



# Anaphylaxis and Adrenaline Pens - ready2reactuk Public Awareness Campaign

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## ARE YOU READY2REACT?

Allergies are the most common type of chronic disease in Europe, with around **150 million people** – and **1 in 5 children** – suffering from some kind of allergy.<sup>1</sup> Here in the UK, **almost half of all adults (44%) have at least one allergy**<sup>2</sup> although not all severe, it's a number that is on the rise.<sup>2,3</sup>



For people with the most severe allergies, being exposed to an allergen can be fatal, requiring the use of a life-saving adrenaline pen, and in some cases, even hospitalisation. Yet, few people would know how to react if they themselves, or someone else, experienced a severe allergic reaction. In fact, according to the ready2reactuk survey, **1 in 4 respondents who have severe allergies don't always carry an adrenaline pen on them, and less than half feel confident using one.**<sup>4</sup>



**Being able to identify when an allergic reaction is becoming life-threatening and being able to properly administer an adrenaline pen can save a life. Everyone should know how to use an adrenaline pen, whether they have an allergy or not.** That's why leading allergy charities Allergy UK, Anaphylaxis UK, and the Natasha Allergy Research Foundation, have come together with Viatrix, a global pharmaceutical company, and the British Society for Allergy and Clinical Immunology (BSACI) to raise public awareness about allergies and the use of adrenaline pens with the ready2reactuk campaign.

As well as representation from the leading allergy charities in the UK, the ready2reactuk campaign is supported by leading allergy specialists, a GP, a school nurse, the vice-principal of a primary school and patients and parents of patients with lived experiences of life with severe allergies.

## LIFE WITH SEVERE ALLERGIES

### What is an allergy?

An allergy is when your body's immune system is triggered by substances that are usually harmless, such as pollen, certain foods or insect stings. Your immune system will begin to attack an allergen, which can cause mild symptoms like itching or rashes or, in more severe cases, can lead to anaphylaxis, a life-threatening condition.

The first signs of anaphylaxis may look like usual allergy symptoms, such as a running nose or a skin rash. But within minutes, more serious signs will begin to appear. Anaphylaxis can come on suddenly and worsen very quickly.<sup>5</sup>

### The main signs that someone is experiencing anaphylaxis include:<sup>6</sup>

- Swelling of the throat or tongue
- Difficulty breathing or breathing very fast
- Difficulty swallowing
- Wheezing, coughing or noisy breathing
- Feeling tired or confused
- Feeling faint, dizzy or fainting
- Skin that is cold to the touch or skin, lips, or tongue that have turned blue, grey or pale (for people with darker complexions, this may be easier to identify on the palms of their hands or soles of their feet)

Some people may experience a second anaphylactic reaction – known as biphasic anaphylaxis – between 6-12 hours after the first reaction. That's why it's important to continue looking out for symptoms, even after administering an adrenaline pen.<sup>7</sup>

It's easy to confuse allergies with urticaria (more commonly known as hives). Hives is a very common condition where a person's skin breaks out in patches of red or white that may feel itchy. These rashes usually clear up on their own within 24 hours and rarely require medical attention. However, if hives are present and the person is also wheezing, experiencing severe diarrhoea, or vomiting, then anaphylaxis cannot be ruled out and urgent medical attention should be sought.

### How do you know if you have an allergy?

If you suspect you, or your child, has an allergy, contact your GP straight away for help identifying the cause. They will likely ask about the symptoms being experienced, how often they occur, and if you've noticed anything that seems to trigger them. Your GP may decide to refer you or your child to a specialist allergy service, particularly if your allergy seems severe or if it isn't immediately obvious what is causing it.

### References

1. According to the European Academy of Allergy and Clinical Immunology (EAACI).
2. According to Allergy UK: <https://www.allergyuk.org/about-allergy/statistics-and-figures/>
3. According to Anaphylaxis UK: <https://www.anaphylaxis.org.uk/latest-nhs-digital-figures-see-rise-in-adult-allergy-hospital-admission/>
4. AAI Public Awareness Campaign Survey carried out by Ipsos for Viatrix, a global pharmaceutical company (April 2023)
5. According to Allergy UK: <https://www.allergyuk.org/about-allergy/what-is-an-allergy/>
6. According to the NHS: <https://www.nhs.uk/conditions/anaphylaxis/>
7. According to Anaphylaxis UK: <https://www.anaphylaxis.org.uk/fact-sheet/anaphylaxis-signs-and-symptoms/>

**SOME PEOPLE MAY DECIDE TO SEEK HELP FOR THEIR ALLERGIES THROUGH PRIVATE HEALTHCARE, RATHER THAN NHS SERVICES. IF YOU DO CHOOSE TO GO THROUGH A PRIVATE HEALTHCARE PROVIDER BUT HAVE ALREADY BEEN REFERRED TO AN NHS-OPERATED ALLERGY SERVICE, PLEASE LET YOUR GP KNOW AS SOON AS POSSIBLE SO THAT YOU CAN BE REMOVED FROM THE WAITING LIST. THIS WILL ALLOW OTHERS TO GET THE HELP THEY NEED SOONER.**



There are several ways healthcare professionals may diagnose your allergy, depending on the type of allergy you may have. The most common method is skin prick testing. This involves putting a small drop of liquid onto your forearm which contains a dose of the suspected allergen. They will then gently prick your skin and, if you're allergic, an itchy, red bump should appear after a few minutes. The test is perfectly safe and isn't usually painful, but you may find it a little uncomfortable.

If your GP suspects you have a specific allergy, they may run a blood test to confirm it or, if you have a suspected food allergy, they may suggest you do an oral food challenge. An oral food challenge is conducted in a controlled environment – such as a hospital – under the supervision of a trained specialist – you cannot carry out this test yourself at home. You will be given a very small amount of the allergen and a healthcare professional will closely monitor you for signs of an allergic reaction.

To learn more about allergies, visit:

 <https://www.allergyuk.org/about-allergy/what-is-an-allergy/>

## AN ADRENALINE PEN CAN SAVE A LIFE

If someone has a severe allergic reaction they may experience anaphylaxis, which can be fatal. Anaphylactic shock must be treated immediately with the use of an adrenaline pen, which is also called an Adrenaline Auto Injector (AAI). As there are several brands available in the UK, it's important to understand how the specific brand of pen you are prescribed works, as pens from different brands function differently.

Adrenaline pens are a prescription medication, so to get one you will need to receive a prescription from your GP, who will ensure your pen contains the right dose of adrenaline based on your age and weight. It is recommended to book in an annual allergy appointment with your GP to review your adrenaline pen prescription, in case the dosage needs to change.

**IF YOU HAVE BEEN PRESCRIBED AN ADRENALINE PEN, TAKE IT WITH YOU EVERYWHERE YOU GO.**






Unlike Public Access Defibrillators, which are placed in public spaces in case of medical emergencies, in the UK it is not currently mandatory for venues to carry adrenaline pens, so it is essential to always have your own.

**// WITH A GROWING NUMBER OF PEOPLE BEING DIAGNOSED WITH ALLERGIES, WE REALLY NEED TO CHANGE THE NARRATIVE AROUND ALLERGIES IN THE UK AND PARTICULARLY ABOUT HOW TO BE SAFE. THIS IS FOR PEOPLE OF ALL AGES, WHETHER THAT'S A CHILD WITH A FOOD ALLERGY, A TEENAGER OR AN ADULT WHO HAS JUST FOUND OUT THEY HAVE A FOOD ALLERGY. WHEN WE CAN RAISE AWARENESS ABOUT ADRENALINE PENS AND TEACH PEOPLE HOW TO USE THEM SAFELY AND APPROPRIATELY, A LOT OF FEAR SURROUNDING THEM DISAPPEARS WHICH WILL HELP KEEP PEOPLE SAFE. //**

*TANYA EDNAN-LAPEROUSE OBE,  
CO-FOUNDER AND TRUSTEE, NATASHA ALLERGY RESEARCH FOUNDATION*

**It is recommended to carry at least two adrenaline pens with you at all times if you have an adrenaline pen prescription for an allergy.** There are many reasons why having two pens is helpful, including:

-  If the first dose isn't effective, you can administer a second dose immediately.
-  If the adrenaline was administered accidentally, you have a back-up – for example, when giving first aid to someone else, it is not uncommon for people to unintentionally administer the adrenaline to themselves rather than the person having the anaphylactic reaction.
-  If there is a delay in reaching the hospital and a second dose is needed.

Adrenaline pens have expiry dates, so it's also important to have a back-up in case one pen has expired. You should regularly check the expiry date that is listed on the pen itself to ensure it is in-date, but another telltale sign that your pen may have expired is if the liquid inside appears murky or discoloured. You shouldn't discard your expired adrenaline pen until you have received a new one.

**21%** OF PEOPLE SURVEYED WITH SEVERE ALLERGIES DON'T KNOW THAT THEIR ADRENALINE PENS EXPIRE. ALWAYS CHECK YOUR ADRENALINE PEN IS IN DATE TO ENSURE THAT IT IS READY FOR USE IN AN EMERGENCY.



// SOMETIMES WE ASK PATIENTS OR PARENTS OF CHILDREN WITH ALLERGIES IF THEY KNOW IF THEIR ADRENALINE PEN IS IN DATE. OFTEN THEY LOOK AT IT AND GO: 'WHOOOPS - IT'S GONE OUT OF DATE'. THAT'S VERY WORRYING, BECAUSE IF THERE WAS EVER A MEDICAL EMERGENCY AN OUT-OF-DATE PEN WOULDN'T BE ANY GOOD TO THEM. FORTUNATELY, THERE ARE EXPIRY ALERT SERVICES AVAILABLE THROUGH THE COMPANIES THAT PRODUCE THE ADRENALINE PENS THEMSELVES. YOU CAN SIGN UP TO RECEIVE REMINDERS TO YOUR SMARTPHONE TO ENSURE YOUR PEN IS ALWAYS IN DATE. IT'S IMPORTANT TO BE PROACTIVE AND GET ALERTS SET UP FOR YOURSELF. //

SARAH BAKER,  
HEALTH POLICY ADVISOR, ANAPHYLAXIS UK

**Even if you don't have an allergy yourself, everyone should know how to use an adrenaline pen.** The knowledge could help save someone's life.

#### How do I administer an adrenaline pen to someone else?

If someone is experiencing anaphylaxis and is unable to administer an adrenaline pen themselves, it is essential to stay calm and act quickly to administer the adrenaline for them.

If they aren't already, gently lay them flat on the ground with their legs raised, for example, by placing their feet on a chair. This will help blood flow back to their heart and vital organs. If they're struggling to breathe, they may need to be propped up, but this should be for as short a time as possible. Avoid changing their position suddenly, such as standing them up or sitting them in a chair, even if they say they're feeling better. This could suddenly lower their blood pressure, which may stop their heart.

If you're unsure whether a person is experiencing anaphylaxis or not, it's best to administer adrenaline anyway, just in case. The correct administration of an adrenaline pen could save a life during anaphylaxis, and if not needed, side effects such as raised blood pressure or heart rate, are usually mild and transient.

The adrenaline should be injected into the muscle of their outer thigh. The needle is able to penetrate clothing, even thicker materials like jeans, so don't worry about removing any of their clothes.

If their condition doesn't begin to improve after about five minutes, or if they seem to be getting worse, administer another dose of adrenaline using their second adrenaline pen, if they carry one.

#### What should I do after using an adrenaline pen?

Call 999 immediately after administering an adrenaline pen. Ask for an ambulance and let them know that someone has suffered anaphylaxis (pronounced: ana-fill-axis). The ambulance may take a while to come, so stay with the person until help arrives. While waiting for the ambulance, they may need you to administer their second adrenaline pen. Encourage them to stay laying down with their feet elevated until the ambulance team arrives, even if they say they're feeling better.

To learn more, visit:



<https://www.anaphylaxis.org.uk/about-anaphylaxis/what-to-do-in-an-emergency/>

#### A quick recap:

- Always carry at least two adrenaline pens with you at all times.
- Regularly check that your adrenaline pen is in-date and sign up for expiry date reminders from your adrenaline pen provider is recommended.
- If helping someone who is experiencing anaphylaxis, gently lay them on their back with their legs elevated. Avoid changing their posture suddenly, such as sitting them up.
- Call 999 immediately after administering an adrenaline pen and wait for an ambulance to arrive.
- Adrenaline pens can be injected straight through clothing, even jeans.
- The correct administration of an adrenaline pen could save a life during anaphylaxis, and if not needed, side effects such as raised blood pressure or heart rate, are usually mild and transient, **so even if you're not sure if someone is experiencing anaphylaxis, inject them anyway.**

## COPING WITH SEVERE ALLERGIES

Living with severe allergies can take a huge emotional toll on those who have them, and their loved ones. **In fact, 73% of people surveyed with severe allergies say it has an impact on their mental health.** From eating out in restaurants to going on holiday or going to school, having an allergy can make navigating everyday life challenging. That's why the ready2reactuk campaign strives to build a society that is safer and more accessible for those living with severe allergies, so everyone has the freedom to live their life to the full.

**// SEVERE ALLERGIES HAVE A HUGE IMPACT ON BOTH PATIENTS AND THEIR FAMILY. WE KNOW FROM RESEARCH THAT WE'VE BEEN CARRYING OUT OVER THE LAST 25-30 YEARS THAT SEVERE FOOD ALLERGIES DO HAVE A BIG IMPACT ON QUALITY OF LIFE - BOTH SOCIALLY AND EMOTIONALLY. //**

DR REBECCA KNIBB,  
ASSOCIATE PROFESSOR IN HEALTH PSYCHOLOGY AT ASTON UNIVERSITY

If you have an allergy and are struggling with your mental health, find support at:

<https://www.anaphylaxis.org.uk/living-with-serious-allergies/anxiety-and-allergies/>

### How can I support a loved one who has severe allergies?

Managing an allergy can be emotionally draining. People with severe allergies must be on high-alert constantly, always on the lookout for allergens or checking the ingredients list of everything they eat or drink – and some allergens can be very difficult to avoid.

**// MY ALLERGY TAKES A HUGE MENTAL TOLL ON MY DAY-TO-DAY LIFE, PARTICULARLY WHEN I'M ON MY OWN OR WITH STRANGERS WHO MAY NOT KNOW HOW TO RESPOND SHOULD I GET STUNG AND NEED HELP. //**

SAMANTHA BURDETT,  
A MOTHER AND FOSTER CARER WHO IS ALLERGIC TO BEES

If someone you know has a severe allergy, the best way you can help put their mind at ease is by learning how to use an adrenaline pen. People with allergies can find it very reassuring to know that the people around them would be equipped to respond if they ever had a medical emergency.

### My child has severe allergies

Having a child, of any age, with severe allergies can be stressful for both the parents and the child themselves – particularly when they start school. As children get older, they will gradually begin spending more time outside of the home, so you won't always be able to keep a watchful eye on them. Every parent wants their child to learn to live life independently, but this loss of control can be understandably anxiety-inducing.

**// MY 9-YEAR-OLD SON, OSIAN, HAS SEVERAL SEVERE ALLERGIES, INCLUDING ALLERGIES TO PEANUTS, WHEAT AND EGGS. MANAGING HIS CONDITION HAS BECOME A FULL-TIME JOB. WHEN WE FOUND OUT HE HAD ALLERGIES, IT WAS LIKE A BOMB WAS THROWN INTO OUR LIVES - WE HAVE TO THINK ABOUT IT EVERY DAY, REMAIN CONSTANTLY VIGILANT, AND WORK CLOSELY WITH HIS SCHOOL TO KEEP HIM SAFE. WE DO OUR BEST TO ENSURE HE CAN LIVE LIFE TO THE FULL DESPITE HIS CONDITION. //**

SARAH PATTISON,  
PONTYPRIDD, WALES, MOTHER TO A CHILD WITH SEVERE ALLERGIES

From a young age, it's important to teach children with allergies about their condition, what to do if they begin feeling poorly, and how to use their adrenaline pen. But it's also essential to make those around them – extended family members, friends, babysitters, and teachers – aware of the allergy and how to respond in case of a reaction.

**Our survey reveals that 68% of parents surveyed with children who have severe allergies say it impacts their school attendance.** That's why it's important to work closely with your child's school to ensure staff are equipped to support them.

Your GP should give you an Allergy Action Plan. This is a medical document filled in by a healthcare professional containing detailed instructions about what to do in the event of anaphylaxis and how to administer the adrenaline pen. Ensure that your child's school has an up-to-date copy of your child's Allergy Action Plan.

Unfortunately, not every school in the UK will have an adrenaline pen onsite, so it's important to get your child into the habit of carrying their own two pens every day. You can choose to provide school staff with an adrenaline pen yourself if they do not have one – just be aware that adrenaline pens do go out-of-date so it will need replacing if it goes unused.

**For more advice on how to support a child with allergies, visit:**

<https://www.narf.org.uk/blog/2022/1/5/what-support-is-available-at-school-for-children-with-food-allergies>

**If you're a teacher and would like to find out how to better support children with allergies, visit:**

<https://www.allergyuk.org/resources/allergies-in-school-top-tips-for-teachers/#:~:text=Develop%20an%20allergy%20and%20anaphylaxis,updated%20on%20a%20regular%20basis>

## ABOUT THE READY2REACTUK PARTNERS:

### **Tanya Ednan-Laperouse OBE - Natasha Allergy Research Foundation**

Along with her husband Nadim, Tanya is the founder and trustee of the Natasha Allergy Research Foundation (NARF). Tanya lost her own daughter, Natasha, to anaphylaxis in 2016, when she was just 15-years-old.

### **Baroness Alicia Kennedy - Natasha Allergy Research Foundation**

Alicia is Chief Operating Officer of the Natasha Allergy Research Foundation (NARF). Previously, she spent 25 years in politics, working with senior politicians across all levels of Government. She was made a life peer in 2012.

### **Holly Shaw - Allergy UK**

Holly Shaw is a Clinical Nurse Advisor working for Allergy UK. Holly has worked in the research field internationally on the world-class HealthNuts study at the Murdoch Research Institute in Melbourne Australia and is a mother to two atopic children.

### **Sarah Baker - Anaphylaxis UK**

Sarah is a health professional with over 40 years' of experience working in the NHS as a Children's Nurse, Health Visitor and latterly as an Executive Director in Community Health Trusts. Sarah herself has multiple food allergies.

### **Georgios Guibas M.D, PhD - British Society for Allergy & Clinical Immunology (BSACI)**

Georgios is a consultant in adult allergy at the Lancashire Teaching Hospitals NHS Foundation Trust, and a Clinical Research Fellow at the Division of Infection, Immunity and Respiratory Medicine of the University of Manchester. He is a member of the BSACI elected Council, the co-Chair of the BSACI Transition Committee, and was the Scientific Program Lead of two BSACI Annual Meetings. He has extensive experience in basic research, epidemiology, and Clinical Trials in Allergy/Immunology.

### **Dr. Helen Evans-Howells**

Helen is a trained GP who became interested in allergy due to her own experiences of managing a child with milk and nut allergies. She holds a Masters in Allergy from Southampton University and now runs a private allergy clinic supporting patients and families struggling with allergies, helps operate the peanut immunotherapy clinic at Southampton Hospital and lectures across the UK and internationally.

### **Dr. Andrew Bright**

Andrew is a consultant paediatrician in Gateshead and an honorary paediatric allergist at the Great North Children's Hospital in Newcastle-upon-Tyne. He also sits on the national British Society of Allergy and Clinical Immunology's anaphylaxis steering committee, holds an associate clinical lecturer position at Newcastle University, and is a clinical advisor with the North-East and North Cumbria Child Health & Wellbeing Network.

### **Professor Rebecca Knibb**

Rebecca is an Associate Professor in Health Psychology at Aston University with 30 years of experience of conducting research into the psychological impact of allergies. She sits on a number of European Association for Allergy and Clinical Immunology Task Force groups and is the Chair of the Psychology Working Group for the British Society for Allergy and Clinical Immunology.

### **Nurse Polly Mattia**

Nurse Polly is the named school nurse for seven schools in the Hammersmith and Fulham area of London. She has a BSc in Nutrition, is a registered nurse, and has a PGDip in community public health nursing.

### **Dr. Dermot Ryan**

Dermot Ryan is a recently retired GP who worked in the East Midlands as a GP for 30 years. He has a long standing interest in asthma and allergy having been Chairman of the Primary Care Respiratory Society and more recently was Chairman of the Primary Care Interest Group or the European Academy of Allergy and Clinical Immunology. He is currently an Honorary Research Fellow at the University of Edinburgh.

### **Amira Hegazey**

Amira is the Assistant Head Teacher and Designated Safeguarding Lead at Melcombe Primary School in Hammersmith, West London.

### **Sarah Pattison**

Sarah became involved in the allergy world in 2014, shortly after having her son, Osian, who was diagnosed with multiple allergies. She is committed to improving life for those with allergies, bringing her insight into her association with the Natasha Allergy Research Foundation.

### **Samantha Burdett**

Samantha is a foster carer and a mum. She was first prescribed an adrenaline pen 12 years ago after experiencing anaphylaxis in reaction to a wasp sting.

### **Jack Fowler**

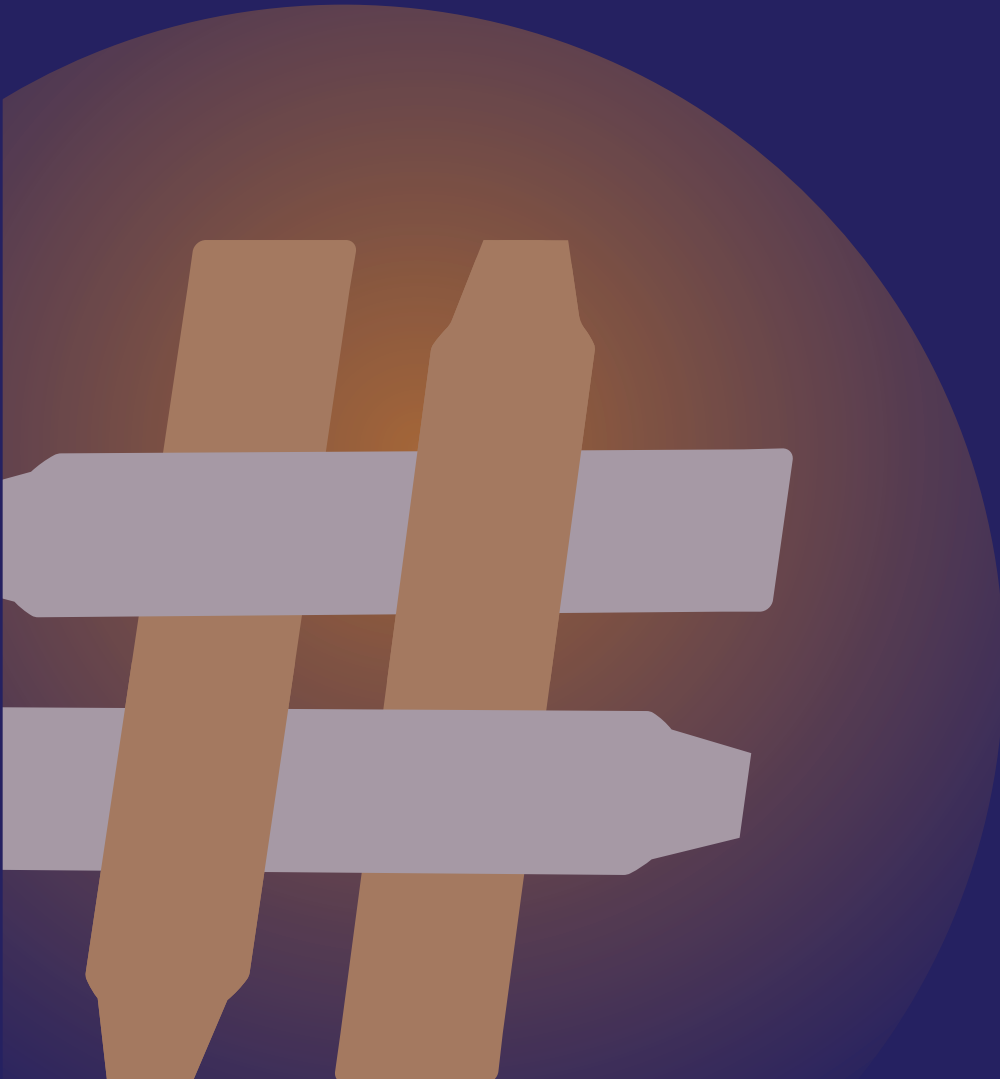
Jack is an actor, DJ and ex-Love Island participant with a severe nut allergy. He has previously been rushed to Accident and Emergency three times due to anaphylactic shock and is committed to empower young people through education around allergies and adrenaline pens.

### **Curtis Billy**

Curtis is 20 years old and was only prescribed an adrenaline pen four years ago, despite having his nut allergy identified when he was five. Before joining the ready2reactuk Steering Group, he was unaware of expiry dates on adrenaline pens.

## ABOUT THE AAI PUBLIC AWARENESS CAMPAIGN SURVEY

This document references data collected by the AAI Public Awareness Campaign Survey, research carried out by Ipsos for Viatris Healthcare UK Ltd, a subsidiary of Viatris Inc, a global pharmaceutical company. The survey was conducted on 200 adults above the age of 18 in the UK who were prescribed adrenaline pens (AAIs) themselves, parents of children prescribed adrenaline pens, or family carers of patients prescribed adrenaline pens. The survey was conducted between 17th-26th April 2023. the freedom to live their life to the full.



The ready2reactuk initiative was funded and reviewed for correctness by Viatris Healthcare UK Ltd

