THE ESSENTIAL GUIDE TO DIABETES

Sarah Gregory
Senior Diabetes Specialist Nurse/Consultant Nurse (Diabetes)

Key Learning Points

- **Understand the difference between Type 1 and Type 2 diabetes**
- **Know the components of a diabetes Annual Review and the 9 key care processes**
- **Know the 15 Healthcare Essentials for Diabetes**
- **Know the principles of target setting for people with Type 2 diabetes**

Type 1 & Type 2 diabetes

- Know the difference!
- Type 1
  - Autoimmune
  - Destruction of Beta cells in the pancreas
  - Need insulin
  - Confirmed with positive antibodies (GAD, IA2 & ZnT8)
- Type 2
  - Insulin resistance
  - Still have beta cell function
  - Strong family history
  - Risk factors include obesity, ethnicity, age, family history, lifestyle
  - Initially managed with diet/lifestyle interventions, medication and sometimes insulin therapy

Annual Review

- What is an Annual Review?
  - 9 key care processes (for QoF targets)
  - Joint target setting, between the HCP and the person with diabetes.
  - Engagement with individuals is key, and consultations should be collaborative and inclusive, and not judgemental.
  - Good use of language – verbal, written and non-verbal – can lower anxiety, build confidence and help to improve self card (NHS England, 2018).
- Also consider the ‘Fifteen Health care Essentials’ (Diabetes UK)

HbA1c Targets

- HbA1c is an average of blood glucose, measured by the red blood cells over the past 120 days
  - it should be measured at least yearly, but not more than three monthly.
- Remember - it is only an average of diabetes control, and if patients are on insulin or a sulphonylurea then that number may be made up of a mixture of highs and lows.
- Home blood glucose monitoring should also be offered for people on insulin and/or sulphonylurea because of the risk of hyoglycaemia.
- In adults with type 2 diabetes, if HbA1c levels are not adequately controlled (above 58mmol) by lifestyle changes alone, or the patient is symptomatic medication should be started.
- A 'step-up' approach should be taken, using NICE guidelines but also considering the individual and their targets as well.

Blood Pressure

- Blood pressure is as important as glycaemic control!
- Blood pressure monitoring is part of the annual review, but should be recorded more frequently if outside of target parameters.
- NICE (2017) recommend that checking blood pressure on diagnosis with initial monitoring as follows:
- • 1 month if blood pressure is higher than 150/90 mmHg
- • 2 months if blood pressure is higher than 140/80 mmHg
- • 2 months if blood pressure is higher than 130/80 mmHg and there is kidney, eye or cerebrovascular damage.

Blood Pressure Treatment

- First-line antihypertensive drug treatment should be a once-daily, generic angiotensin-coverting enzyme (ACE)inhibitor.
  - Exceptions to this are people of African or Caribbean family origin, or women for whom there is a possibility of becoming pregnant.
- For African or Caribbean
  - Step 1 calcium-channel blocker, Step 2 angiotensin-coverting enzyme inhibitor, angiotension II receptor bocker or thiazide-like diuretic (NICE 2017)
- **Do not combine** an ACE inhibitor with an angiotensin II-receptor antagonist to treat hypertension.
- Remember to check for possible adverse effects of antihypertensive drug treatment – including the risks from unnecessarily low blood pressure.

Cholesterol

- **Target total cholesterol should be below 5mmol**
- The decision whether to start statin therapy should be made after an informed discussion between the clinician and the person about the risks and benefits of statin treatment, including other co-morbidities, polypharmacy and frailty (NICE 2019)
- Also consider:
  - Smoking status
  - alcohol consumption
  - blood pressure
  - body mass index or other measure of obesity
  - total cholesterol, non-HDL cholesterol, HDL cholesterol and triglycerides
  - renal function and estimated glomerular filtration rate
  - transaminase level (alanine aminotransferase or aspartate aminotransferase
  - thyroid-stimulating hormone

Retinal Screening

- Hyperglycaemia can damage the vessels behind the eye, but is preventable.
- Everybody with diabetes is offered eye screening through a national programme, and the importance of this should be explained at annual review and patients encouraged to attend
- Retinopathy can progress without any warning symptoms, but the eye screening programme is effective at picking up any problems and appropriate referrals.
- High blood glucose levels can also affect the vision – so ask about this at annual review, especially if their visual prescription changes or is getting worse.

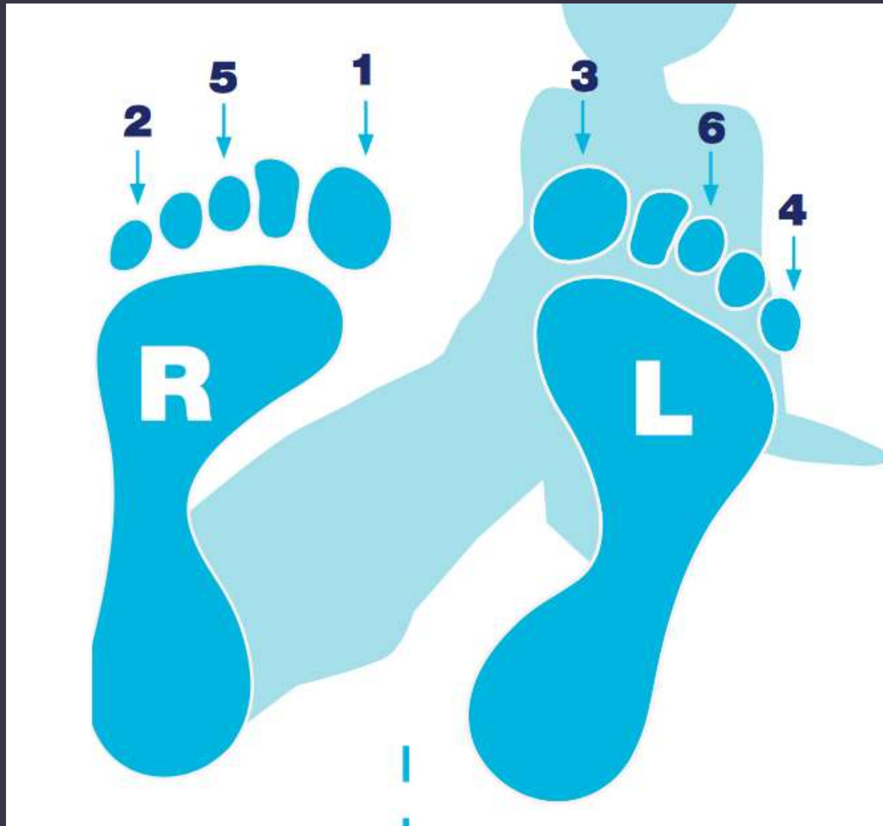
Foot Checks

- Know what is normal and what is not!
- People with Type 2 diabetes are at risk of foot problems due to neuropathy (nerve damage) and vascular disease (circulation)
  - Diabetic neuropathy can cause pain in the lower limbs and feet, pins and needles or complete loss of feeling.
  - Vascular disease can impact on wound healing and increase the risk of ulceration
- Adults with diabetes should have a foot check when diabetes is diagnosed and at least yearly
- Where possible, encourage people to look at their own feet every day

Carrying out a foot check

- Take off shoes and socks, and any bandages or dressings.
- Both feet should be carefully examined
- Ask about any current foot problems
- Examine foot shape and footwear to identify any rubbing or pressure from shoes
- Check skin for changes in colour and looking for ulcers, sores, areas of hard skin and any signs of inflammation or infection
- Take the pulses in each foot (using a doppler if available – pulses are difficult to find on some people, particularly if their legs are swollen)
- Use the Ipswich Touch Test for sensation

Ipswich Touch Test



The touch must be light as a feather, and brief (1–2 seconds): do not press, prod or poke tap or stroke the skin.

If the person did not respond do not attempt to get a reaction by pressing harder. They did not feel; this should be recorded as not felt.

You must not touch each toe more than once. If not felt do not repeat the touch, there is no second chance.
(Diabetes UK)

Kidney Function

- Kidney Function should be monitored at least yearly and measured by
  - blood (eGFR and Creatinine)
  - urine (Albumin/Creatinine Ration ACR) which identifies the amount of protein going through the kidneys. Urine samples are sent to the laboratory for measurement of ACR.
- ***Normalbuminuria, Microalbuminuria, –Macroalbuminuria*- are all old terminology**
- Early identification of proteinuria can limit progression of Chronic Kidney Disease (CKD)
- More frequent monitoring if patients have CKD stage G3b and above or any of the following:
  - CV disease, renal tract disease, nephrotoxic medication
- ***Remember that HbA1c may be giving a false high reading – those with CKD have shortened erythrocycte survival (90 days compared to 120 days)***

Classification of CKD

GFR ml/min/$1.73m^2$	Albuminuria	Categories	mg/mmol
	A 1	A 2	A 3
G1 ≥ 90	No CKD	G1 A2	G1 A3
G2 60-89	No CKD	G2 A2	G2 A3
G3a 45-59	G3a A1	G3b A2	G3a A3 G3b A2
G3b 30-44	G3b A1	G2b A2	
G4 15-29	G4 A1	G4 A2	G4 A3
G5 <15	G5 A1	G5 A2	G5 A3

Diet & Lifestyle Advice

- **Discuss** benefits of weight loss and lifestyle advice.
  - Individual goals, different interventions and ways of eating that they can follow.
  - The general principles of any healthy eating plan should be something they can afford, easily follow and which is sustainable.
- Encourage a diet with less salt and less fatty food, and use resources such as Diabetes UK for information, meal ideas and recipes – which include information about carbohydrate, calories and salt.
- Refer to a structured education programme, or to a dietitian is specialist dietary advice is needed.

Smoking Advice

- Smoking increases the risk of heart disease or stroke, and all other complications.
- It also increases blood pressure.
- Smoking status should be documented at Annual Review, and smoking cessation advice offered if appropriate. There are smoking cessation services in all areas

What else?

- Fifteen Health Care Essentials (Diabetes UK)

- Emotional & Psychological support
- Opportunity to talk about sexual dysfunction
- Pre-Conceptual care
- Access to specialist diabetes healthcare professionals
- Flu Vaccination
- Diabetes Education Course
- Good care in hospital

Summary

- Type 1 and Type 2 diabetes are fundamentally different
    - Know the difference!
- All people with diabetes are entitled to an Annual Review
    - Consider those that cannot attend or are housebound
- It is not just glycaemic control
- It is THEIR annual review – you facilitate it
- Prioritise the time and focus on achievable goals and targets