

# Stress and diabetes: The use of “worry time” as a way of managing stress

Jen Nash

**Stress is a concept that all of us, with or without diabetes, can relate to. Coined less than sixty years ago by Hans Selye (1956), in our Western world the term has quickly become an ingrained part of both our vocabulary and our daily existence. It is a catch-all description for many of the everyday worries in our modern day lives – family challenges, work demands, health difficulties, relationship conflicts and so on. For the individuals we care for, there are the additional diabetes and lifestyle-related stressors to contend with. This article outlines the impact of stress on diabetes, and offers some practical suggestions and a strategy that non-psychologist clinicians can use to support people with diabetes who are experiencing diabetes-related stress.**

Stress is the feeling of being under too much mental or emotional pressure (NHS Choices, 2014). A certain amount of pressure is a usual part of life; however, what distinguishes pressure from stress is the feeling of being unable to cope. Reactions to stress are dependent on the individual, so a situation that feels stressful to one person may, in contrast, feel motivating and challenging to someone else. Two of the early researchers on stress, Holmes and Rahe (1967) were quick to observe that stress is not just negative. Positive events like holidays, marriage and outstanding personal success are listed in their Social Readjustment Rating Scale as life events that can cause stress. Stress is a complex phenomenon.

This article discusses the impact of stress on people with diabetes and offers nurses working in diabetes some simple suggestions and a “worry time” strategy, which can be adopted in their consultations. It is anticipated that the reader will feel able to help their patients with diabetes tackle their worries by using this systematic approach.

Stress and anxiety is a natural response that has evolved in us as a reaction to situations that we perceive as dangerous. In our evolutionary history, our ancestors needed fast and effective responses to

survive in a hostile world, in which predators were many and often unpredictable. Three reactions to anxiety were established; the fight, flight and freeze responses. These reactions cause a release of hormones in the body. These stress hormones enable the person to deal with pressures or threats – the so-called “fight or flight” response. Once the pressure or threat has passed, the stress hormone levels will usually return to normal; however, if the person is constantly under stress, these hormones will remain in the body, leading to the symptoms of stress.

These responses were hugely effective in the environment in which they evolved. Those humans who had the most effective fight/flight/freeze response were the ones who survived to pass their genes on to subsequent generations. The problem is that against the dangers that are present in our modern-day lives, this strong physiological anxiety reaction is not so helpful. Our biological responses have not evolved to adapt to our modern-day environments, so the things that we are stressed by cannot often be so easily solved as the fight or flight response of our ancestors:

- Illness.
- The death of a loved one.
- Being in an accident.

**Citation:** Nash J (2014) Stress and diabetes: The use of “worry time” as a way of managing stress. *Journal of Diabetes Nursing* 18: 329–32

## Article points

1. Stress is a concept that most of us are familiar with, but for people with diabetes, there are additional stressors, such as a fear of hypoglycaemia and worries about impact on their family.
2. This article introduces the concept of “worry time”, which allows the person to allocate a certain amount of time each day to reflect on the worries and find solutions.
3. As non-psychologist medical professionals, there is often little you feel you can do to support the complexities of your patients’ stressful lives. It is sobering, however, to consider that their medical appointment may be the only time they have to think and reflect amidst these competing priorities.

## Key words

- Blood glucose
- Stress
- Stress management strategy

## Authors

Jen Nash is Clinical Psychologist at the Diabetes Wellbeing Service, Hillingdon Hospital, and Director of Positive Diabetes, London

### Page points

1. Common signs of stress include sleeping problems, loss of appetite and difficulty concentrating. People may report feeling anxious, irritable or low in self esteem, and be aware of racing thoughts, constant worry or ruminating on problems.
2. Diabetes-specific stressors include fear of developing long-term complications, worry about hypoglycaemic episodes, dislike of needles and worry about the impact of diabetes on the family.
3. Stress can alter blood glucose levels, and the extent of its impact is dependent on the individual and the type of diabetes.

- Redundancy or job loss.
- Job promotion.
- Giving a speech in public.
- A new life stage such as parenthood, or the children leaving home.
- Feeling rejected, embarrassed or humiliated.

### Symptoms of stress

Stress can affect us in four ways – physically, cognitively, emotionally and behaviourally (Butler and Hope, 2007). Common signs of stress include sleeping problems, loss of appetite and difficulty concentrating. People may report feeling anxious, irritable or low in self-esteem, and be aware of racing thoughts, constant worry or ruminating on problems. They may also lose their temper more easily, drink more alcohol or act unreasonably. Headaches, muscle tension and dizziness are also common (Butler and Hope, 2007).

### Diabetes-specific worries

People with diabetes are likely to also experience diabetes-specific stress (Lloyd et al, 2005). Some commonly reported examples of these may be:

- Fear of developing long-term complications.
- Being stressed about the possibility of hypoglycaemic episodes.
- Dislike of needles.
- Feeling judged at health appointments.
- Dealing with the impact of diabetes on the family.
- Worry about hypoglycaemic episodes whilst driving.
- The cognitive effort required to manage self-care decisions of diabetes.

### Impact of stress on blood glucose

We know that stress alters blood glucose levels, and the extent of its impact is dependent on the individual (Surwitt et al, 1992). Psychological stress causes a rise in glucose levels in people with type 2 diabetes and in most people with type 1 diabetes, although blood glucose levels can drop in some individuals with type 1 (Lloyd et al, 2005). Physical stress, such as illness or injury, almost always causes blood glucose levels to elevate in people with either type of diabetes (Surwitt et al, 1992).

When a person is stressed they are understandably likely to de-prioritise diabetes self-care in order to divert emotional and cognitive energy towards dealing with the stressor(s). This decrease in attention to self-

care, combined with associated physical effects of stress – such as a change in eating patterns (loss of appetite or overeating in order to comfort/distract) and disturbed ability to sleep – are likely to have an adverse impact on glycaemic control. Prolonged stress in which the person perceives they have no control over the stressor, often leads to a sense of helplessness, which in turn leads to risk of low mood and depression. It is now well accepted that the individual with diabetes is 2–3 times more likely to experience depression than the general population (Barnard et al, 2006) and that a diagnosis of depression leads to poorer diabetes health outcomes than those without (Gonzalez et al, 2008)

### Working with stress in a consultation

In the time-limited medical consultation, it can feel problematic to know how to fully address issues that are causing stress in our patients. What follows are some practical suggestions that you can adapt to suit your own style and weave into your practice as you feel appropriate.

#### Listening

You may feel it is not a good use of your time to simply listen to your patient's accounts of stress, but do not underestimate the importance of listening as an intervention. Simply giving your time to listen can be very therapeutic and increase trust (Walker, 2013). Furthermore, the process of people hearing themselves talk about their difficulties is often the first step to them making changes (Bell and Arcury, 2013).

#### Permission to focus on non-diabetes related stressors

Often diabetes will be perceived as the least important from a range of competing stressors. Health professionals being empathic about this and acknowledging that diabetes is just one of many parts of life can be very beneficial for the person with diabetes. Encouraging the individual to put a time-frame on when diabetes will be prioritised again can be useful. For example, “In one month, I will re-focus on diabetes. In the meantime, I will give myself permission to focus on the other aspects of life I'm finding stressful.”

Feeling in control is the most important aspect of emotional wellbeing (NHS Choices, 2014). As diabetes merges into every aspect of the person's life,

helping the person gain control of one part of their life may well give them the confidence that they can make changes with their diabetes management too. Anything the person can do to increase their personal sense of control will be helpful.

### Worrying on purpose

Stress can lead to rumination on worries and a sense that they are overwhelming (Brinker et al, 2014). The act of getting worries down on paper (or speaking them aloud if there are literacy challenges) can demonstrate that no matter how long the list, there is a beginning and an end; this can lead to an increased sense of control. Worrying on purpose can help. Encouraging the individual to create a “worry time” (Nash, 2013) may appear counter-intuitive, but setting an appointment to worry on a daily basis can encourage a pro-active, problem-solving approach and increase the sense of personal control. There are five steps, and an example of it used in practice is described in the upcoming case study.

### The five steps of “worry time”

#### Set aside the time

“Worry time” can initially be scheduled into your appointment, and after that, it should ideally be done at a time when there are no interruptions. They are likely to need to set a reminder (leave a note, set an alarm on their phone) until it becomes a habit. The duration of the worry time can be decided by the individual; it is good practice to start with 20 minutes and then reduce this time, as often people are pleasantly surprised they have run out of things to worry about after 10 minutes.

#### Record the worries

Gather three things – some paper, a pen and an alarm that will alert the person at the end of their worry time. They simply need to write down their worries without thinking too hard – just let them all spill out onto the page. Once the stream has slowed, they can put their pen down.

#### Rate the worries

The individual should then read the list and give each worry a rating of 1, 2 or 3:

- 1: A worry they can definitely do something about.
- 2: A worry they may be able to do something about.
- 3: A worry that they cannot do anything about.

### Problem solving

Problem solve each of the worries. Begin with the ones marked with a “1” and then focus on “2” and finally “3”. Encourage them to think about the actions they could take or conversations they could have to tackle these problems. The individual should assign a date and time to each action they need to take. Encourage them to imagine for a moment that they could not fail. If that was the case, what would they do to start to tackle this worry? All ideas are good ideas at this point, there are no wrong opinions. For the worries that are marked “3”, brainstorm and see if there might be some ideas they can generate for tackling these worries. If not, that is OK. Some worries cannot be immediately solved; however, by using this process they will see that their worries are not as endless as they seem.

### Put away worries for the rest of the day

Once their timer has gone off, or they have reached the end of their worries, they should put their pad away until the same time tomorrow. Of course, the mind will continue to try to draw them back to their worries, so when they notice they are worrying, encourage them to respond internally, “I’m worrying again, but I’ve dealt with these worries for today and worry-time is now not until tomorrow.” They could then find a way of distracting themselves, for example, by calling a friend, reading a book or busying themselves in a task. If they are outside of the home, they can engage in a simple thinking/counting game, such as counting the number of red cars they see. They can also concentrate on bringing to mind a memory of a pleasant time they’ve enjoyed in the past, or an event they are looking forward to in the future.

Any cognitive activity that interrupts worrying ruminations is useful. In the same way that a person may find it hard when starting to exercise a muscle, confining worries to a specific time will also feel a bit of a challenge at first. As the individual gets used to controlling their worries, they will become better skilled at keeping them under control.

The value of compartmentalising worry is gathering empirical support. McGowan and Behar (2013) investigated individuals with generalised anxiety disorder. Those who were trained in restricting worry to a 30-minute period each day showed reductions on measures of worry, anxiety, negative affect and insomnia, compared to a control condition who were

### Page points

1. The concept “worry time” can be used in order to encourage a pro-active, problem-solving approach to dealing with stress. The act of getting worries down on paper can demonstrate that no matter how long the list, there is a beginning and an end.
2. “Worry time” can initially be scheduled into your appointment, and after that, it should ideally be done at a time when the individual can be uninterrupted.
3. Worry time involves writing down problems and rating each problem in order of perceived controllability. The individual is then able to assess each problem and think of potential solutions.

instructed not to avoid naturally occurring worry.

### Case study

Angela was referred to a clinical psychologist by her DSN, who was concerned about her stress levels. Angela had consistently had an elevated HbA<sub>1c</sub> of 75 mmol/mol (9%), but since the death of her husband last year, it was now at 120 mmol/mol (13.1%). She had two sons, aged 9 and 13 and had an office job in the mornings. Angela had the following worries and gave them the following ratings:

- The house was a constant mess (her husband had taken the lead in keeping the home tidy and she hadn't adapted since his death) – 1
- She could not find the time to do blood glucose tests (“I've got too much on my plate”) – 2
- Relationship with her son (he too had diabetes and tended to react angrily to her “nagging”) – 2
- No time to volunteer for school activities (when her husband was alive this was achievable, but now it felt like yet another chore) – 2

- Sadness at loss of husband (she felt she could never recover from his death) – 3

She gave herself 20 minutes to complete her worry time after she got home from work at 12.30pm while she had her cup of tea and before watching her favourite lunchtime soap at 2pm. Over the course of the week she came up with following ideas:

- House a mess (rating 1). Possible solutions: Do 15 minutes of tidying per day, straight after worry time; “blitz” the house with the boys at the weekend; invite a few supportive friends over to help and ask a friend who is a cleaner to help her in return for babysitting.
- Cannot find time to do blood glucose tests (rating 2). Possible solutions: put blood glucose kit next to kettle and aim to test whenever I have a cup of tea; put a reminder by my toothbrush to do a test when I brush my teeth; put my spare meter in my make-up bag and test in “idle” time (for example, when waiting to pick up son or in waiting rooms.)
- Relationship with son (rating 2). Possible solutions: sit down and talk with him; get a book from the library about raising teenagers; ask the DSN for advice; refrain from asking him about his diabetes for a day or two and see what happens.
- Volunteer for school activities (rating 2). Possible solutions: say no to the next commitment (preparing what to say in advance to help); write an

email to the school explaining that you are unable to help as much at the moment.

- Sadness at loss of husband (rating 3). There were no easy solutions for this, although Angela decided to get bereavement counselling, read a book about overcoming grief and allow herself to have a cry with a friend once a week.

### Limitations of “worry time”

Worry time is a relatively pragmatic tool, although it does require a certain amount of flexibility of thinking on the part of the individual, in order to creatively problem-solve and tolerate any frustration associated with compartmentalising worry. If you notice your patient struggling, then a better way forward may be to simply pick one worry at a time to focus on, and ask a loved one to support them through the process.

### Referring to a psychologist

When effective, this process ought to leave the person with a greater sense of calm and being in control. If, in contrast, the individual becomes more distressed or overwhelmed, or a lessening of stress does not occur by implementing this process, then asking the two anxiety screening questions (Kroenke et al, 2007) is advisable:

Over the past 2 weeks, have you been daily bothered by:

- Feeling nervous, anxious, or on edge.
- Not being able to stop or control your worrying.

If both of these questions are responded to positively, and the person is open to receiving psychological help, then local referral pathways for psychological support should be followed. In most cases, this would mean contacting the local primary care Improving Access to Psychological Therapy (IAPT) Service, or the secondary care Clinical Health Psychology team.

### Conclusion

As a medical professional, there is often little you feel you can do to support the complexities of your patients' stressful lives. It is sobering, however, to consider that their medical appointment may be the only time they have to think and reflect amidst these competing priorities. Using your time in the ways discussed can encourage small acts of taking control. This will, in turn, increase the emotional and physical wellbeing of the individual with diabetes. ■

Barnard K, Skinner T, Pevelar R (2006) The prevalence of co-morbid depression in adults with type 1 diabetes: systematic literature review. *Diabet Med* **23**: 445–8

Bell R, Arcury T (2013) Correlates of physician trust among older adults with diabetes. *Am J Health Behav* **37**: 660–6

Brinker J, Chin Z, Wilkinson R (2014) Ruminative thought style and personality. *Pers Individ Dif* **60**: 41–51

Butler G, Hope T (2007) *Managing your mind: The mental fitness guide*. Oxford University Press, Oxford

Gonzalez JS1, Peyrot M, McCarl LA et al (2008) Depression and diabetes treatment nonadherence: a meta-analysis. *Diabetes Care* **31**: 2398–403

Holmes T, Rahe R (1967) The Social Readjustment Rating Scale. *J Psychosom Res* **11**: 213–8

Kroenke K, Spitzer RL, Williams JB et al (2007) Anxiety disorders in primary care: prevalence, impairment, comorbidity, and detection. *Ann Intern Med* **146**: 317–25

Lloyd C, Smith J, Weinger, K (2005) Stress and diabetes: A review of the links. *Diabetes Spectr* **18**: 121–7

McGowan SK, Behar E (2013) A preliminary investigation of stimulus control training for worry: effects on anxiety and insomnia. *Behav Change* **37**: 90–112

Nash J (2013) *Diabetes and wellbeing: Managing the psychological and emotional challenges of diabetes types 1 and 2*. Wiley-Blackwell, Chichester

NHS Choices (2014) Struggling with stress? NHS Choices. Available at: <http://bit.ly/1oGprn3> (accessed 07.08.14)

Selye H (1956) *The Stress of Life*. McGraw-Hill, New York

Surwitt R, Schneider M, Feinglos M (1992) Stress and diabetes mellitus. *Diabetes Care* **15**: 1413–22

Walker R (2013) *Person-centred practice for long-term conditions: A concise guide to success*. SD Publications, UK