

How to be a resilient doctor: skills to maximize your antifragility

Resilience has become a byword for solving many of the problems in the current NHS caused by years of underfunding and increased workload. This article focuses on individual skills and resources that the reader can use to enhance his/her own performance in life and work.

Introduction

Dr Michael Peters, President of the European Association for Physician Health, opened the 2015 meeting by saying that ‘medicine has become a battlefield’. Members of the health profession are under an onslaught of pressure. The General Medical Council (2018) national training survey demonstrated some stark results: long and intense working hours, heavy workloads and the challenges of frontline medical practice are affecting doctors’ training, experience and personal wellbeing.

A quarter of doctors in training and a fifth of trainers consider themselves to be burnt out because of their work. Burnout is defined by Lafreniere et al (2016) as ‘a chronic state of emotional exhaustion and depersonalisation, and a reduced sense of personal accomplishment’ – this unsatisfactory trio has a negative effect on patient care. A third of trainees said that they are often or always exhausted at the thought of another shift and half of trainees and trainers reported that they often or always feel worn out at the end of their working day. A fifth of doctors in training and trainers told the General Medical Council they feel short of sleep when at work. Most trainees and trainers rate the intensity of their work as very heavy or heavy.

Dr Mark RW Stacey, Consultant Anaesthetist and Welsh Associate Dean, Department of Anaesthetics, University Hospital Wales, Cardiff and Vale University Health Board, Cardiff CF14 4XW (airwayman@me.com)

This increasing workload unsurprisingly leads to lost training opportunities (General Medical Council, 2018). Data from the King’s Fund demonstrate the risks to care quality and staff wellbeing of an NHS system under pressure (Sizmur and Raleigh, 2018).

As an individual, some of these challenges cannot be addressed, but as a group of health workers and as individuals we can influence some of these issues. The buzzword of 2018 (Fishwick, 2018) seems to be ‘resilience’, often defined as the ability to adapt successfully in the face of trauma, adversity tragedy or significant threat, or the capacity to adapt successfully in the presence of risk and adversity. Resilience is a process and is dynamic.

An alternate approach to these challenges is to become antifragile, a term coined by Nassim Taleb (2013) (an emeritus Professor of Uncertainty):

‘Some things benefit from shocks; they thrive and grow when exposed to volatility, randomness, disorder, and stressors and love adventure, risk, and uncertainty. Yet, in spite of the ubiquity of the phenomenon, there is no word for the exact opposite of fragile. Let us call it antifragile. Antifragility is beyond resilience or robustness. The resilient resists shocks and stays the same; the antifragile gets better.’

Sokol (2018) agrees and suggests that doctors revealing their vulnerabilities is like a boxer announcing that he is scared of his opponent.

So why should doctors consider developing antifragile skills? The job is already difficult, without the increasing workload and managerial interference.

It is also a huge privilege to work in this profession with patients often demonstrating the many amazing positive aspects of human behaviour. As Elton (2018) states in her book looking at the inner lives of doctors, doctors are also human, which means that

not only are they vulnerable to all the slings and arrows of outrageous fortune, but they have the ability to learn and perform skills to a very high standard. Like any skills, in order to get good at them (and all the skills listed below are worth becoming expert in), it is useful to adopt the recommendations of Ericsson and Pool (2016) on deliberate practice (*Table 1*).

The three ‘C’s of stoic philosophy

I have developed a personal philosophy of dealing with my life shaped by stoicism which can be summarized by the three Cs:

- Control what you can
- Cope with what you can’t
- Concentrate on what is important.

As the most recent Geneva convention (Parsi-Parsi, 2017) states: I will attend to my own health, wellbeing, and abilities in order to provide care of the highest standard.

So how can we attend to our own health?

The emotional threats that doctors face on both an acute and chronic level can be modified using the skills suggested below. These evidence-based skills can enable you to improve your own antifragility. In order for them to be of value to you, you will need to attend to them as an ongoing process. Resilience is a dynamic process encompassing

Table 1. Ericsson and Pool’s principles of deliberate practice: five steps to mastery

Deliberate practice
Repeat, repeat, repeat
Seek constant critical feedback
Focus ruthlessly on where you need help
Prepare for the process to be mentally and physically exhausting
<i>From Ericsson and Pool (2016)</i>

This is an open access article distributed under the terms of the Creative Commons Attribution Noncommercial License (CC BY-NC 4.0, <http://creativecommons.org/licenses/by-nc-nd/4.0/>).

positive adaptation within the context of significant adversity (Luthar et al, 2000). After many years of practice, these skills will become part of your behaviour. Many of these skills are recognized as factors that promote resilience (Meredith et al, 2011).

This article now discusses 13 practical skills that can be introduced to improve doctors' own antifragility.

See problems as challenges not threats

'In a growth mindset, challenges are exciting rather than threatening. So rather than thinking, oh, I'm going to reveal my weaknesses, you say, wow, here's a chance to grow.' (Dweck, 2017)

Do you view problems as challenges or threats? Psychologically it is more useful to view problems as challenges. Events are not threats or traumatic until they are experienced as such. Additionally it can be useful to reframe our internal chatter – how often do you chastise yourself using sentences such as 'it's not fair'? We know life is unfair – we all work in a job where this unfairness is demonstrated on a daily basis in the stories of our patients.

We have a choice about how we deal with adversity and it is sometimes useful to realize that even extremes of human cruelty as occurred in the holocaust have resulted in inspiring survivor stories such as those told by Victor Frankl (2014) and Edith Eger (2017). Stories such as these are both harrowing and uplifting. As Frankl states: 'Everything can be taken from a man but one thing: the last of the human freedoms – to choose one's attitude in any given set of circumstances, to choose one's own way.' There are even examples of businesses that have turned disaster into opportunity (Orton-Jones, 2016).

So look at your problems as challenges not threats.

Learn optimism skills

Seligman's original research looked at the concept of 'learned helplessness', which occurs when people or animals feel helpless to avoid negative situations. A good example of how we inflict learned helplessness on patients is by getting them to remove all their clothes and put on a backless theatre gown. Seligman shifted his focus from what makes people psychologically ill to what keeps people psychologically well. Much of the practical and useful applications of

his 40 years of research is summarized by the PERMA model (Seligman, 2017). This acronym stands for:

- Positive emotion
- Engagement (how many readers have stopped doing hobbies that they previously enjoyed, and why?)
- Relationships
- Meaning (make your own mission statement, e.g. Crossland, 2018)
- Accomplishments.

Even if you consider yourself a pessimist, developing optimism skills is valuable. As Joseph (2018) discusses, how and why can we avoid learned helplessness?

Praise yourself

How often do you praise yourself? Rarely, I suspect. A very useful exercise to improve this is to keep a gratitude diary (Wood et al, 2010). Write down three things that you are proud of achieving every day. It may be worth doing this in your head on the way home from work, meaning that when you arrive home you discuss positive things with your partner rather than starting off the evening with a moan.

Physical exercise

Regular physical exercise has benefits including improving strength, balance, mood and lowering the risk of dementia. Among Swedish women, a high level of cardiovascular fitness in midlife was associated with a decreased risk of subsequent dementia. Promoting a high level of cardiovascular fitness may be included in strategies to mitigate or prevent dementia (Hörder et al, 2018).

A simple physical test that is supposed to assess all-cause mortality is described by Brito et al (2012) – the author is not responsible for any injuries.

An often used excuse to not exercise is that one has inadequate time, but everybody has 7 minutes to try out the 7-minute full bodyweight exercise (Klika and Jordan, 2013) – if you are feeling particularly fit then do it twice. Remember you have 24 hours in a day – you choose how you spend them.

Cognitive exercise: meditation and mindfulness

The benefits of living a mindful life and learning some meditation skills can include relieving anxiety, pain and depression (Schreiner and Malcolm, 2008). Regular

meditators state that their concentration and performance improves as a result of the training. Google has a happiness expert called Chade-Meng Tan (2017) whose job it is to improve the performance of the staff who work at Google. He runs a once a week 8-week training programme which is effectively a meditation training programme.

Mindfulness is a state of active, open attention on the present. How often do we eat mindfully? Try it today – put your phone away and enjoy your breakfast. Meditation is a cognitive skill that can enhance your ability to be mindful. Think of meditation as cognitive exercise to add to the benefits of physical exercise.

A very simple meditation tool is the four-count breath technique (also called box breathing; *Figure 1*) which takes about a minute – breathe in for a count of four, hold for four, out for four, hold for four. This can be used when one is very stressed to calm your physiology and therefore calm your psychology, enabling enhanced performance. Trainees (and consultants) can use this skill in or before a stressful situation, e.g. pre-oxygenating a patient before intubating them or struggling with a difficult cannulation.

If you are not meditating or being mindful you are effectively spending less time looking after your mental health than you are cleaning your teeth.

Become a stress management expert

Stress is inevitable but our emotional response to it is not. So learn as many stress management techniques as possible. Obsessive medics can use a list system where you list your stressors ensuring that you are as specific as possible ('work' is not specific,

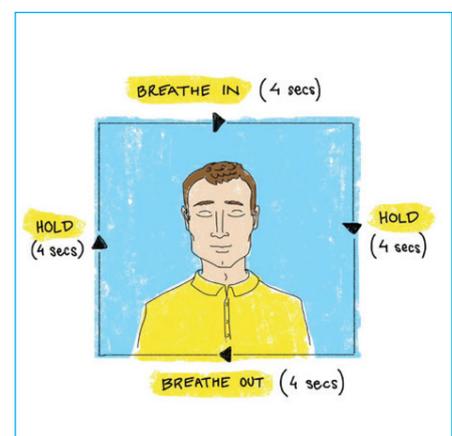


Figure 1. Box breathing. From Stacey et al (2017).

© Wales Dearey & DNA Definitive

© 2018 The author

managing a difficult case might be) and divide your stressors into three categories:

1. Deal with now
2. Deal with later
3. Ignore and adapt to.

I find the last category the most difficult to deal with but meditation certainly helps – remember we always have a choice as to how we feel about a stressor.

A stress management tool that helps on a daily basis is the use of a stress bucket, a cognitive tool that is particularly useful to deal with stress caused by the work–home interface. You take your stress bucket and fill it with the stress from work. At the end of the day you empty your bucket so that when you get home you have an empty bucket. You can then fill with your bucket with your home stress. Then reverse the sequence before you go to work the next day. You need two things: a bucket and a regular trigger (e.g. locking and unlocking your car or bike, changing into or out of your work clothes). The term ('a full bucket') may even creep into common parlance – an overloaded member of staff recently said: 'My bucket's a bit full today – so back off'. Sapolsky (2004) gives an excellent review of the process and consequences of poorly controlled stress.

Get enough sleep

Matthew Walker (2018) has discovered a revolutionary new product: 'that makes you live longer. It enhances your memory, makes you more attractive. It keeps you slim and lowers food cravings. It protects you from cancer and dementia. It wards off colds and flu. It lowers your risk of heart attacks and stroke, not to mention diabetes. You'll even feel happier, less depressed and less anxious'.

Are you interested?

The 'product' is of course sleep and has often been ignored in medicine – in fact lack of sleep has been considered a badge of honour. Sleep is probably the most important performance-enhancing agent we currently know of, and it affects both health and performance. It is being investigated particularly in elite sport and the military where sleep hygiene strategies that improve both quality and duration are highly valued. Two easy suggestions you can implement today – ban electronic devices (especially the phone) from the bedroom and investigate sleep hygiene strategies that will improve your own sleep. Finkel (2018) gives an enjoyable and interesting summary.

Make better decisions in your life and your clinical work

'A bat and a ball together cost £1.10. The bat costs £1 more than the ball. How much does the ball cost?'

Questions such as these were used by Kahneman (2012) and Tversky to analyse how we make decisions – they came up with the fast and slow cognitive hypothesis. 'System 1' (OS 1 – fast) thinking is intuitive thinking – fast, automatic and emotional – and based on simple mental rules of thumb ('heuristics') and thinking biases (cognitive biases) that result in impressions, feelings and inclinations. 'System 2' (OS 2 – slow) thinking is rational thinking – slow, deliberate and systematic – and based on considered evaluation that result in logical conclusions. It is not that one system is wrong and the other right – it is just that they are different. In order for us to make better decisions we need to be aware of their limitations.

A practical decision-making tool devised by Heath and Heath (2014) is the WRAP model:

- Widen your options – do I want to buy these shoes? From this store, from somewhere else or a different pair?
- Reality test your assumptions – do the shoes fit?
- Assume some distance – try the 10/10/10 rule – how will I feel in 10 minutes/10 weeks/10 years if I buy these shoes?
- Prepare for failure – if I do not buy these shoes will I be disappointed?

A useful cognitive decision-making tool that is worth using clinically is the premortem test designed by Klein (2007). If you look at a clinical situation where a decision needs to be made, assume that the worst prediction has actually happened (in my job this may be disability leading to death). Now fast forward 3 months and visualize yourself standing up in front of the coroner who asks you the question – 'what would you have done differently that day had you known that would be the outcome?' If the answer is nothing then you go ahead and carry out the decision. But if it is not the coroner will almost certainly ask you 'well why didn't you?'

If you would like more strategies for making better decisions in your clinical environment see Stiegler and Tung (2014) and Trimble and Hamilton (2016).

Never be afraid to ask for help

It is likely that because of overconfidence in one's skillset or conversely because of a lack of confidence doctors may not consider that help is needed. As Bohns and Flynn (2010) state we often underestimate the discomfort of help seeking (no matter how senior we are), but it is available – sometimes you just have to ask.

Deal with conflict

Conflict in work and at home is not good. Conflict in teams will increase the likelihood of disasters particularly to patients. Furthermore it makes work a toxic environment, potentially leading to increased burnout. It is useful to learn assertive behavioural skills early on, because the likelihood of conflict in the health environment is high and probably unavoidable, as a result of the increased strain on all workers in the NHS. Strategies are discussed by Greer et al (2012).

Work done by NASA on maximizing team skills has demonstrated that of the various domains investigated, interpersonal relationships are the most important components of successful team performance – so it is worth ensuring that interpersonal relationships are appropriately maximized.

Learn something new

Learning decreases your likelihood of developing Alzheimer's disease (Panitsides, 2014), can slow cognitive ageing and is fun. For trainers, returning to being a novice can also improve your teaching skills as, starting as a beginner, you realize the effect that stress has on performance and learning, particularly for the learners you are teaching.

Avoid HALT in yourself and in others

HALT is a one-word easy to remember acronym that summarizes human factors:

- Hungry
- Angry
- Late
- Tired.

This has been introduced in Guy's and St Thomas' Hospital to help improve the mood of the hospital. Avoid HALT in yourself and those you work with.

Smile

Finally practise smiling (Lawrence et al, 2015) – it makes other people smile and

can even trick your brain into feeling better which in turn boosts your health. You can combine this with random acts of kindness which make both the deliverer and the receiver smile.

Conclusions

Many readers may say that they do not have time to practise these skills; I would argue that you do not have time not to. Time is the most valuable thing we have and we should choose very carefully how we spend it.

So make a deal with yourself having decided to spend your valuable time reading this article. Choose three of the skills and read a bit more about them. When you have optimized the performance of those three, pick another three. Is it worth it? A randomized controlled trial found that workplace mental health training decreases work-related sick leave (Milligan-Saville et al, 2017), so you be the judge. **BJHM**

Conflict of interest: Dr M Stacey runs a resilience course called Med trim with Professor McCann from which many of the concepts discussed above are taken.

The author would like to thank Elaine Russ and Professor Andy McCann for their input and Hazel Hall for her administrative help.

Figure 1 is taken from Baker's *Dozen of Mental Toughness* (Stacey et al, 2017) with permission.

Bohns VK, Flynn FJ. 'Why didn't you just ask?'

Underestimating the discomfort of help-seeking. *Journal of Experimental Social Psychology*. 2010 Mar;46(2):402–409. <https://doi.org/10.1016/j.jesp.2009.12.015>

Brito LB, Ricardo DR, Araújo DS, Ramos PS, Myers J, Araújo CG. Ability to sit and rise from the floor as a predictor of all-cause mortality. *Eur J Prev Cardiol*. 2014 Jul;21(7):892–898. <https://doi.org/10.1177/2047487312471759>

Chade-Meng T. 2017. *Search inside yourself*. San Francisco: Harper One.

Crossland M. 2018. How to Fight Through the Worst of Times. (accessed 3 October 2018) <https://www.goalcast.com/2018/05/22/michael-crossland/>

Dweck CS. 2017. *Mindset*. London: Robinson.

Eger E. 2017. *The Choice*. London: Ebury Digital.

Elton C. 2018. *Also Human*. London: William Heinemann.

Ericsson A, Pool R. 2016. *Peak: Secrets from the New Science of Expertise*. London: Bodley Head.

Finkel M. 2018. *While We Sleep, Our Mind Goes on an Amazing Journey*. (accessed 3 October 2018) <https://www.nationalgeographic.com/magazine/2018/08/science-of-sleep/>

Fishwick S. 2018. *Join the resilience band: why learning how to fight back is the key to thriving in 2018*. (accessed 3 October 2018) <https://www.standard.co.uk/lifestyle/london-life/resilience-buzzwords-2018-a3748386.html>

Frankl V. 2014. *Man's search for Meaning*. Boston: Beacon Press.

General Medical Council. 2018. *National training surveys 2018: initial findings report*. (accessed 3 October 2018) [https://www.gmc-uk.org/-/media/documents/dc11391-nts-2018-initial-findings-](https://www.gmc-uk.org/-/media/documents/dc11391-nts-2018-initial-findings-report_pdf-75268532.pdf)

[report_pdf-75268532.pdf](https://www.gmc-uk.org/-/media/documents/dc11391-nts-2018-initial-findings-report_pdf-75268532.pdf)

Greer LL, Saygi O, Aldering H, de Dreu CK. Conflict in medical teams: opportunity or danger? *Med Educ*. 2012 Oct;46(10):935–42. <https://doi.org/10.1111/j.1365-2923.2012.04321.x>

Heath C, Heath D. 2014. *Decisive, how to make better decisions*. New York: Random House Business.

Hörder H, Johansson L, Guo X, Grimby G, Kern S, Östling S, Skoog I. Midlife cardiovascular fitness and dementia. A 44-year longitudinal population study in women. *Neurology*. 2018 Apr 10;90(15):e1298–e1305. <https://doi.org/10.1212/WNL.0000000000005290>

Joseph R. 2018. *A look in the mirror: the role of medical training in physician burnout*. (accessed 3 October 2018) <https://catalyst.nejm.org/medical-training-physician-burnout-learned-helplessness/>

Kahneman D. *Thinking, fast and slow*. 2012. London: Penguin.

Klein G. 2007. *Performing a Project Premortem*. (accessed 12 October 2018) <https://hbr.org/2007/09/performing-a-project-premortem>

Klika B, Jordan C. High intensity circuit training using body weight: maximum results with minimal investment. *ACSM's Health & Fitness Journal*. 2013 May/June;17(3):8–13. <https://doi.org/10.1249/FTT.0b013e31828cb1e8>

Lafreniere JP, Rios R, Packer H, Ghazarian S, Wright SM, Levine RB. Burned out at the bedside: patient perceptions of physician burnout in an internal medicine resident continuity clinic. *J Gen Intern Med*. 2016 Feb;31(2):203–208. <https://doi.org/10.1007/s11606-015-3503-3>

Lawrence EM, Rogers RG, Wadsworth T. Happiness and longevity in the United States. *Soc Sci Med*. 2015 Nov;145:115–119. <https://doi.org/10.1016/j.socscimed.2015.09.020>

Luthar SS, Cicchetti D, Becker B. The construct of resilience: a critical evaluation and guidelines for future work. *Child Dev*. 2000 May-Jun;71(3):543–562. <https://doi.org/10.1111/1467-8624.00164>

Meredith LS, Sherbourne CD, Gaillot SJ, Hansell L, Ritschard HV, Parker AM, Wrenn G. 2011. *Promoting Psychological Resilience in the U.S. Military*. (accessed 3 October 2018) <https://www.rand.org/pubs/monographs/MG996.html>

Milligan-Saville JS, Tan L, Gayed A et al. Workplace mental health training for managers and its effect on sick leave in employees: a cluster randomised controlled trial. *Lancet Psychiatry*. 2017 Nov;4(11):850–858. [https://doi.org/10.1016/S2215-0366\(17\)30372-3](https://doi.org/10.1016/S2215-0366(17)30372-3)

Orton-Jones C. 2016. *10 organisations that turned possible disaster into opportunity*. (accessed 3 October 2018) <https://www.raconteur.net/business/10-examples-of-how-organisations-turned-possible-disaster-into-opportunity>

Panitsides EA. *Lifelong Learning as a Tool in Combating Age-related Dementia and Activating the Potential of Seniors: 'WISE' – Designing a Project of Integrated Educational Interventions During Third Age*. *Procedia Soc Behav Sci*. 2014. 128:4–9. <https://doi.org/10.1016/j.sbspro.2014.03.109>

Parsi-Parsi RW. *The Revised Declaration of Geneva. A Modern-Day Physician's Pledge*. *JAMA*. 2017;318(20):1971–1972. <https://doi.org/10.1001/jama.2017.16230>

Sapolsky R. 2004. *Why Zebras Don't Get Ulcers: The Acclaimed Guide to Stress, Stress-Related Diseases, and Coping*. New York: St Martin's Press.

Schreiner I, Malcolm JP. *The benefits of mindfulness meditation: changes in emotional states of depression, anxiety, and stress*. *Behaviour Change*. 2008;25(3):156–168. <https://doi.org/10.1375/>

KEY POINTS

- Resilience skills can be learned and need to be practised to become part of your behaviour.
- Change perspective – view problems as challenges not threats.
- Learn a meditation technique.
- Do something physical every day.
- Optimize your sleep.

bech.25.3.156

Seligman M. 2017. *The PERMA Model: Your Scientific Theory of Happiness*. (accessed 3 October 2018) <http://positivepsychologyprogram.com/perma-model/>

Sizmur S, Raleigh V. 2018. *The risks to care quality and staff wellbeing of an NHS system under pressure*. (accessed 3 October 2018) <http://www.picker.org/wp-content/uploads/2014/12/Risks-to-care-quality-and-staff-wellbeing-VR-SS-v8-Final.pdf>

Sokol D. *Doctors shouldn't reveal so much*. *BMJ*. 2018 Jun 11;361:k2495. <https://doi.org/10.1136/bmj.k2495>

Spector N. 2018. *Smiling can trick your brain into happiness — and boost your health*. (accessed 3 October 2018) <https://www.nbcnews.com/better/health/smiling-can-trick-your-brain-happiness-boost-your-health-ncna822591>

Stacey M, Russ E, McCann A. 2017. *Baker's Dozen of Mental Toughness*. (accessed 3 October 2018) http://www.cardiff.ac.uk/__data/assets/pdf_file/0003/808950/Bakers-Dozen-Toolkit.pdf

Stiegler MP, Tung A. *Cognitive processes in anesthesiology decision making*. *Anesthesiology*. 2014 Jan;120(1):204–217. <https://doi.org/10.1097/ALN.0000000000000073>

Taleb N. 2013. *Antifragile: Things that gain from disorder*. London: Penguin.

Trimble M, Hamilton P. *The thinking doctor: clinical decision making in contemporary medicine*. *Clin Med (Lond)*. 2016 Aug;16(4):343–346. <https://doi.org/10.7861/clinmedicine.16-4-343>

Walker MP. *A sleep prescription for medicine*. *The Lancet*. 2018;391(10140):2598–2599. [https://doi.org/10.1016/S0140-6736\(18\)31316-3](https://doi.org/10.1016/S0140-6736(18)31316-3)

Wood AM, Froh JJ, Geraghty AW. *Gratitude and well-being: a review and theoretical integration*. *Clin Psychol Rev*. 2010 Nov;30(7):890–905. <https://doi.org/10.1016/j.cpr.2010.03.005>

Further reading

Brown A. 2018. *62 Stress Management Techniques & Tips To Prevent A Burnout*. (accessed 3 October 2018) <https://positivepsychologyprogram.com/stress-management-techniques-tips-burn-out/>

Konnikova M. 2016. *How People Learn to Become Resilient*. (accessed 3 October 2018) <https://www.newyorker.com/science/maria-konnikova/the-secret-formula-for-resilience>

McKinley P. 2008. *Drawing the Line Effective: Management Strategies for Disruptive Behavior*. (accessed 3 October 2018) <https://www.psqh.com/analysis/effective-management-strategies-for-disruptive-behavior/>

Solan M. 2016. *Back to school: Learning a new skill can slow cognitive aging*. (accessed 3 October 2018) <https://www.health.harvard.edu/blog/learning-new-skill-can-slow-cognitive-aging-201604279502>