

**DiABETES UK**  
KNOW DIABETES. FIGHT DIABETES.

**TYPE**  
**TIPPING**  
**POINT** **1**



**SEIZING THE**  
**OPPORTUNITY TO**  
**TRANSFORM TYPE 1 DIABETES**

# FOREWORD



**Colette Marshall**  
Chief Executive

*Colette Marshall*

**We stand at a pivotal moment. For the first time, it is becoming possible to intervene earlier, treat the root causes of type 1 diabetes – the autoimmune attack on insulin-producing beta cells in the pancreas – and restore the body’s ability to produce insulin. Through long-term vision and strategic investment, Diabetes UK has helped make this moment possible, laying the foundations for scientific progress and positioning the UK to lead globally in the next era of type 1 diabetes treatment.**

For almost a century, Diabetes UK has invested in the scientists and research behind advances in diabetes care. This commitment has transformed scientific understanding of type 1 diabetes and opened new pathways to prevention and cure.

In 1979, Diabetes UK scientists were the first to show that altering the immune system could change the course of type 1 diabetes. Since then, research we have funded has revealed the immune processes that destroy insulin-producing cells, has enabled early detection before symptoms appear, and has laid the groundwork for immunotherapies to delay or prevent progression. The first of which, teplizumab, has just been approved for use on the NHS in England and Wales.

Beta cell therapies that aim to restore insulin production and form part of a future cure have also become a major focus of our work. Through our core research funding and, more recently, the Type 1 Diabetes Grand Challenge generously funded by the Steve Morgan Foundation and in partnership with Breakthrough T1D, we have been able to commit £30 million to accelerate progress and build world-leading teams across the UK.

Funding excellent science alone is not enough. The Type 1 Diabetes Grand Challenge is also an example of how we work with key players across the entire system. This positions Diabetes UK to connect the right expertise, align efforts, and accelerate progress. Our long-standing collaboration with organisations such as the NIHR reflects this role in strengthening the wider research landscape.

We have also invested in the national infrastructure to translate discovery into impact, including the UK Type 1 Diabetes Research Consortium – a national network of 30 research centres scaling up type 1 diabetes immunotherapy clinical trials – and partnering with the NIHR to strengthen the UK’s beta cell therapy clinical trial capacity, while unlocking additional UK, European and global investment.

Underpinning this, is the growing community of disease-modifying therapy experts we have built, collaborating across disciplines and borders, to deliver breakthroughs now and in the years to come.

People living with diabetes are central to this community and all of our work is grounded in their real-life experiences. Through extensive engagement with thousands of individuals across the UK, including Priority Setting Partnerships, and a clear commitment to placing lived experience at the centre of decision-making, people with diabetes directly inform Diabetes UK’s research priorities, funding decisions, study design, and policy recommendations. Together, this shows that innovation in type 1 diabetes is an urgent and shared priority for those affected by the condition.

**Our mission is clear: to accelerate progress from the laboratory to the NHS. This is a pivotal moment – and together, we can turn scientific promise into life changing impact for people with type 1 diabetes.**



# CONTENTS

- 6** Introduction
- 9** Prevention and early detection
- 12** Timeline of discoveries
- 14** Pursuing cures
- 17** Driving the future of diabetes discovery
- 18** Conclusion
- 20** Recommendations
- 22** References

# INTRODUCTION

**A century ago, the discovery of insulin transformed type 1 diabetes from a fatal diagnosis into a long-term condition. Since then, Diabetes UK's research has transformed how people live with type 1 diabetes – from the insulin pen to the handheld blood glucose monitor, from hybrid closed loop systems to donor islet transplants delivered by the NHS. Investment and leadership from the NHS and governments have translated this progress into better care for people with diabetes.**

These advances have dramatically improved safety and quality of life. They have helped reduce the risk of serious complications and enabled many people with type 1 diabetes to live longer, healthier lives.

However, even the most advanced technology currently available to people living with type 1 diabetes still depends on constant self-management. Great strides have been made in recent years in widening access to technology including hybrid closed loop systems, however even those with access must still calculate food intake, anticipate the effects of exercise, stress, sleep, illness and even the weather, and respond to unpredictable changes in blood glucose. Technology can support these decisions, but it cannot remove the need to make them. The daily burden of type 1 diabetes remains relentless.

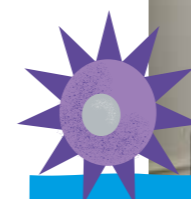
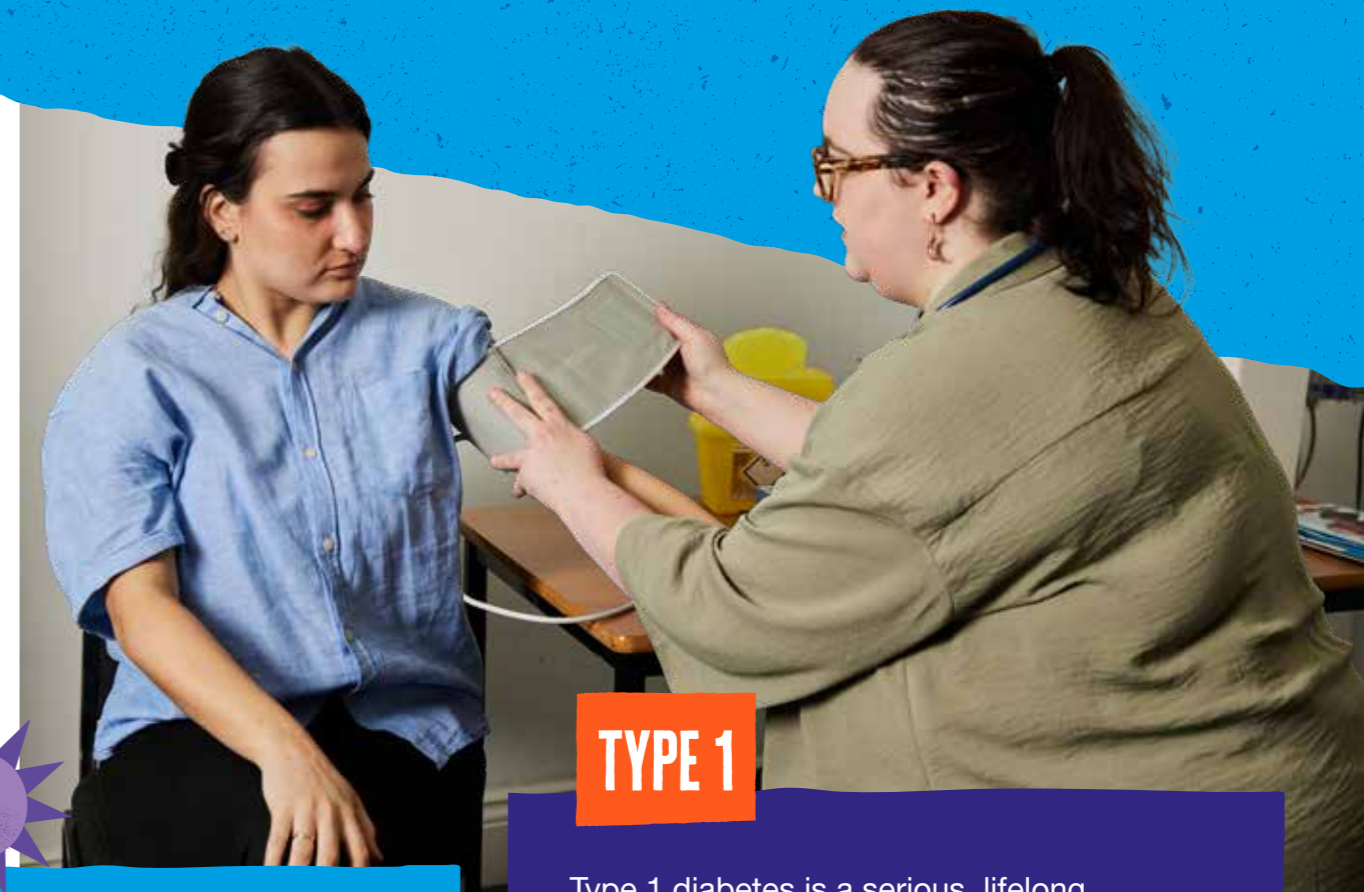
And while outcomes have improved, serious complications and mental health conditions still affect too many people with type 1 diabetes. Only a minority (15%) of people with type 1 diabetes are able to meet the NICE recommended target long-term blood glucose levels, reflecting the considerable challenges

of managing blood glucose in daily life. This means heart disease, stroke, kidney failure, sight loss and amputation remain real risks, and type 1 diabetes continues to cut lives short.

Today, however, the UK stands at the threshold of a new era. Decades of research have transformed our understanding of why type 1 diabetes develops and how it might be stopped at its source. This knowledge is now unlocking approaches that go beyond managing the condition: screening to detect type 1 diabetes early; immunotherapies to weaken the immune attack; and beta cell therapies to replace destroyed insulin-producing cells.

Together, these innovations have the potential to prevent or cure type 1 diabetes and restore the body's own insulin production – reducing the burden of daily management, cutting the risk of complications, and extending lives.

This represents both a scientific tipping point and a strategic economic opportunity for the country.



## Disease-modifying therapies

Disease-modifying therapies in type 1 diabetes are interventions that target the underlying autoimmune disease process, rather than only treating blood glucose levels. They alter the disease course, for example by slowing or preventing progression, preserving beta cell function, or delaying onset of symptomatic type 1 diabetes.

These innovations sit at the intersection of immunology, cell therapy and genomics – areas where the UK already has internationally recognised strengths. With the right political ambition, the UK can lead the world in the next generation of type 1 diabetes treatments and push forward these strategically important research areas.

## TYPE 1

Type 1 diabetes is a serious, lifelong autoimmune condition that develops when the immune system attacks the insulin-producing beta cells in the pancreas. Almost **350,000** people in the UK are living with type 1 diabetes.

It requires constant self-management with insulin therapy to prevent serious acute and long-term complications. We estimate that each year type 1 diabetes leads to **2,334 heart attacks, 2,694 strokes, and 7,962 cases of heart failure.**<sup>1</sup> These complications contribute to earlier mortality for people with type 1 diabetes. While life expectancy varies widely, on average type 1 causes 7.6 lost life years per person.<sup>2</sup>

There is currently no alternative treatment or cure for type 1 diabetes, and the NHS spends an estimated **£2.1 billion** per year treating the condition and its complications.<sup>3</sup>

The causes of type 1 diabetes are not yet fully understood. While genetics influence risk, most people diagnosed have no family history, showing that other triggers are involved.

To seize this once in a century opportunity, we are calling on the Government to adopt a bold national ambition for type 1 diabetes innovation:

- Support ongoing research and the development of clinical pathways to identify and monitor people with early-stage type 1 diabetes, with the ambition to establish a national screening programme in the future.
- Fast track approval processes for new type 1 diabetes immunotherapies as they are developed and prepare the NHS to deliver them, ensuring the UK is among the first countries where these treatments are available.
- Position the UK as the global destination for beta cell therapy research, attracting investment, talent, and manufacturing capacity.

With decisive action, Parliament can help ensure the UK becomes the global leader in type 1 diabetes innovation for the benefit of patients, the NHS, and the UK economy.

## JACK'S STORY



### Living with type 1 diabetes means managing hundreds of decisions every single day.

Since being diagnosed at age 10, I've had to balance insulin, food, and sport while trying to live a healthy life.

I've been incredibly lucky to have the unwavering support of my family and girlfriend, but the truth is, the constant worry and hidden anxiety never truly leave you. Type 1 doesn't just affect the individual; it weighs heavily on those closest to us.

Current tech like my insulin pump and continuous glucose monitor have significantly improved daily management. However, future treatments are about more than numbers—they're about quality of life, helping young people feel safer and less overwhelmed by the constant mental load.

While progress can sometimes feel slow, I remain deeply optimistic. Crucially, life-changing tech and future treatments must be accessible to everyone not just a lucky few. Access shouldn't depend on where you live in the UK like a postcode lottery, nor should people have to prove they are 'well managed' just to qualify for support.

Continued investment and campaigns like Type 1 Tipping Point have the genuine potential to level the playing field and change lives.

# PREVENTION AND EARLY DETECTION

The symptoms of type 1 diabetes appear suddenly and can become dangerous extremely quickly. People are typically diagnosed abruptly only once they develop symptoms known as the 4Ts (**T**hinner, **T**ired, **T**hirsty and going to the **T**oilet more) - turning someone's world upside down as they urgently learn to manage their blood glucose levels with insulin therapy. Around 25% of children only get diagnosed once they are seriously ill with DKA (Diabetic Ketoacidosis) requiring immediate emergency care.

Yet before symptoms appear, type 1 diabetes develops silently. For months or years, the immune system attacks insulin-producing beta cells while blood glucose remains normal and insulin as a treatment is not yet required. Decades of research, including a 40-year landmark study funded by Diabetes UK<sup>4</sup>, have shown that this early stage can be identified through immune markers known as islet autoantibodies, detected with a simple blood test.

Screening for early-stage type 1 diabetes – before symptoms appear – is an exciting area of research that could fundamentally transform the diagnosis experience. Identifying people earlier would allow monitoring and support, offering a 'softer landing' into life with the condition and preventing life-threatening complications at diagnosis. Crucially, screening also opens a window to give new immunotherapies and intervene to disrupt the type 1 immune attack, which can delay onset of the condition and in the future could entirely prevent it.

However, screening in the UK is currently only available as part of research programmes. The Diabetes UK co-funded ELSA (Early Surveillance for Autoimmune Diabetes) study has screened more than 40,000 children for type 1 diabetes autoantibodies and demonstrated that general population screening is feasible, effective and could prevent thousands of emergency diagnoses.<sup>5</sup> While a similar study, T1DRA, is screening 20,000 adults.

This research is generating the evidence needed to inform decisions about a future NHS-led screening programme for type 1 diabetes. To further build this vital evidence base, Diabetes UK is co-funding the second phase of the ELSA study. This will expand screening from children aged 3-13 to children aged 2-17 years, study health economics and establish NHS Early-Stage Type 1 Diabetes Clinics. This will create a clean path from screening through to monitoring, diagnosis and treatment. A further ELSA study will also

Around 25% of children only get diagnosed once they are seriously ill.



**Without a screening programme, access to immunotherapies will remain limited to research studies or sporadic NHS testing.**

explore the use of genetic risk scoring to target monitoring and follow up. In parallel, we are working with clinicians and policy makers through an NHS England task and finish group to develop new care pathways for people at risk or with early-stage type 1 diabetes.

Working towards a future national screening programme is more important than ever. The first immunotherapy – teplizumab (Tzielid) – is now licensed in the UK for people aged 8 years or over with early-stage type 1 diabetes and has also been approved by NICE for people in England and Wales. Clinical trials show it can delay the onset of symptomatic type 1 diabetes for around 3 years, supported by real-world data from the US.<sup>6</sup>

This marks a tipping point in the treatment of type 1 diabetes, but realising its impact depends on action now, so that everyone at risk of type 1 diabetes can be diagnosed early through screening and offered life-changing treatments.

Diabetes UK continues to fund research to ensure a range of immunotherapies become available for people at the earliest stages of type 1 diabetes and beyond. Through the

Type 1 Diabetes Research Consortium and the Type 1 Diabetes Grand Challenge, we invest not only in innovative research, but also in the critical infrastructure needed to translate discoveries from the lab into clinical practice.

This work focuses on closing key knowledge gaps, including long-term outcomes, why responses to treatment vary, and how genetic, autoimmune and environmental factors drive the condition. Addressing these challenges is critical if we are to move from delaying type 1 diabetes towards preventing it.

Government should build on these foundations and use the learnings from research studies and clinical practice to establish a future UK-wide screening programme for type 1 diabetes autoantibodies, designed with equity at its core.

## AMY AND IMOGEN'S STORY OF SCREENING AND TEPLIZUMAB

Amy is a mental health practitioner from the West Midlands who lives with type 1 diabetes. Her 12-year-old daughter, Imogen, took part in the ELSA study, which picked up she was in the early stages of type 1 diabetes. She became the second child in the UK to access immunotherapy treatment, teplizumab, to delay the progression of her condition.



When I was diagnosed with type 1 at 13, I had no warning. I ended up quite poorly in hospital with diabetic ketoacidosis (DKA). When Imogen's diagnosis arrives, we hope that having this awareness will reduce her chances of experiencing DKA and the added trauma that comes from a sudden illness.

Because I've got lived experience of diabetes, I felt confident that choosing teplizumab was the best thing we could do for Imogen. Back in the 1990s when I was diagnosed if someone had said, 'You could be given this and it will delay you getting type 1 diabetes for up to three years,' I'd have bitten their hand off.

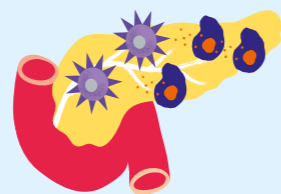
What I'm truly hoping is that we've bought Imogen more time before she fully develops type 1 diabetes and needs insulin therapy.

I've told Imogen that having diabetes won't stop her living the life she wants to. She can still eat sweets, spend time with her friends, and do everything she wants. But it does take extra care and effort to manage life with diabetes and keep yourself well.

If we can give her a childhood where she doesn't need to think about that yet – especially over adolescence, which is already a hard time – that will mean everything.

Photography: Gemma Griffiths

# TIMELINE OF DISCOVERIES



## 1974 WE UNCOVER TYPE 1'S CAUSE

Our scientists show type 1 diabetes is caused by an immune system attack.

## 1979 WE SPOT AN EARLY WINDOW TO STOP TYPE 1

We discover the immune attack happens gradually, long before a diagnosis.



## WE FUND A LANDMARK 40-YEAR STUDY

It rewrites understanding of type 1 diabetes' early, symptom-free stages.

## 1985



## 2015

### WE MAKE THE UK A GLOBAL IMMUNOTHERAPY HUB

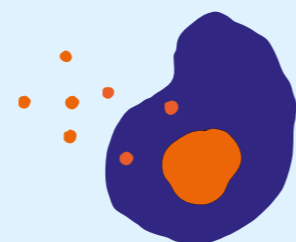
Launching a multi-million-pound research network to fast-track immunotherapy breakthroughs.



## WE FUND THE UK'S FIRST ISLET TRANSPLANTS

It leads to them becoming available on the NHS.

## 2005



## 1990s

### WE DETECT EARLY WARNING SIGNS

We develop tests to identify people in the early stages of type 1, allowing trials of immunotherapies designed to slow its progress.



## 1989

### OUR SCIENTISTS PIONEER ISLET TRANSPLANTS

They develop a way to collect cells from donor pancreases for transplant.



## 2022

### THE TYPE 1 DIABETES GRAND CHALLENGE BEGINS

Moving towards a future where immunotherapies and beta cell therapies are available for everyone at risk or living with type 1.



### WE FUND THE UK'S FIRST TYPE 1 SCREENING PROGRAMME FOR CHILDREN

To detect type 1 before symptoms start – and find those who would benefit from immunotherapies.

## 2025

### A MILESTONE MOMENT

The first type 1 diabetes immunotherapy – teplizumab – is licensed in the UK. We work to make sure it can reach people who need it.



## TODAY

### WE'RE NOT STOPPING

Funding the science that will one day prevent and cure type 1 diabetes altogether.



# PURSUING CURES



**At the heart of Diabetes UK's research strategy is a long-term ambition to cure all types of diabetes. For type 1 diabetes, this means finding ways to restore the body's ability to produce its own insulin.**

Groundbreaking cell therapy research is now exploring how to replace destroyed beta cells with stem-cell-derived beta cells, offering the potential for people to regain natural insulin production and, ultimately, paving the way towards a cure. These therapies also have exciting potential to be combined with immunotherapies, to protect transplanted cells from the type 1 diabetes immune attack.

**Through the Type 1 Diabetes Grand Challenge, Diabetes UK is funding cutting-edge and high-risk, high-reward research into beta cell therapies, involving a growing international community of scientists from diverse disciplines.**

The strength of our partnerships with the Steve Morgan Foundation and Breakthrough T1D, meant we could enable UK institutions to participate in the Europe-wide Horizon Innovation Health Initiative (IHI) call for beta cell research, with a £2 million investment to overcome the Government's budget timing issues. While early outcomes from Grand Challenge research are expected, sustained investment is needed to increase diversity of approaches and the likelihood of success.

The UK is well placed to lead this field. It has strong NIHR clinical research infrastructure, unrivalled population health datasets, and world leading experience in donor islet transplantation.

**Building on these strengths, the Type 1 Diabetes Grand Challenge, with NIHR support, is establishing a UK wide Type 1 Diabetes Cell Therapy Clinical Trials Network.**

The network is designed to accelerate clinical trials of potentially curative therapies by providing a coordinated, high quality environment for cell therapy development,

supporting the ambition to make the UK one of the fastest and best places in the world to run advanced clinical trials and attracting industry investment. Rather than duplicating existing capacity, the network will coordinate and connect regional and national expertise, aligning with the NIHR Industry Hub and the UK Life Sciences Growth Mission.

Working with support from NIHR infrastructure and co-produced with people living with type 1 diabetes, the network will provide sponsors with bespoke trial support, access to the UK's leading experts and delivery infrastructure. By increasing international visibility of the UK's expertise in type 1 diabetes beta cell therapy research and recruitment potential, the network aims to expand opportunities for people with type 1 diabetes to participate in cutting-edge trials and move closer to transformative, curative treatments.

Continued Government support and insight will be essential to future-proof the network and ensure the UK is a world-leading platform for the delivery of these complex cell therapy trials. It promises to attract industry to the UK and also ensure that UK academic expertise is fully engaged with new innovations that benefit the national economy.

We welcome the Government's commitments to reduce clinical trial set up times, and these reforms must work for the added complexity of cell therapies, which face unique regulatory and delivery challenges, and require platforms with disease-specific expertise. Sustained, long term funding will also be vital to ensure promising therapies move beyond early trials to reach people who could benefit.

Together, these foundations position the UK to translate world leading science into real world impact and bring the possibility of cures closer for people living with type 1 diabetes.

## SONIA'S STORY



I wish that people understood that type 1 diabetes is constant. It doesn't switch off when you're tired, busy, unwell or trying to live a normal life. Every day involves decision making – around food, insulin, activity, stress, illness – often hundreds of small choices that most people never have to think about. Even when it looks 'managed', there's always mental effort, planning and risk behind the scenes.

When I'm at work and we have all-day workshops or back-to-back meetings, it's hard to know when you're going to get a break for lunch. I need to take my insulin 15-20 minutes before I eat, so I know on those office days I'll end up delayed and have a small window of time to eat. As a result, I've had high blood glucose levels, which then causes anxiety.

Starting an insulin pump has made a positive difference for me. It's helped me to keep my blood sugar levels in range, reduced some of the guesswork, and given me more flexibility day to day (also means taking no more injections in public!). Technology has absolutely changed lives – it's a major step forward from what diabetes care used to look like.

That said, technology doesn't remove diabetes. Alarms, data and devices are helpful, but they also mean you're never fully away from it. You still have to respond, adjust, think ahead, and manage risk. The condition remains relentless, even with the best tools available.

Diabetes research feels incredibly important. This feels like a monumental time. Moving beyond insulin alone has the potential to transform what it means to live with type 1 diabetes, not just for individuals, but for families and future generations.



**Sonia, 40, is from Berkshire and was diagnosed with type 1 diabetes just before her 32nd birthday.**

# DRIVING THE FUTURE OF DIABETES DISCOVERY

**Transformative breakthroughs are built on long term investment in people. To deliver the next generation of diabetes treatments, the UK needs a strong and diverse pipeline of researchers equipped to drive discovery and translation.**

There is significant untapped potential for frontline healthcare professionals to contribute to diabetes research. However, in today's pressured NHS, many clinicians lack the time, support and clear pathways needed to get involved. National leadership is needed to create sustainable career routes into research for frontline clinicians, including GPs, nurses, midwives and allied health professionals, whose insight is critical to shaping effective, patient centred studies.

Another barrier to building a strong pipeline of diabetes researchers is the lack of early-career funding. Government investment through initiatives such as the Medical Research Charities Early-Career Researcher Fund represents important progress in supporting emerging talent. However, further sustained and targeted investment is needed to help ensure promising scientists stay in the field after their PhD. It is now the exception rather than the norm for junior diabetes researchers to stay in science. We must do more to attract, develop, and retain early-career researchers – both clinical and discovery scientists.

Diabetes UK is committed to expanding access to funding for early-career researchers, and to nurture an inclusive research culture that attracts and retains diverse talent in diabetes research. However, system-wide



action is also essential to address the under-representation in research leadership and to embed culturally sensitive research design.

Improving equity in research participation will require better awareness and understanding of clinical trials among healthcare professionals, particularly Diabetes Specialist Nurses, so they can support people from all backgrounds to access research opportunities.

The progress we have seen in type 1 diabetes is testament to the strength of the UK's life sciences sector and its world-class researchers, alongside sustained public investment and strong NHS leadership. Over the next decade, by continuing to invest in people and the research ecosystem, the UK can build on this and lead the world in the next generation of type 1 diabetes treatment.

# CONCLUSION

Our vision for the future of type 1 diabetes aligns with the UK Government's ambition, as set out in the Life Sciences Sector Plan, with prevention at its core. Diabetes UK is committed to ensuring that new treatments and innovations are adopted rapidly and equitably, so that everyone affected by diabetes can benefit from them as soon as possible.

The type 1 diabetes scientific community has the knowledge to transform type 1 diabetes, and the UK is in a strong position to lead the world into the next generation of treatments. Our research infrastructure, national health system and demographics give the UK the perfect conditions to be at the forefront in this life-changing, cutting-edge field.

With continued political will and investment, we will be able to translate the science into real improvements in the lives of people with diabetes. Diagnosing type 1 diabetes before people become sick, delaying symptoms for years and eventually delivering life-changing treatments that remove the need for insulin altogether.

Diabetes UK is committed to pushing forward new discoveries, creating an environment that attracts further investment and supporting the health system to adopt innovation.



# RECOMMENDATIONS

## Prevention and early detection

- 1 UK Governments should commit sustained funding for clinical pathways** to identify and monitor early-stage type 1 diabetes, using evaluation to ensure effective, acceptable and equitable delivery, to build towards a future national screening programme.
- 2 Ensure use of national registry, clinical coding and standardised autoantibody testing for early-stage type 1 diabetes.** Use long-term monitoring systems to assess outcomes and cost-effectiveness.
- 3 Provide national guidance, monitoring and education** for those who test positive for autoantibodies, and co-design care pathways and resources with people with lived experience.
- 4 Invest in immunotherapy research for people with early-stage type 1 diabetes.** Government, charitable and industry research funders should invest in immunotherapy research and trials in people with early-stage type 1 diabetes to maximise prevention potential.
- 5 Prepare the NHS for the roll out of immunotherapies.** Governments should ensure that the NHS is prepared for type 1 diabetes immunotherapies by expanding and upskilling the specialist workforce, building service capacity, and designing national pathways that identify target populations – for example, via type 1 diabetes autoantibody screening – and guarantee equitable access.
- 6 Upskill wider NHS healthcare professionals on early-stage type 1 diabetes.** Department of Health and Social Care should work with professional bodies, clinical leads and clinical networks to increase awareness amongst relevant healthcare professionals of early-stage type 1 diabetes and opportunities for their patients to participate in screening research and immunotherapy clinical trials.
- 7 In England, the Department of Health and Social Care should ensure the infrastructure required to disseminate knowledge and implement new care pathways is in place.** Crucially this would mean retaining and sustaining diabetes clinical leadership at national, regional and local levels of the health system and supporting diabetes clinical networks.

## Pursuing cures

- 1 Champion the UK as a global leader in beta cell therapy trials.** Government should adopt a national ambition to make the UK the world's leading destination for beta cell therapy research and implementation. The UK's demographics, clinical infrastructure and national health systems mean it is well placed to lead in this field.
- 2 Secure long-term funding for the UK Type 1 Diabetes Cell Therapy Clinical Trials Network.** Commit sustained public investment in the Cell Therapy Clinical Trials Network, jointly run by Diabetes UK and NIHR, to provide certainty and continuity for pharmaceutical companies and researchers.
- 3 Horizon Europe should continue to support beta cell therapy research in collaboration with the UK.** This should build on the Type 1 Diabetes Grand Challenge's investment which secured access to the Innovation Health Initiative (IHI) call for UK institutions.
- 4 Establish a timely evaluation and commissioning route for advanced beta cell therapies.** The Advanced Therapy Medicinal Products (ATMP) Programme should establish a pathway to assess emerging advanced beta cell therapies and put in place the mechanisms for swift commissioning and rollout.

## Driving the future of diabetes discovery

- 1 Invest in UK science careers and talent pipelines.** Expand public, charity and industry investment in training, fellowships, and career development for researchers in diabetes research and medicine.
- 2 Address NHS clinical research workforce shortages.** Plan to recruit, retain, and support clinical researchers within the NHS, with dedicated funding and career pathways, including for nurses and allied health professionals.
- 3 Increase diverse participation in research trials.** Create equitable opportunities to participate in clinical trials by increasing knowledge of trials amongst healthcare professionals, particularly Diabetes Specialist Nurses.

# REFERENCES

- 1 Diabetes UK (2024) Estimation based on NHS England Digital: National Diabetes Audit—Complications and Mortality Outcomes Dashboard, 2009–2023. Available at: <https://digital.nhs.uk/data-and-information/publications/statistical/national-diabetes-audit/complications-and-mortality-2009-2023> (Accessed: 14 November 2024).
- 2 Heald, A.H. et al. (2020) 'Estimating life years lost to diabetes: outcomes from analysis of National Diabetes Audit and Office of National Statistics data', *Cardiovascular Endocrinology & Metabolism*, 9(4), pp. 183–185. <https://doi.org/10.1097/XCE.0000000000000210>.
- 3 Hex, N. et al. (2024) 'Estimation of the direct health and indirect societal costs of diabetes in the UK using a cost of illness model', *Diabetic Medicine*. <https://doi.org/10.1111/dme.15326>.
- 4 Johnston, C. et al. (1989) 'Islet-cell antibodies as predictors of the later development of Type 1 (insulin-dependent) diabetes', *Diabetologia*, 32, pp. 382–386. <https://doi.org/10.1007/BF00277263>
- 5 Quinn, L.M. et al. (2026) 'Feasibility of general population screening for Type 1 diabetes in the UK: the ELSA study', *The Lancet Diabetes & Endocrinology*, 14(3), pp. 197–199. [https://doi.org/10.1016/S2213-8587\(25\)00363-8](https://doi.org/10.1016/S2213-8587(25)00363-8).
- 6 Sims, E.K. et al. (2021) 'Teplizumab improves and stabilizes beta cell function in antibody-positive high-risk individuals', *Science Translational Medicine*, 13(583), eabc8980. <https://doi.org/10.1126/scitranslmed.abc8980>





# DiABETES UK

KNOW DIABETES. FIGHT DIABETES.

Diabetes UK  
Wells Lawrence House  
126 Back Church Lane  
London E1 1FH

Call 0345 123 2399  
Email [campaigns@diabetes.org.uk](mailto:campaigns@diabetes.org.uk)

 /diabetesuk  
 @DiabetesUK

**[diabetes.org.uk](https://diabetes.org.uk)**

The British Diabetic Association operating as Diabetes UK, a charity registered in England and Wales (no. 215199) and in Scotland (no. SC039136). A company limited by guarantee registered in England and Wales with no. 00339181 and registered office at Wells Lawrence House, 126 Back Church Lane London E1 1FH. © Diabetes UK 2026. 102099EINT.

