden onset of Airway and/or Breathing and/or Circulation problems?
- And usually skin changes (e.g. itchy rash)

Call for HELP
Call resuscitation team or ambulance

- Remove trigger if possible (e.g. stop any infusion)
- Lie patient flat (with or without legs elevated)
 - A sitting position may make breathing easier
 - If pregnant, lie on left side

Give intramuscular (IM) adrenaline*

Inject at anterolateral aspect – middle third of the thigh

- Establish airway
- Give high flow oxygen
- Apply monitoring: pulse oximetry, ECG, blood pressure

If no response:

- Repeat IM adrenaline after 5 minutes
- IV fluid bolus*

If no improvement in Breathing or Circulation problems* despite TWO doses of IM adrenaline:

- Confirm resuscitation team or ambulance has been called
- Follow REFRACTORY ANAPHYLAXIS ALGORITHM

1. Life-threatening problems

Airway
Hoarse voice, stridor

Breathing
↑ work of breathing, wheeze, fatigue, cyanosis, SpO₂ <94%

Circulation
Low blood pressure, signs of shock, confusion, reduced consciousness

2. Intramuscular (IM) adrenaline
Use adrenaline at 1 mg/mL (1:1000) concentration

Adult and child >12 years: 500 micrograms IM (0.5 mL)
Child 6–12 years: 300 micrograms IM (0.3 mL)
Child 6 months to 6 years: 150 micrograms IM (0.15 mL)
Child <6 months: 100–150 micrograms IM (0.1–0.15 mL)

The above doses are for IM injection only. Intravenous adrenaline for anaphylaxis to be given only by experienced specialists in an appropriate setting.

3. IV fluid challenge
Use crystalloid

Adults: 500–1000 mL
Children: 10 mL/kg

Paediatric Emergency Department BH **Anaphylaxis & Allergy in Children** **Barts Health NHS**

Allergy is an immune-mediated hypersensitivity reaction to a particular antigen [allergen] resulting in a pathological reaction. These are usually common environmental substances eg food, drugs. Allergic reactions can be mild, moderate or severe. **Anaphylaxis** is a potentially life-threatening systemic allergic reaction with multi-organ involvement. Anaphylaxis should be suspected if there is any airway or breathing compromise or signs of shock. Anaphylactic reactions follow IgE mediated mast cell release while anaphylactoid reactions follow non-IgE mediated mast cell release eg drug mediated reactions. There is no practical difference in the acute management of these conditions. **Refractory anaphylaxis** is where there is no improvement in a life-threatening symptoms despite 2 appropriate doses of adrenaline

Remove allergen (eg bee sting / latex)

Mild/Moderate Allergic Reaction
Swelling of lips, face, eyes
Urticarial rash
Abdominal pain

Treatment
Cetirizine or Loratadine po
(Chlorpheniramine in <1 year or <10kg)

Investigations
Not usually required
(if bloods taken request serum save)

Discharge

- TTA cetirizine or loratadine pm (chlorpheniramine if <1 year or <10kg)
- Safety netting advice plus a [SACU allergy advice plan](#)
- Discharge letter and advise all patients to see GP for review and consider whether referral required
- Oral steroids are not required (limited usefulness in mild/moderate allergic reactions and no benefit in acute urticaria)

Severe Reaction/Anaphylaxis
Signs as per mild/moderate reaction plus any of the following:
Breathing difficulty
Stridor / Hoarse voice/cry
Tongue swelling / Throat tightness
Wheeze or cough
Vomiting
Loss of consciousness
Clinical shock – tachycardic, hypotensive, pale, clammy, peripherally shut down

MOVE TO RESUS

Treatment
GIVE IM ADRENALINE
High flow facial O₂ (aim sats 94–98%)
Obtain iv access
Call for ED Senior / Paediatric Reg
NB Adrenaline is the first line treatment for all presentations of anaphylaxis – treatment for ABC compromise comes after adrenaline

Reassess 5 minutes after adrenaline
Repeat dose adrenaline im if ongoing symptoms (can repeat every 5 minutes)
Fluid bolus 10mL/kg iv Plasma-Lyte
2222 for paediatric resus call if not improving
If no improvement in breathing / circulation despite 2 doses of adrenaline this is **REFRACTORY ANAPHYLAXIS**

After Initial Resuscitation

- Consider antihistamine following initial stabilisation if skin symptoms persist (urticaria or angioedema)
- Consider giving steroids (oral if possible) after initial resuscitation for refractory reaction or ongoing asthma / shock symptoms
- Take blood for **tryptase** (as soon as possible after emergency treatment plus a 2nd sample at 2 hours) and **serum save**. If admitted a further sample should be at >24 hours

Refractory Anaphylaxis Treatment
Venous (or io) access if not already established
2222 for Paediatric Resus call
Fluid bolus 10 mL/kg iv Plasma-Lyte
Give im adrenaline every 5 minutes until adrenaline infusion started
Peripheral adrenaline infusion (ED senior and with CATS / PICU) advice
1mg (1 mL of 1:1000) adrenaline at 50mL 0.9% sodium chloride (see a detailed leaflet at 018-3377) available at all trusts according to response
Treat other ABC symptoms (see boxes)
If not responding to adrenaline infusion consider adding a second vasopressor eg Noradrenaline or vasopressin (all hypertension may indicate adrenaline overdose)
Consider ECMO via **CATS 0800 885 0003**

Discharge Criteria following Anaphylaxis

Minimum 2 hours observation following resolution if:

- Good response (within 5–10 minutes) to a single adrenaline dose given within 30 minutes of reaction
- Complete resolution of symptoms
- Already have an adrenaline auto-injector and has been trained in its use
- Adequate supervision following discharge

Minimum 6 hours observation following resolution if:

- > 2 doses of im adrenaline needed
- Previous history of biphasic reaction

Minimum 12 hours observation following resolution if:

- Severe reaction requiring > 2 doses im adrenaline
- Previous history of severe asthma or reaction involved severe respiratory compromise
- Possibility of continuing absorption of allergen eg slow-release medication
- Patients presenting late or night or if may not be able to respond to any deterioration eg lack of adequate supervision or access to emergency care facility or difficulty in communicating eg developmental impairment

Discharge Plan following Anaphylaxis

For children treated for first suspected anaphylaxis or if concerns re parent / patient understanding then an email should be sent to the paediatric allergy service for decision about whether they need an allergy appointment (email to antony.watson@bwh.net or 1.norfolk@rfsa.net)

If patient has a reaction to a known allergen and this is not their first presentation of anaphylaxis and they already have follow up appointment with the local paediatric allergy service then they do not need another appointment with the local paediatric allergy service

Give safety netting advice about signs & symptoms of anaphylactic reactions, when to use an auto-injector and how to avoid suspected triggers. Discharge with a [SACU allergy advice plan](#)

Prescribe 2 adrenaline auto-injectors, with advice to carry with them at all times. Demonstrate how to use the adrenaline auto-injector and clearly explain when to use it prior to discharge

Other information:
Anaphylaxis Campaign: www.anaphylaxis.org.uk/get-involved/support-groups
Allergy UK: www.allergyuk.org

Drug Doses:

Adrenaline in base 1:1000
<6 months 100–150mcg (0.1–0.15mL)
6 months – 6 yrs 150 mcg (0.15mL)
6–12 yrs 300 mcg (0.3mL)
>12 yrs 500 mcg (0.5mL)

Adrenaline peripheral iv:
1mg (1 mL of 1:1000) adrenaline in 50mL 0.9% sodium chloride via dedicated line

Adrenaline nebuliser:
0.5 mL/kg 1:1000 max 3–6 mL

Salbutamol nebuliser:
<6 yrs 2.5 mg
>6 yrs 5 mg

Ipratropium bromide nebuliser:
<6 yrs 1.0–2.0mg
>6 yrs 2.0mg

Cetirizine po:
<2 yrs 2.5 mg qd
2–6 yrs 2.5 mg bina daily
6–12 yrs 5 mg bina daily
r 12 yrs 10mg – 20mg

Hydrocortisone po:
2 mg/kg (max 40 mg)

Dexamethasone po:
0.5 mg/kg (max 16 mg)

Hydrocortisone iv:
1–6 months 20 mg
6 months–5yrs 50 mg
6–11 yrs 100 mg
1–12 yrs 200 mg

Airway Compromise:
Stridor: Give nebulised adrenaline
Beware a possible rebound effect
Early consideration of need for intubation if severe airway compromise severe and unresponsive to adrenaline

Breathing Compromise:
Wheeze: Give nebuliser salbutamol and ipratropium bromide
Give iv hydrocortisone if not already
If no response to first nebuliser continue treatment as per asthma guideline (see [asthma management & hyperemesis](#))

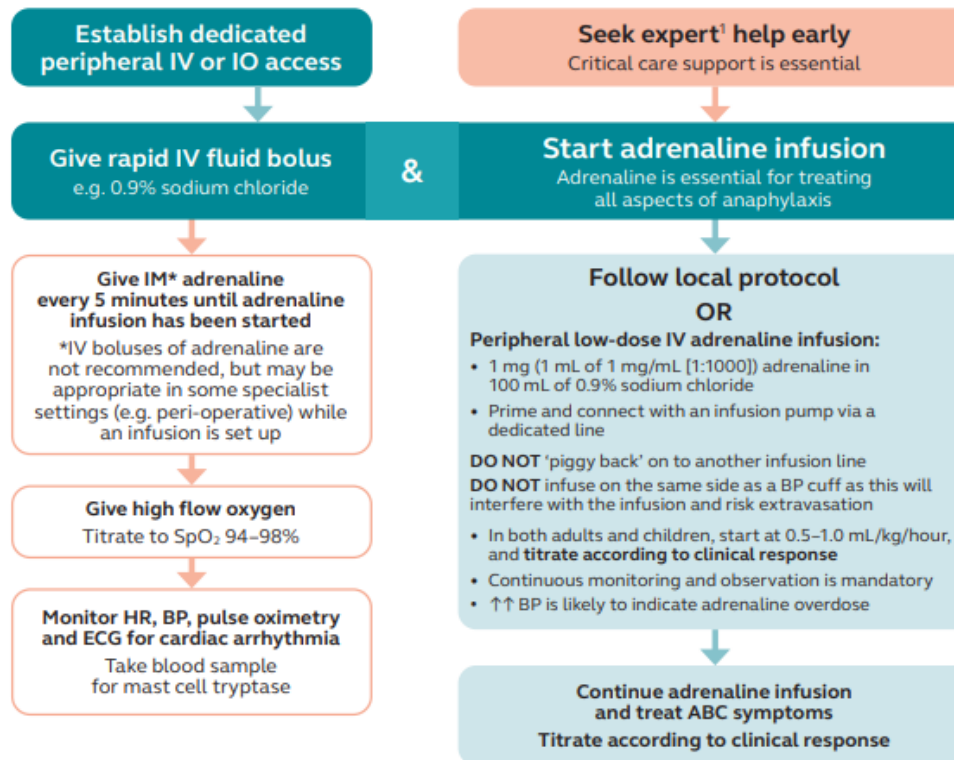
Circulatory Compromise:
Fluid bolus 10 mL/kg Plasma-Lyte if shock persists repeat fluid bolus (reassess after each bolus)
Consider intubation if requiring >40 mL/kg fluid boluses
Consider adrenaline infusion as per Refractory Anaphylaxis Treatment

PEM Guidelines Group 42 November 2024 (previous November 2021)

Treatment of refractory anaphylaxis

Refractory anaphylaxis

No improvement in respiratory or cardiovascular symptoms despite 2 appropriate doses of intramuscular adrenaline



¹Intravenous adrenaline for anaphylaxis to be given only by experienced specialists in an appropriate setting.

A = Airway

Partial upper airway obstruction/stridor:
Nebulised adrenaline (5mL of 1mg/mL)

Total upper airway obstruction:

Expert help needed, follow difficult airway algorithm

B = Breathing

Oxygenation is more important than intubation

If apnoeic:

- Bag mask ventilation
- Consider tracheal intubation

Severe/persistent bronchospasm:

- Nebulised salbutamol and ipratropium with oxygen
- Consider IV bolus and/or infusion of salbutamol or aminophylline
- Inhalational anaesthesia

C = Circulation

Give further fluid boluses and titrate to response:

Child 10 mL/kg per bolus

Adult 500–1000 mL per bolus

- Use glucose-free crystalloid (e.g. Hartmann's Solution, Plasma-Lyte[®])

Large volumes may be required (e.g. 3–5 L in adults)

Place arterial cannula for continuous BP monitoring

Establish central venous access

IF REFRACTORY TO ADRENALINE INFUSION

Consider adding a second vasopressor in addition to adrenaline infusion:

- Noradrenaline, vasopressin or metaraminol
- In patients on beta-blockers, consider glucagon

Consider extracorporeal life support

Cardiac arrest – follow ALS ALGORITHM

- Start chest compressions early
- Use IV or IO adrenaline bolus (cardiac arrest protocol)
- Aggressive fluid resuscitation
- Consider prolonged resuscitation/extracorporeal CPR

Documentation and Discharge

Discharge checklist?

MHRA – Yellow Card

Local alert / UK Anaphylaxis Registry

Allergy Action Plan

Adrenaline Auto Injector prescription

Specialist referral

Psychological support

North Middlesex University Hospital
NHS

Paediatric Allergy Anaphylaxis Discharge Checklist

Avoidance of suspected food / substance advice given
(Including maternal exclusion if breastfed)

Customised Allergy Action Plan provided, and training given:
Non-AAI Jext EpiPen

Rescue medications provided:
Cetirizine:
Up to 2years: 0.25mg/kg
2 – 5 years: 2.5mg
6 – 12years: 5mg
>12yrs: 10mg

Adrenaline Auto Injector (AAI)
Absolute indications: Previous anaphylaxis and/or co-existent asthma & food allergy, teenagers with cow's milk protein allergy.
Relative indications (one or more of): Reaction to a trace amount, nut allergy, teenager with food allergies, living/visiting a remote location, multiple IgE mediated food allergies.

Jext (First choice brand)
• Children between 8kg -12kg prescribe ONE Jext (150mcg) only |
• Children 12-25kgs = TWO Jext (150mcg) for home (GP to provide 2 further for nursery)
• Children above 25kgs = TWO Jext (300mcg) for home (GP to provide 2 further for school)

EpiPen (To be given if the family are used to this brand)
• Children between 8kg -12kg prescribe ONE EpiPen Jr (150mcg) pen only
• Children 12-25kgs = TWO EpiPen juniors (150mcg) for home (GP to provide 2 for Nursery)
• Children above 25kgs or 12years of age = TWO EpiPen (300mcg) for home (GP to provide 2 further for school)

Other comorbidities of allergy addressed:
Eczema
Cow's Milk Substitute – maternal exclusion if breastfed, extensively hydrolysed formula or amino acid formula (refer to milk guideline)
Rhinitis
Asthma

Referral to the North Middlesex University Hospital Paediatric Allergy Team made
Email the allergy nursing team on northmid paedallergy@nhs.net

bsaci ALLERGY ACTION PLAN

This child has the following allergies:

Name: _____
DOB: _____

Watch for signs of ANAPHYLAXIS
(Life-threatening allergic reaction)

AIRWAY
• Persistent cough
• Hoarse voice
• Difficulty swallowing
• Swollen tongue

BREATHING
• Difficult or noisy breathing
• Wheeze or persistent cough

CONSCIOUSNESS
• Persistent dizziness
• Pale or floppy
• Sudden sleepiness
• Collapse/unconscious

IF ANY ONE (OR MORE) OF THESE SIGNS ABOVE ARE PRESENT:
1. Lie child flat with legs raised (if breathing is difficult, allow child to sit)
2. Use Adrenaline autoinjector **without delay** (see Jext/EpiPen)
3. Dial 999 for ambulance and say ANAPHYLAXIS (CALL-112-AN-99)
*** IF IN DOUBT, GIVE ADRENALINE ***

AFTER GIVING ADRENALINE:
1. Stay with child until ambulance arrives, do NOT stand child up
2. Continue CPR if there are no signs of life
3. Please parent/next of kin contact
4. If no response after 15 minutes, give a further adrenaline dose using a second autoinjector device, if available.

Mild/moderate reaction:
• Swollen lips, face or eyes
• Itchy/ringing mouth
• Urticaria or itchy skin rash
• Abdominal pain or vomiting
• Sudden change in behaviour

Action to take:
• Stay with the child, call for help if necessary
• Give adrenaline autoinjector
• Give antihistamine

Emergency contact details:
1) Name: _____
2) Name: _____

Parental comment: (writing additional notes and to document the incident on the back of this plan, including when back up adrenaline autoinjector (if available) is received, in accordance with Department of Health Guidance on the use of this document)

How to give Jext®
1. Pull the green cap off the Jext.
2. Place the Jext into the thigh, with or without clothing.
3. Push down hard with a stick or hard ball and hold in place for 10 seconds.
4. Release the Jext. Storage expires after 10 minutes.

Additional instructions:
If wheezy, GIVE ADRENALINE FIRST, then asthma reliever (blue puff) via spacer

For more information about managing anaphylaxis in schools and 'spare' back-up adrenaline autoinjectors, visit www.nhs.uk

North Middlesex Hospital Paediatric Allergy Team
0208 887 2301



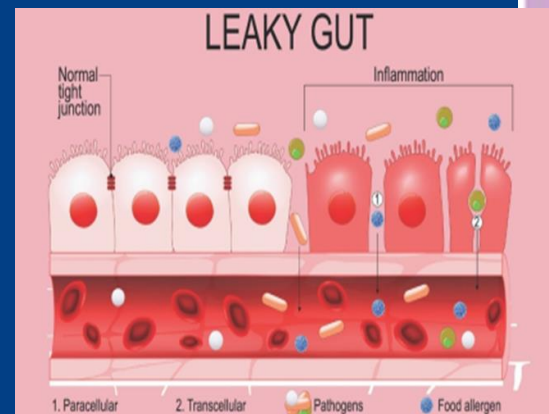
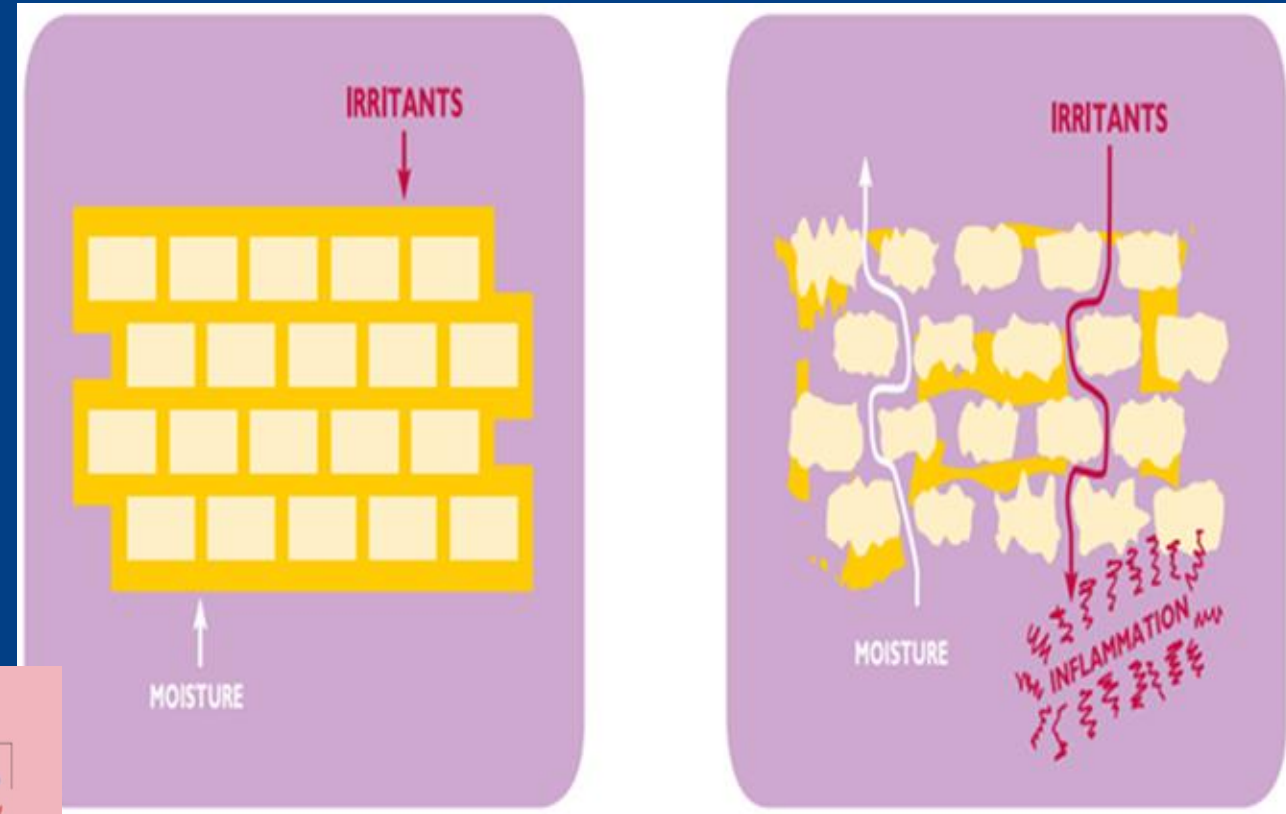
Paediatric Atopic Eczema

Identification, management & prevention

Infantile eczema

Where can you stop the allergic march?

- Babies born with a depleted gut biome
- Gut immune system cannot process milk protein
- Intestinal wall becomes inflamed
- Reflux, enterocolitis, proctocolitis
- Skin becomes inflamed (eczema)
- Skin barrier breaks – further sensitisations
- Allergens drive eczema
- More food allergies
- Asthma
- Rhinitis



Paediatric Eczema

Distribution



Paediatric Eczema

Severity of inflammation

- Will guide your steroid choice – Mild, Moderate or Potent steroid



Paediatric Eczema

Quality of eczema – excoriated, erythrodermic, lichenified, hyperpigmented, hypopigmented



Paediatric Eczema

Type of eczema

Discoid / Nebular



Pruiginous



Paediatric Eczema

Infected Eczema

Bacterial – Oral antibiotics
e.g. Flucloxacillin



Fungal –
Antifungal cream,
oral



Viral (herpeticum)
– Medical
emergency, IV
acyclovir



Paediatric Eczema

Eczema Psychiatric March



Inflammatory soup→
↓Serotonin
↓Melatonin
↓Sleep
↑Stress
Depression
Anxiety disorders

“I can’t sleep”

“I can’t
concentrate”

“I don’t want to
go to school”

“I am tired,
emotional
and angry all
the time”



Eczema psychiatric march

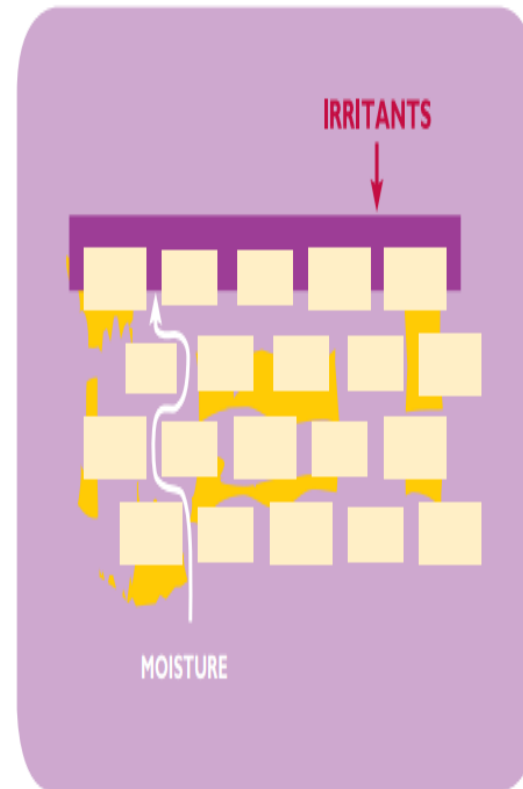
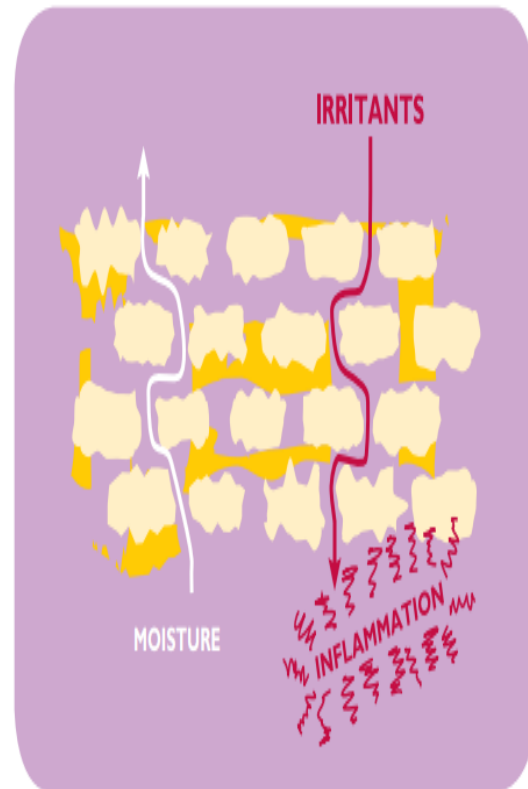
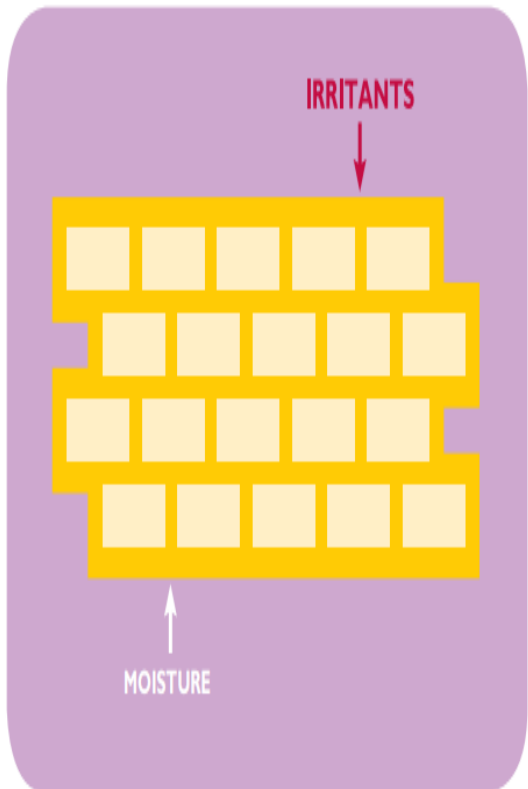
Separation anxiety→ADHD→conduct disorder→substance
misuse→suicide

Attachment disorder→anxiety→depression→suicide

Paediatric Eczema - Management

Education for chronic conditions

- Self management
- Improved concordance
- Improved outcomes

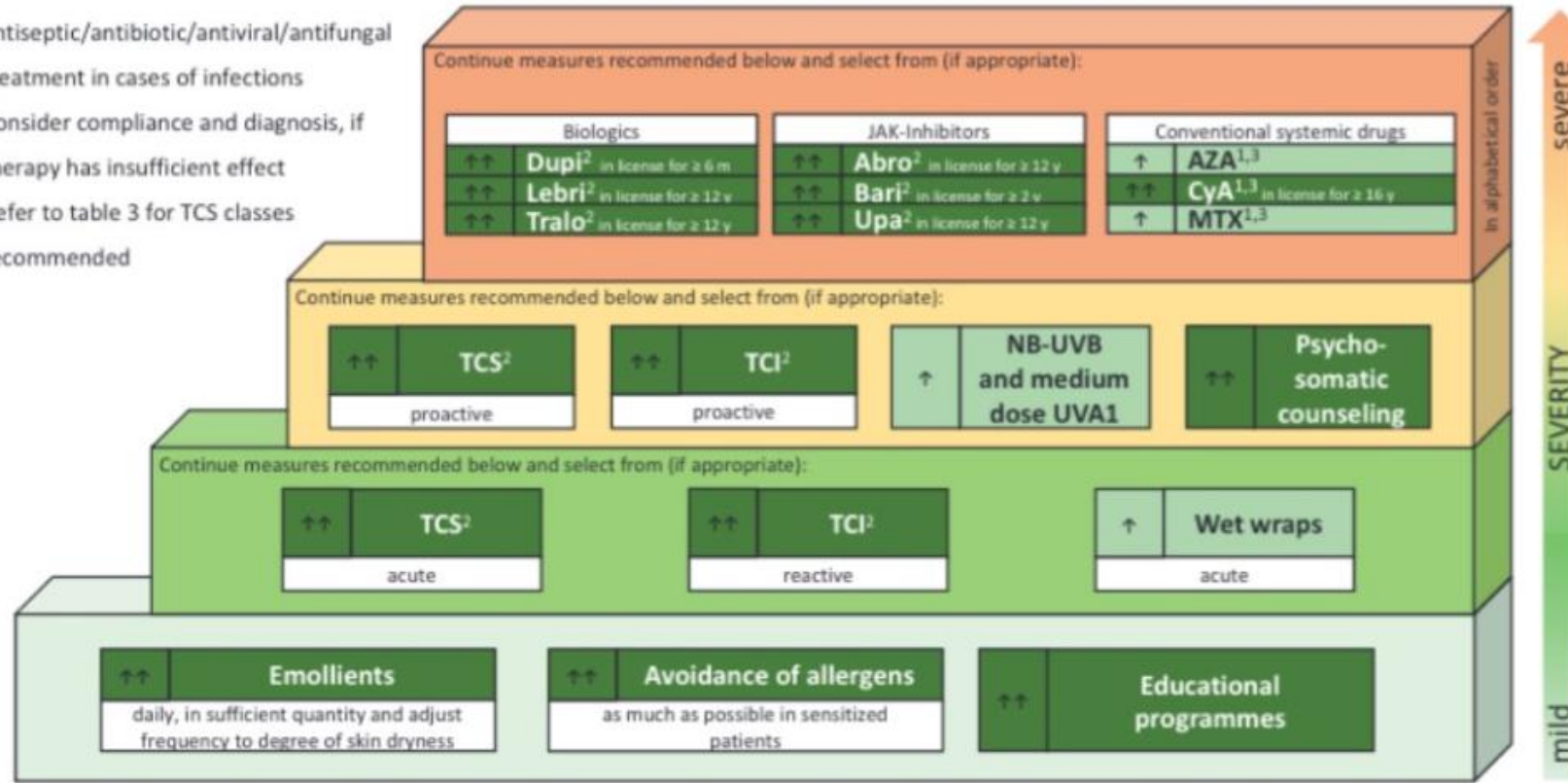


Paediatric Eczema - Management

EuroGuiDerm Guideline on Atopic Eczema

Stepped-care plan for children and adolescents with atopic eczema

- Add antiseptic/antibiotic/antiviral/antifungal treatment in cases of infections
- Consider compliance and diagnosis, if therapy has insufficient effect
- Refer to table 3 for TCS classes recommended



Treating Eczema in the Paediatric Emergency Department - Clinical Guideline
 North Middlesex University Hospital | 12/23
 Adele Dunge (Paediatric Allergy Nurse Specialist)
 Anne Biggs (Clinical Nurse Specialist in Children's Allergy)
 Dr Joseph Simpson (Clinical Fellow - Paediatric Emergency Medicine)

Step 1: Assess and document severity (Mild/Moderate/Severe) and look for signs of infection

Signs of severe eczema: Significant dryness, lacerated, fissured, Disrupting sleep (beyond pruritus)

Step 2: Management of eczema
 Refer to paediatric allergy team via paediatric.allergy@nmdh.nhs.uk if age of onset < 2 years OR 2+ food allergies OR poorly controlled eczema or rhinitis. If referred, patients can call 02089871303 for further advice.

Mild: Steroid (OD 1 week then OD 1 week), Scalp: Hydrocortisone 1% ointment, or daktarin (miconazole) if itches suspected. Daktacort + daktarin + hydrocortisone 1% ointment (max 14 days), Eyes: Hydrocortisone 1% ointment (max 14 days), Face/neck: Hydrocortisone 1% ointment, Body/limbs: Hydrocortisone 1% ointment, Hands/feet: Hydrocortisone 1% ointment, Emollient: Epinax at least QDS, also use as soap substitute. See key points. See key points. Additional history: Food allergies and co-morbidities. Follow up: GP if worsening or not cleared in 2 weeks, see speciality referral criteria below.

Moderate: Steroid (OD 1 week then OD 1 week), Scalp: Hydrocortisone 1% ointment, or daktarin (miconazole) if itches suspected. Daktacort + daktarin + hydrocortisone 1% ointment (max 14 days), Eyes: Hydrocortisone 1% ointment (max 14 days), Face/neck: Hydrocortisone 1% ointment or Clobetasone (Eumovate) (Eumovate) or Mometasone (Elocom) (Elocom) (at least), Hands/feet: Clobetasone (Eumovate) (Eumovate) or Mometasone (Elocom) (Elocom) (at least), Emollient: Hydralmo ointment at least QDS. Also use as soap substitute. See key points. Additional history: Food allergies and co-morbidities. Follow up: GP if worsening or not cleared in 2 weeks, see speciality referral criteria below.

Severe: Steroid (OD 1 week then OD 1 week), Scalp: Hydrocortisone 1% ointment, or daktarin (miconazole) if itches suspected. Daktacort + daktarin + hydrocortisone 1% ointment (max 14 days), Eyes: Hydrocortisone 1% ointment (max 14 days), Face/neck: Clobetasone (Eumovate) (Eumovate) or Mometasone (Elocom) (Elocom) (at least), Hands/feet: Mometasone (Elocom) (Elocom) (at least), Emollient: Hydroalmo ointment at least QDS. Also use as soap substitute. See key points. Additional history: Food allergies and co-morbidities. Follow up: GP if worsening or not cleared in 2 weeks, see speciality referral criteria below. Consider admission for wet wrap therapy if significantly impacting daily activities and/or failed treatment at home.

Speciality referral criteria: If age of onset above 2 years, with no food allergy, asthma or rhinitis, consider referral to dermatology if eczema is severe and not responding to treatment. Use at least moderate potency steroids on infected eczema, no wet wrap or topical calcineurin inhibitors (e.g. tacrolimus) and infection monitoring. If viral infection suspected e.g. eczema herpeticum, medical emergency, admit for IV acyclovir. Provide a personalised eczema management plan and education leaflet. Refer to Paediatric ED or on V-COMPAED Allergy/Eczema. Emollient liberally and frequently, at least QDS. Continue use. Don't apply emollients within 30 minutes of steroids as this can cause absorption and reduce steroid efficacy. Ointments generally work better than creams. Quick and effective treatment is paramount.



¹ refer to guideline text for restrictions, ² licensed indication, ³ off-label treatment
 ↑↑ (dark green) strong recommendation for the use of an intervention / ↑ (light green) weak recommendation for the use of an intervention
 For definitions of disease severity, acute, reactive, proactive see section 'VII' and section 'Introduction to systemic treatment' of the EuroGuiDerm Atopic Eczema Guideline
 Abro= abrocitinib; AZA=azathioprine; Bari=baricitinib; CyA=ciclosporin; Dupi=dupilumab; Lebri=lebrikizumab; MTX=methotrexate; TCI=topical calcineurin inhibitors; TCS= topical corticosteroids; Tralo=tralokinumab; Upa=upadacitinib; UVA1=ultraviolet A1; NB-UVB=narrow-band ultraviolet B

Paediatric Eczema - Management



This plan was agreed between:

Patient:	AND	Health Professional:	Date:
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STEP 1 – MAINTAIN: everyday care – even when eczema is clear

- Use moisturiser / emollient at least twice every day – always wait 20 minutes after medicated creams
- Apply emollient thickly
- Apply emollient in direction of hair growth

If your skin is itchy, red, inflamed or flared

Go to Step 2 ↓

EMOLLIENT (Moisturiser): - thick and frequent (>20 minutes after medicated cream)

SOAP SUBSTITUTE: – apply thick layer, carefully lower into bath, massage into skin, then pat dry.

FIRE RISK: Some ointments and skin care products are dangerous when near a naked flame or cigarette

STEP 2 – PROTECT & REPAIR: use only on active, itchy, red, inflamed eczema

	MEDICATED CREAMS/OINTMENTS (e.g. steroids or other)	A.M.	P.M.
Applying medicated creams and ointments	Face and Neck:		
<p>One finger tip unit (FTU) is the amount of ointment from the first bend in finger to the fingertip. This will cover an area equal to two adult hands.</p>	Scalp:		
	Body:		

If this treatment is not working, see your doctor or nurse for help

Go to Step 3 ↓

Medications (tablets, syrups or other)	How often:
1.	
2.	
3.	

Other information
Wait 30 minutes between layers of cream

STEP 3 – SEEK MEDICAL HELP

- If your eczema is not responding or is getting worse
- If you suspect the eczema is infected – very red, oozing, or any blister like spots. Child may be unwell.

MOISTURISER S / EMOLLIENTS
Emollients should be non-perfumed and used frequently. It is safe to apply to all areas of skin on the body and face every few hours if possible. Use plenty—dry skin will soak it up. An ideal time to apply moisturisers is a few minutes after a warm bath or shower while skin is slightly damp. Greasier preparations such as ointments are ideal for very dry skin, although some people prefer the feel of lighter creams. Use a spoon or spatula to take moisturiser from a tub to avoid bacterial contamination from hands. Some ointments and skin care products are dangerous when near a naked flame or cigarette.

SOAP SUBSTITUTES
All soaps dry the skin, leaving it feeling tight and itchy. This can make eczema worse. A soap substitute is an emollient which is used instead of soap for washing and cleaning the skin. Apply generously to the whole body before getting into the bath and then use your hands to rinse off with warm water. Gently pat the skin dry with a clean towel afterwards.

MEDICATED CREAMS / OINTMENTS (STEROID / NON-STEROID ANTI-INFLAMMATORY)
You may have different strengths of medicated creams for different areas on the body. Your personal management plan should tell you what goes where. If you do not have a personalised up-to-date treatment plan, then ask your doctor or nurse to prepare one with you. Apply these medicated creams / ointments to the affected areas and smooth them in, gently stroking in the direction of hair growth. Leave a short while, at least 15 minutes, between emollient and medicated cream to allow the first one to soak into the skin before putting on the next one.

One finger tip unit (FTU) is the amount of ointment from the first bend in finger to the fingertip.

This will cover an area equal to two adult hands.

FINGERTIP UNIT AMOUNT TO USE

STRENGTHS OF MEDICATED CREAMS VARY. HERE ARE A FEW EXAMPLES:

MILD	MODERATE	STRONG
1% Hydrocortisone Cream/Ointment Daktacort Cream/Ointment	Eumovate Cream/Ointment Synalar 1:4 Cream/Ointment Betnovate RD Cream/Ointment	Elocon Cream/Ointment Cutivate Cream/Ointment Betnovate Cream/Ointment

Mild to moderate strength medicated creams / ointments are fine to use on the face under the guidance of your doctor or nurse. Strong creams/ointments should not be used on the face unless recommended by an eczema specialist.

SUN PROTECTION
Sun protection is important for all children and especially if you use the medicated creams Protioic® or Elidel®. In that case, use sun block (>SPF 30) and cover up if possible. Choose a sun block for sensitive skin and please try this out on a test patch of skin before using it all over.

INFECTION
Skin with eczema is more vulnerable to infection than healthy skin. Signs of bacterial infection may include pustules, crusting or a sudden severe flare of eczema not responding to usual treatments. Please see your doctor as oral antibiotics may be needed. Moderate topical steroids can continue to be applied to infected skin but wet wraps or dressings need to be stopped. Protioic® or Elidel® should not be applied to infected skin. Should you see blisters (with fluid in) or cold sores please see a doctor urgently (the same day).

- WHERE TO GET MORE INFORMATION**
You are not alone with eczema. Your doctor and nurse can help you and more information is available:
- National eczema society: www.eczema.org
 - Understanding the NICE guideline for eczema in children: www.nice.org.uk/CG057
 - Anti-bullying website: www.antibullying.net; www.kidscape.org.uk
 - To watch videos on how to apply your creams go to: www.itchyneezywhiezzy.co.uk

Paediatric Eczema

Take Home Messages for Eczema

- Early effective treatment to prevent life-long problems
- Steroids Steroids Steroids
- Match potency to level of inflammation
- Longer duration of treatment for chronic changes
- Ointments not creams
- Space layers of creams by >30mins
- Education and personalised management plans essential
- No foods on skin
- Keep cool
- Bath infrequently



Paediatric Eczema

Eczema Resources

- National eczema society: www.eczema.org
- www.eczemacareonline.org.uk
- NICE guideline for eczema in children: <https://www.nice.org.uk/guidance/CG57>
- Anti-bullying websites: www.antibullying.net ; www.kidscape.org.uk
- To watch videos on how to apply your creams go to: www.itchysneezywheezy.co.uk;
- [Powerful videos of patient and family experiences:](https://www.patientvoices.org.uk/terrificteens.htm)
<https://www.patientvoices.org.uk/terrificteens.htm>
- [British Academy Dermatology:](http://www.bad.org.uk/for-the-public) <http://www.bad.org.uk/for-the-public>
- [Eczema and Allergy | British Society for Paediatric Dermatology \(bspd.org\):](http://bspd.org)
<http://bspd.org/eczema-and-allergy/>



Allergy Prevention

Advice from HCPs working with families

BSACI Weaning advice

To reduce development of food allergies

Early introduction of allergens – standard advice from all health visitors and EYP

Especially for those with eczema, existing or Family Hx allergy

– Peanut and Egg from 4-6 months BSACI weaning advice

bsaci Preventing food allergy in your baby: A summary for parents

BDA Food Allergy

Current advice from the UK health departments for healthy babies is:

- Exclusive breastfeeding for around the first 6 months of life.
- From around 6 months of age (but not before 4 months), introduce complementary foods (solids) – including foods known to cause food allergies – alongside continued breastfeeding.
- Excluding egg and peanut from your baby's diet may increase their risk of food allergy.
- **When your baby is ready, at around 6 months of age, you can start to feed them complementary foods (solids)** – usually as pureed foods. Start by offering small amounts of vegetables, fruit, starchy foods, protein, pasteurised dairy. Never add salt or sugar – they don't need it.
- In addition to fruit and vegetables, include foods that are part of your family's normal diet which are commonly associated with food allergies. **If this includes egg and peanut, aim to introduce these by one year of age, and continue to feed these to your baby as part of their usual diet.**

Your baby is at higher risk of food allergy if they have:

- Eczema (especially if eczema is very bad) OR
- Already has a food allergy

babies who are at higher risk of food allergy include:

- Someone in your home (not the baby) has a food allergy
- All other babies

Your baby may be at a higher risk of food allergy, and may benefit from starting egg and/or peanut earlier, alongside other solids. When your baby is ready, consider introducing solid foods – including cooked egg, and then peanut – from age 4 months, followed by other foods known to cause food allergies (more information on this can be found on page 3).

The benefits of allergy testing in higher risk babies before introducing egg or peanut needs to be balanced against the risk this could cause a delay (due to lack of available testing), and increase the risk of food allergy.

Some babies will already have food allergies, especially those with severe eczema. The risk of a severe reaction (anaphylaxis) is low (1.2 per 1000 in these babies). Speak to your healthcare professional before introducing egg and peanut if your baby has severe eczema. **DO NOT FEED YOUR BABY SOMETHING THEY ARE ALREADY ALLERGIC TO.**

Monitor for any symptoms of an allergic reaction:

Immediate-type food allergy
Typically happen within 30 minutes of eating the food:

Mild/moderate symptoms:

- Swollen lips, face or eyes
- Itchy skin rash e.g. "hives", urticaria
- Abdominal pain, vomiting

The following severe symptoms are rare:

- Swollen tongue, persistent cough, hoarse cry
- Difficult or noisy breathing
- Pale or floppy, unresponsive/unconscious

If your baby has any severe symptoms (anaphylaxis), immediately dial 999 for help.

Mild/moderate symptoms are not dangerous. Dial 111 for advice, if needed.

Avoid the causative food, do **NOT** reintroduce.

Speak to your GP to discuss review by a specialist paediatric / allergy team.

NICE recommends any baby with multiple food allergies or severe symptoms (anaphylaxis) should be referred to a hospital team.

bsaci Preventing food allergy in your baby: Information for parents

BDA Food Allergy

The Scientific Advisory Committee on Nutrition (SACN) and the Committee on Toxicity (Food Standards Agency) have published a joint report to advise the UK Government health departments on advice regarding feeding your baby in the first year of life.

This leaflet provides advice to families on preventing food allergies in babies at higher risk of food allergy. It has been developed by the Food Allergy Specialist Group of the British Dietetic Association (BDA) and Paediatric Allergy Group of the British Society for Allergy & Clinical Immunology (BSACI), and complements an information sheet for GPs and other healthcare professionals available at www.bsaci.org/about/early-feeding-guidance or www.bda.uk.com/regionsgroups/press/foodallergyallergy_prevention_guidance.

Young children at a higher risk of getting a food allergy include:

- Babies with eczema (in particular, babies with more severe eczema), or
- Babies who already have a food allergy.

Research shows that these babies may benefit from the earlier introduction – from 4 months of age – of complementary foods (solids), including foods containing egg and peanut in a form to suit the baby.

Some babies will already be allergic when they are fed these foods:

- Parents should not continue to feed their baby something they are reacting to.
- Referral to a children's allergy clinic is recommended for babies with immediate-type food allergy.

If your baby has more severe eczema (e.g. needs daily steroid creams), discuss with your health visitor or GP when to start feeding your baby foods containing egg or peanut. These babies are more likely to have reactions, but can also benefit more where the food doesn't cause a reaction.

DURING PREGNANCY

- Don't avoid any particular foods (such as peanut) – this has **not** been shown to prevent allergies.
- Omega-3 fatty acids (found in oily fish such as salmon, trout, mackerel and fresh (not canned) tuna) may help reduce the risk of eczema and allergic sensitisation (development of allergy antibodies) in early life. Pregnant women should not eat more than two portions of oily fish a week.*
- At the moment, there is not enough evidence to recommend routine probiotics to prevent food allergy.
- Eat a balanced, healthy diet – with plenty of vegetables and fruit to provide vitamins and minerals, as well as fibre (which helps digestion).
- General health advice is to take folic acid and vitamin D supplements during pregnancy.

AFTER BIRTH

- The UK health departments recommend exclusive breastfeeding for around the first 6 months of life. Breastfeeding alone does not prevent allergies, but has many other important benefits to the mother and child. Breastfeeding should continue throughout the first year of life.
- Unless otherwise advised by a healthcare professional, **don't avoid eating any particular foods (such as peanut or dairy) while breastfeeding** – this has **not** been shown to prevent allergies.
- Infant formula is the only suitable alternative under 12 months of age when mothers do not breastfeed or choose to supplement breast milk. Infant formula made from cows' and goats' milk are suitable, however soya-based infant formula should not be used unless prescribed by a GP. If formula feeding, guidance regarding the safe preparation, storage and handling of infant formula should be followed.
- Using a non-cow's milk-based formula (such as soya) or a specialist "low allergy" or hypoallergenic formula has **not** been consistently shown to prevent food allergy or other allergic diseases.
- **Speak to a healthcare professional if you think your baby may be allergic or intolerant to cow's milk.**
- All babies (including those who are exclusively breastfed) should be given a daily supplement containing 8.5 to 10 micrograms (µg) of vitamin D – even if you're taking a supplement yourself. Vitamin D supplements should be continued until at least 5 years of age. Formula-fed babies don't need extra Vitamin D until they're having less than 500ml (about a pint) of infant formula a day, as infant formula is fortified with vitamin D.

* This is because oily fish can contain pollutants (toxins) which, if eaten in large amounts, outweigh the health benefits of omega-3 fatty acids. Fresh tuna should be limited to a serving size of 340g (cooked weight).

Egg (both egg white and yolk)	Choose British Lion-stamped eggs: then you can offer your baby scrambled egg, omelette, soft or hard-boiled egg. You can mash egg into other foods e.g. pureed fruit/vegetables, yoghurt, or baby cereals such as rice. Aim for at least 1 egg over the course of a week. <i>If you are not using British Lion-stamped eggs, only give well-cooked or hard-boiled egg.</i>
Peanut	Never give whole nuts, coarsely-chopped nuts or chunks of peanut butter to children under 5 years of age, as these are a choking risk. You can use smooth peanut butter, "puffed peanut" snacks, or grind whole peanuts to a fine powder. Mix with pureed fruits/vegetables, yoghurt, porridge, baby cereals etc. or add to baby's milk. Suggested recipe: Mix 1 teaspoon of smooth peanut butter with 1 tablespoon of warm water (boiled) or baby's milk, or some pureed fruit/vegetable. Aim for a total of 2 level teaspoons per week.

In babies at higher risk of food allergy, studies have shown that starting egg and peanut earlier – from 4 months of age – can help prevent food allergy to egg and peanut.

If part of your family's diet, aim to introduce egg and peanut by 12 months of age, and continue to give them to your baby regularly as part of their usual diet as they get older.

You may also like to introduce some of the following foods if eaten as part of your family's diet:

Tree nuts	Never give whole nuts or coarsely-chopped nuts to children under 5 years old. Use finely-ground nuts, or a nut butter (e.g. almond butter, cashew butter etc). Mix with pureed fruits/vegetables or add to yoghurt, porridge or baby's milk.
Cow's milk	Yoghurt, fromage frais with no added sugar. Or add fresh whole milk to meals e.g. porridge, mashed potato
Wheat	Weetabix or similar breakfast cereal, well-cooked pasta shapes, toast fingers, couscous
Seeds	Hummus (houmous) which contains tahini (sesame) paste; crushed seeds added to yoghurt, porridge or mixed with pureed or mashed fruit/vegetables
Fish, seafood	Pureed, flaked or mashed cooked fish (e.g. cod, haddock, salmon, trout) or seafood (e.g. prawns, crab, mussels)

Supporting the immune system

To reduce risk of allergy....

Risks

- Antibiotics during pregnancy and labour
- Caesarean delivery
- Offering once off or sporadic bottles of cow's milk formula
- Maternal exclusion of allergens in pregnancy and breastfeeding
- Frequent bathing
- Food oils on skin
- Sterile living
- Poor air quality

Advise

- Prebiotic diet throughout & Probiotics during 3rd trimester
- Omega 3- fatty acids e.g. oily fish
- Perinatal Vit D – significant reduction in AD
- Vaginal delivery
- Exclusive Breastfeeding
- Continue formula - >3 X per week
- Early introduction of allergens
- Vitamin D for all BF babies (<500ml formula)
- Avoid food exclusions unless proven allergy
- Pharmaceutical emollients
- Bathe infrequently
- Treat emergence of eczema aggressively and asap

Thank you! Any Questions?

Food Allergy – Delayed or Immediate
Eczema
Asthma
Allergic Rhinitis
Urticaria

Paediatric Allergy Nurse Specialist
Adele Durge

