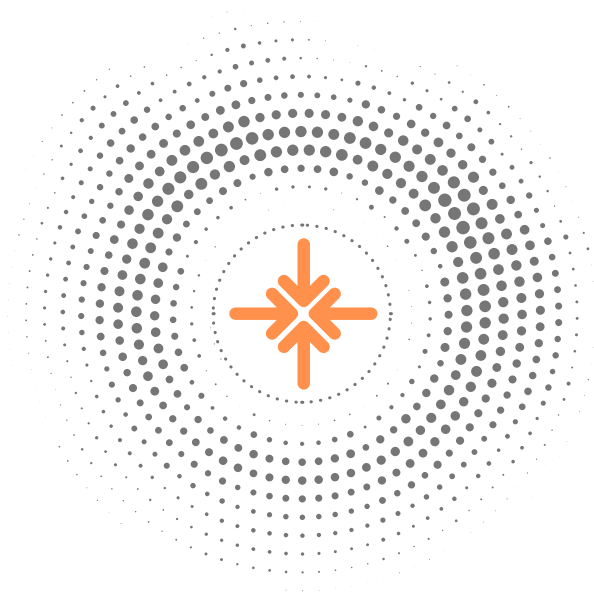


Brace for Impact

Surviving and Thriving
in the Pandemic Era



Alessandra Edwards and
Dr Amy Silver

with special contribution from Brent Hodgson

What People are Saying about *Brace for Impact*

There is no playbook from the past that you can use to navigate through the current pandemic crisis. Thankfully Amy and Alessandra give us hope – and a range of practical strategies that we can use to help us physically and mentally prepare for the way forward.

Scott Stein

CEO, The Learning Difference & Founding Board
Member, Hands Across the Water Charity

This is a must-read for anyone that not only wants to survive isolation but emerge from this unique situation a better version of themselves ...both physically and mentally.

Gabrielle Dolan

Author of Real Communication and Stories for Work

This gem of a book is all you need to protect, prepare and propel yourself through the COVID-19 pandemic.

Sam Makhoul

Managing Director, MSA National,
Founder of A Higher Branch Success Academy

A wealth of pragmatic advice from two of the smartest health and wellbeing thought leaders in Australia.

Professor Clive Smallman
Author of *Breakthrough*

Even the strongest people and most robust teams need guidance as none of us have faced a global pandemic. Essential reading to get you and your team through and beyond these challenging times.

George Vlachos
Director, Clinical Trials Supply, Akessa Pharma

Helping our colleagues with their physical and psychological strength throughout COVID-19 is our essential role as People & Culture Executives. This book is a valuable resource in these trying times.

Sarah Guthleben
Executive Officer, People & Culture

Amy and Alessandra have nailed it. Taking years of personal lived experience, observation through their respective professional practices and understanding of what the world needs right now, they have brought 'Brace for Impact' into the world at exactly the right time. Read it. Implement it.

Kate Billing
Founder and Creative Director, Blacksmith –
Human-centred Leadership Specialists

For a time such as this, these two brilliant authors have collaborated to deliver us an incredibly useful book. Alessandra Edwards and Dr Amy Silver are experts in the fields of wellbeing, physical and mental strength, and I am so thankful they have turned their genius to the complexity we are all facing right now. This book will help us all to take a breath, get some clarity, and develop some resilience. Brilliant!

Andrew Deering

Coach, Mentor and Facilitator to CEOs and
C-Suite teams, Author of 'Create the SHIFT'

We need to learn how to stay safe and adapt to meet the challenges of the pandemic now, and of those to come. This book is a go-to guide for anyone wanting to develop those skills

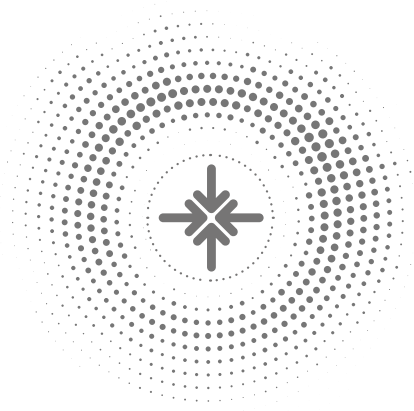
Sarah McGuinness

CEO/Founder, My Health Revolution

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Published by Alessandra Edwards and Dr Amy Silver, with special
contribution from Brent Hodgson

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book is available from the
National Library of Australia

Alessandra – For everyday heroes everywhere

Amy – For Mervyn Silver and John Manuel, forever
precious parts of my heart

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Foreword

Like the authors, I applaud everyone on the front line who is going above and beyond at this time. The health professionals, drivers, teachers, carers, shop workers, and everyone else who is doing their bit to serve the community and help us get through this the best way possible.

While they would never say this themselves, I put Alessandra and Amy in this category. They have written this book in a week. And not just in any week – but in what has probably been the craziest week of their lives. As I read online: “What a crazy year this last week has been”.

They have written it while in isolation, while relatives are dying, while attending funerals via Zoom, while looking after families and clients and friends, and while (in Amy’s case) recovering from the COVID-19 infection itself.

Why? Why put themselves through this? Not for any personal gain (this book isn’t for sale). But because this is what the world needs now, and this was how they could help.

Alessandra and Amy are my go-to people for my physical and emotional wellbeing (as well as both being dear friends). Alessandra has looked after my family and me for

years and is still my performance coach around nutrition, exercise, sleep and optimal performance.

I have Amy as my *break-glass-in-an-emergency* go-to person when I need emotional support. Whenever life gets too hard, she's my lifeline. I reckon if now doesn't count as an emergency, nothing ever will. I'm glad that, through this book, you also can have the two of them in your corner during this time.

So, let's talk about the book.

This is the most important book you'll read this year. It could save your life, or at the very least, your sanity while navigating the uncertain times ahead.

I would love this book to have an R_0 (infection rate) of 5. While we're all trying to reduce the R_0 of COVID-19 to below 1, let's try and lift the R_0 of this book. That means you need to send it on to 5 people. Maybe to 10 just to be on the safe side. Or really, to everyone you know.

With so much misinformation out there, what you're holding in your hand (or viewing on your computer screen) is gold.

So please read this. Learn. Implement it. And most of all, share it.

Peter Cook
Chairperson, Thought Leaders

Introduction

As we write this introduction, we are about to stand on our porches and join those who are united, clapping and cheering, in support of all the frontline workers. Every medical professional, driver, shop worker, teacher, carer and anyone else who is currently putting their life on the line so the rest of us can stay safely at home. All this to curb the exponential growth of the worst global pandemic in recent years.

We are also reflecting on a world that is no longer recognisable, where the busiest streets in the most bustling cities look like scenes from a sci-fi movie. Where churches in Europe are collecting caskets as there is no time or space to commemorate with a funeral. These are weeks where the lives of our families, colleagues and friends, near and far, have been disrupted or prematurely ended.

Amy and her beloved family are in the midst of trauma and turmoil, having lost two close relatives to COVID-19 in the past two weeks, and with others still suffering from the virus. It is very real and very sad.

Alessandra's relatives are living in strict confinement, in Italy, fearing daily for their lives. One of her closest friends recently passed away with pancreatic cancer. Her widowed husband is now in strict isolation as sole carer for their son, who has just been diagnosed with terminal stomach cancer. He cannot be exposed to any external contacts as his compromised immune system places him at the highest risk of COVID-19 infection.

These are physically, mentally and emotionally trying times. The experts we turn to have no answers. Governments are at a loss as to the best course of action. We find ourselves confined and exiled to an almost surreal, parallel world where everything almost looks the same as before COVID-19 and yet where everything has changed.

Like the current experts, we have no definitive answers. We can offer you no miracle cures, supplements or techniques that will make the pain, the grief and the uncertainty go away. But as professional mentors, we have each spent the best part of the last two decades helping people navigate physically and psychologically through difficult situations. And now we hope to show up in service, by offering a different perspective and providing tools to help you work through what will undoubtedly be a long period of uncertainty.

One of Alessandra's Italian grandmother's favourite sayings was, '*Chi cerca trova*,' which translates as '*He who seeks finds*.' Humans are wired to seek safety. It is a universal

law of nature that drives us always to seek the assurance of survival. For this reason, we are well equipped to scan for information that helps make decisions that may ensure our survival or lead to our demise.

Unfortunately, sourcing all our information from the constant barrage of news – real or fake – contributes to our belief that this is the worst thing that has ever happened to the planet. And so we begin to believe that everything is entirely harmful and threatening. With our focus so much on negative statistics, we lose sight of the fact that nothing lasts forever. We forget that even among all the uncertainty, there are still points of reference that can provide access to the sense of control that we currently seem to have lost.

Finding Our Way

We can think of no better way to represent this, than the ancient Polynesian art of Tautai, or wayfinding.

The people of the Pacific sailed vast oceans hundreds of years before Europeans. Every time an island became overpopulated, they would set out, without a map, compass or sextant, to navigate thousands of miles in search of a new home.

The only things at their disposal were the clouds – which could mirror land, the stars – to help keep their bearings, the flight of birds, and the swells of the ocean – having worked out how currents changed around the land.

Carrying supplies to last the voyage, they would live for weeks within the confines of a double-hulled canoe, crafted from wood and braided fibres.

Even with no ocean in sight, much of humanity's current predicament mirrors some of the challenges faced by these early explorers. We are on a voyage, but we don't know when it's going to end or where we're going to dock. The outside world presents a real danger to our safety. We are isolated and living in often cramped conditions, forced to cohabitate with loved ones.

Now, we both love our families dearly, but living 24/7 for weeks on end with husbands and school-aged children is challenging, even for the most Zen among us.

Over the past two decades, we have worked and helped thousands of people develop an internal method of wayfinding. It's a mind and body navigation tool to recognise rocky outposts or emotional and physical red flags that signal we have gone astray. It tells us that we need to take action and course-correct.

The mind and body are two sides of the same coin, each affecting the other in an endless sequence, like a dog chasing its tail. Respecting and honouring both, and recognising the impact of navigating through unknown waters is an essential step towards being able to establish safety.

Start with safety

So, what do you do when nothing around you makes sense, and you've lost your bearing on a path that was once clear and certain? You need first to ensure that you and your family are safe. In pandemic terms, this means the physical and psychological safety of your family, your teams and colleagues. That is your number one priority.

There can be no long term strategy until safety is assured.

Once you have claimed safety, then it is time to accept that you are heading toward a new landscape; one that you have not explored before.

Whenever we embark upon a new journey, it is necessary to take some tools with us. Our aim is that this book will help you to find your way through this uncharted territory, using a wayfarer's skills to manage your most essential needs over the coming months.

How this book will help

If you wish to discover more about your current state and how you are preparing your body and mind, we would recommend you take the quick diagnostic on our website www.braceforimpact.com.au. The results will help you understand where to focus your attention as you read through the rest of the book.

Our first step, in Chapter One, is to look at the **Patterns of Pandemics**. Here we will take a closer look at the phases of how pandemics evolve. It might seem a bit scary, but you need to understand the full picture of what is ahead of us all.

In the second Chapter, we will examine the **Impact on our Body**. Evolution has equipped us with an exquisitely sensitive biological response to any alterations in our immediate environment. We will explore how change, uncertainty and stress trigger a cascade of reactions inside our bodies. These affect our immunity, energy, digestion and nervous system. We will also note red flags to watch for.

In Chapter Three, we turn to the **Impact on our Mind**. The changes and experiences in pandemics are deeply affective. The global nature of the virus is worsened by the impact of the changes we need to make to manage the situation.

The mind is a complicated mix of conscious and unconscious thoughts and feelings. By understanding the impact of the pandemic on the mind, we can soothe it. Identifying the risks helps us recognise our vulnerabilities so that we can develop effective coping strategies.

Chapter Four discusses **Physical Safety**. This is the first step we all need to follow when in the middle of a global pandemic. This chapter examines our immediate safety in

terms of decreasing the risk of infection, then turns to ways of sustaining physical safety during self-isolation.

Mind Safety is the focus of Chapter Five, where we consider the necessity of strengthening and modifying our thinking as a result of this traumatic experience. Life before and after COVID-19 will be very different, and we want our minds to be sharper as a result of the pressure we are under. That will change us for the better and make us safer than we have ever been.

In the final chapter, **Thrive Beyond the Flattening of the Curve**, we invite you to consider the kind of person you want to be at the end of this journey. Our bodies and minds carry the capacity for continuous evolution. Every few days the lining of your intestinal tract is renewed, and every three months, you have a new supply of blood. Every six weeks, you have a new skin, and every year you have a new liver.

Likewise, your mind is an accumulation of every single thought, emotion and experience you have ever had until now and, like the body, it continues to evolve in response to the environment.

Adopting a safety mindset will prepare you to navigate change beyond the intensity of the pandemic phase and help you remain in control of your emotions, regardless of whatever curve life may throw at you.

When is the right time to begin?

In startup methodology, if you think it's too early, that's the right time to start. In pandemic terms, that time is now, while COVID-19 has not yet reached its peak worldwide. While panic is sweeping the globe and while you feel it could possibly not get any worse. While you are working long hours because the only productive time you have is after the kids are in bed. While you are reading news reports that make forecasts about whether Australian hospitals are going to be overwhelmed.

Now is the time to roll up our sleeves and dig deep. To find the courage to make brave decisions about our future and choose the road less travelled. We may be in a physical lockdown, but it is not a psychological one unless we allow it to become so.

Don't treat self-isolation as a prison, or a holiday or an excuse to binge-watch news or Netflix. Don't allow your self-care to go out of the window. You have a unique opportunity to start creating a new you, fully prepared, mentally and physically, to bring your bravest, your brightest and most evolved self to the new shores beyond the curve. Imagine the amazing world, post COVID-19, if we all did the work to create body and mind safety.

Yes, jobs are disappearing, businesses are failing, and whole sectors of the economy are evaporating. Yet amidst the disruption, you have more choices than you can imagine.

Introduction

It is our hope that the strategies in this book will enable you to grow through this time and be ready for the world ahead.

Let us begin.



PART ONE

Patterns of Pandemics

One of the most significant issues faced by governments, individuals, and business leaders is the difficulty in making decisions around the COVID-19 outbreak.

After all, this is an unprecedented event in modern history.¹ A global health pandemic in a post-globalised, increasingly complex, and highly interconnected world. How can you plan if you don't know what's going to be happening next week or next month or next year?

So let's take information from the World Health Organization (WHO), the Center for Disease Control (CDC) in the United States, modelling from Imperial College COVID-19 Response Team,² and other reputable sources and put them together to build a COVID-19

1 Head of UN economic and social body underscores priority of health,. (2020, March 19). Retrieved March 19, 2020, from <https://news.un.org/en/story/2020/03/1059802>

2 Ferguson, N. M., Laydon, D., Nedjati-Gilani, G., et al on behalf of the Imperial College COVID-19 Response Team. (2020, March 16). Impact of non-pharmaceutical interventions (NPIs) to to reduce COVID19 mortality and healthcare demand. Retrieved from <https://www.imperial.ac.uk/media/imperial-college/medicine/sph/ide/gida-fellowships/Imperial-College-COVID19-NPI-modelling-16-03-2020.pdf>

roadmap. This will help us to identify where we are at in the outbreak, and what we are likely to experience ahead.

	Arrival (WHO Phase 1–3)	Contagion (WHO Phase 4)	Pandemic (WHO Phase 5–6)	Post-Break Outbreaks	Containment
Phase	First cases	Rapid growth (Cases multiply 10x every 16 days)	Severe containment	Ongoing vigilance	Calm
Length	0–8 weeks	4–10 weeks	7–12 weeks	12–24+ months	Outbreak ends
Total Cases	0–100	1000s (10s of deaths)	100,000s (1k–40k deaths)	5,000,000 (~200k deaths) (20% of Australia)	
Health Sector	Notified	Alert	Over-stretched (Who lives and who dies?)	Rapid response, developing cure	Renewal
Government Message	Limited	Warn and escalate	War-footing	Be alert	Lessons and blame
Business Impact	Low	Panic-buying, economic slow- down	Partial or full shut-downs, low human movement	Changes to habits and values	Ripples still felt

Figure 1: Phases of outbreak

Arrival

The earliest phase of a pandemic is the Arrival of a disease.³ It is where we start to see the first cases.

Health sectors are notified, but government messaging is minimal. After all, it’s only a few cases, and the business impact is low. The public has limited awareness of the situation.

3 World Health Organization. (2009). *Pandemic influenza preparedness and response WHO guidance document*. Retrieved from https://www.who.int/influenza/resources/documents/pandemic_guidance_04_2009/en/

Contagion

Viruses that become significant pandemics share two traits: contagiousness and lethality. It is in this next phase, Contagion, that cases start to rise very rapidly.

With few controls standing in its way, COVID-19 is virulent enough⁴ to spread to around two-and-a-half people for every person who is infected.

That might not seem like a lot, but the figures compound rapidly.

To use some simplified numbers:

- One case spreads to an average of 2.5 more people – creating 3.5 total cases
- Those 3.5 cases spread to 8.8 more people – becoming 12 (rounded) total cases
- Those 12 cases become 43 total cases
- Those 43 cases become 150
- Those 150 cases become 525
- Within just 11 steps, the virus has nearly infected a million people
- And within only 16 steps, half a billion people are infected

4 Majumder, M., & Mandl, K. D. (2020). Early Transmissibility Assessment of a Novel Coronavirus in Wuhan, China. *SSRN Electronic Journal*. doi: 10.2139/ssrn.3524675

And it doesn't take long, with cases multiplying by around 10x every two weeks if left unchecked.

So if you have 100 cases of COVID-19 in a country one day, it's probable that (if left unchecked) you'll have 1,000 two weeks later.

Two weeks beyond that, the figure is likely 10,000.

A further two weeks beyond that, it will grow to 100,000.

And two weeks beyond that again, expect 1,000,000.

In the early stages of the Contagion Phase, there's alertness, but there is no urgent need to act.

“10 cases isn't such a big number. Certainly not for a developed nation with world-class hospitals and healthcare.”

“100 is hardly cause for concern.”

“1,000 is something we can handle.”

But within two weeks, a sudden leap from 1,000 to 10,000 puts hospitals and healthcare under significant stress.

Governments will typically be reluctant to act.⁵ After all, if they overreact, they risk damaging the economy.

5 Belluz, J. (2014, October 1). Why we fail at stopping outbreaks like Ebola. Retrieved March 15, 2020, from <https://www.vox.com/2014/9/30/6843117/slow-ebola-virus-epidemic-response-WHO-after-brantly-Americans-infected>

But in their hesitation, we end up with a warn-and-then-escalate scenario, where we are warned that schools may close, and then schools **do** close. Or, we are warned that people may be in lockdown, and then people **are** in lockdown.

During this phase, we frequently see panic-buying and an economic slowdown in some sectors and some industries, but not others. There is a rise in consumer spending in survival sectors. These are essentials such as food, medicine, and services that help insulate businesses and consumers against the predicted shocks. In some more recent outbreaks of diseases in more developed nations, there has also been a shift towards online spending rather than offline.

Pandemic

Next comes the Pandemic Phase, where severe containment is required to prevent the spread of the disease.

Reflecting what we have seen in South Korea and China, we should expect it to take at least seven weeks, and possibly more than twelve weeks, to contain COVID-19.

Countries that act sooner and with greater resolve require shorter periods of severe containment. But those that let the number of cases rise before acting will take significantly longer to contain their outbreaks.

Countries that are better prepared for a medical response, with greater access to testing kits and stores of PPE (personal protective equipment), tend to do better at containing an outbreak.

For example, the recent memories of two other coronavirus outbreaks – SARS (2002-03) and MERS (2012-13)⁶ – led South Korea to develop a rapid pandemic response framework long before the outbreak of COVID-19. This was notable for having a far more abundant testing capability at the outbreak of COVID-19 than other nations, in addition to battle-hardened policies on infection containment and control. These traits allowed South Korea to identify cases and reduce infection rates much earlier and much more readily than other countries – without needing to lock down entire cities – therefore minimising the social, economic and health consequences of the outbreak.⁷

But even lacking abundant testing capability and medical stores, those countries that decisively implement and enforce non-medical interventions (such as banning of mass gatherings, implementation of mass quarantines,

6 The Diplomat. (2020, March 15). Lessons From South Korea's COVID-19 Outbreak: The Good, Bad, and Ugly. Retrieved March 20, 2020, from <https://thediplomat.com/2020/03/lessons-from-south-koreas-covid-19-outbreak-the-good-bad-and-ugly/>

7 Chan-Kyong, P. (2020, March 11). Coronavirus: South Korea's infection rate falls without citywide lockdowns like China, Italy. Retrieved March 11, 2020, from <https://www.scmp.com/week-asia/health-environment/article/3074469/coronavirus-south-korea-cuts-infection-rate-without>

border closures, social distancing, and other protective measures) tend to be spared the worst of the consequences of a pandemic.⁸ [N.B. This just doesn't mean they are spared from the worst of health consequences, but also the worst economic implications.]

During the Pandemic Phase – before infection rates reduce – the spike in infections can rise so quickly that it often overwhelms the ability of healthcare systems to cope.

In the early stages in Italy, we witnessed an overstretched healthcare system having to make decisions around who lived and who died, effectively triaging their population. There, people who had a history of cancer, heart disease, respiratory issues, or were over the age of 60, were turned away from life-saving treatment in intensive care units.

The philosophy behind triage is to sort patients based on their likely survivability, so that hospital resources (beds, equipment, doctors, nurses, staff) are utilised to ensure the optimal delivery of care and improved overall health outcomes.

Saving more patients by using scarce resources on those most likely to recover, is seen as optimal use of hospital resources. Sadly, this comes at a high cost – at the expense

8 Hatchett, R. J., Mecher, C. E., & Lipsitch, M. (2007). Public health interventions and epidemic intensity during the 1918 influenza pandemic. *Proceedings of the National Academy of Sciences*, 104(18), 7582–7587.

of people who might otherwise have been saved if they were able to access intensive care. But when there's not enough care to go around, decisions need to be made about how that care is shared.

Prevention, or at least minimisation of these kinds of scenarios, is a primary reason for taking strong containment measures. With proper treatment, the survival rates of COVID-19 are relatively high. So if infection numbers can be slowed in the Pandemic Phase to a figure that critical care wards can cope with, lives get saved.

It's important to note here that critical care wards don't just treat COVID-19 patients. They also treat people with heart attacks, strokes, complications from other medical issues and cancer treatments, as well as traumatic injuries from car crashes, slips and falls. These cases don't just stop when there's a pandemic.

In mid-March 2020, the Chief Health Officer of New South Wales, Dr Kerry Chant, was preparing for a case-load that would result in twenty per cent of the population catching COVID-19.⁹

9 Davey, M. (2020, March 18). Hospital staff in NSW told to prepare for 8,000 coronavirus deaths. Retrieved March 18, 2020, from <https://www.theguardian.com/world/2020/mar/12/hospital-staff-in-nsw-told-to-prepare-for-8000-coronavirus-deaths>

According to the Australian Bureau of Statistics, Australia's population in March 2020 was 25.6 million people.¹⁰

A mortality rate of four per cent is mid-range; it is approximately the rate reported in Wuhan¹¹ in the early stage of its pandemic, and a mid-point between Italy's high and Germany's low.¹²

Based on Australia's population, an outbreak contained to just twenty per cent of the population could still result in more than 200,000 deaths.

In countries that do not contain their outbreaks, the virus may spread to eighty per cent¹³ of the population before reaching the point of 'herd immunity'. And in countries

-
- 10 Population clock. (2020, March 18). Retrieved March 18, 2020, from <https://www.abs.gov.au/ausstats/abs@.nsf/0/1647509ef7e25faaca2568a900154b63?OpenDocument>
 - 11 World Health Organization: WHO. (2020, January 23)Statement on the meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). Retrieved March 13, 2020, from [https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov))
 - 12 Oltermann, P. (2020, March 22). Germany's low coronavirus mortality rate intrigues experts. Retrieved March 22, 2020, from <https://www.theguardian.com/world/2020/mar/22/germany-low-coronavirus-mortality-rate-puzzles-experts>
 - 13 Dunn, K., & Kahn, J. (2020, March 14). Even while canceling mass gatherings, the UK, is still aiming for deliberate 'herd immunity'. Retrieved March 14, 2020, from <https://fortune.com/2020/03/14/coronavirus-uk-cases-herd-immunity-covid-19/>

that have lower resourcing of critical care units, or older populations, the mortality rate is likely to be much higher.

On some simple numbers, if the virus spread to eighty per cent of all Australians, and we experienced the same nine per cent mortality rate that Italy saw at the peak of its outbreak, this would lead to more than 1.84 million deaths. Most of these deaths would be among those aged 60 and above.

It is the primary reason why decisive action is required – as the alternative to control is an uncontained and deadly pandemic.

Post-Peak Outbreaks

The end of the Pandemic Phase does not signal the end of the pandemic itself.

There will still be people who carry (and spread) the virus in the community, and new cases will continue to appear. Remember that a single carrier of COVID-19 could easily create 100 new cases within a month.

So, once the pandemic is mostly under control, there's an ongoing game of whack-a-mole – where everyone needs to be on high-alert, to identify cases and prevent their spread.

In recent outbreaks of deadly diseases (such as the Ebola outbreak in West Africa between 2013–2016), outbreaks

were eventually contained through a mix of health system surveillance, contact tracing, community awareness, travel restrictions and quarantining.

This phase is probably accompanied by easing of some limitations around movement and gatherings.¹⁴ However, there will likely be a public ‘hangover’ from the restrictions.

Having experienced the surge in cases, and the accompanying spike in deaths, awareness of the risks and consequences of COVID-19 is likely to be heightened.

Changes to attitudes, values and habits learned during the Pandemic Phase are likely to carry through the Post-Peak Outbreak Phase, and possibly well beyond, years after the outbreak has been contained.

In the same way the Great Depression¹⁵ changed the way people treated food and money, business owners will need to be aware of, and responsive to, the lasting changes to consumer behaviour that COVID-19 will create over the long term.

14 Xie, E. (2020, March 15). As coronavirus epidemic eases in China, life is slowly returning to normal. Retrieved March 15, 2020, from <https://www.scmp.com/news/china/society/article/3075111/coronavirus-epidemic-eases-china-life-slowly-returning-normal>

15 Spilimbergo, A., & Giuliano, P. (2009, September 25). The long-lasting socio-political effects of the economic crisis. Retrieved March 20, 2020, from <https://voxeu.org/article/long-lasting-socio-political-effects-economic-crisis>

In the Post-Peak Outbreaks phase, the health sector aims to keep the case-load of COVID-19 patients low enough so that critical care wards can cope.

But it also continues work on new treatments and preventative measures.

There are many avenues open in the treatment and prevention of viruses such as COVID-19, with all options explored in the race to be first-to-market.¹⁶

- Antibody treatments
- Anti-virals
- Cell-based therapies
- RNA-based treatments
- Scanning and re-purposing existing compounds
- Vaccines

But before any treatment is released to the public, it needs to be thoroughly tested to ensure it is both effective and safe.

These studies take time to complete

The development of a new medicine typically takes more than a decade from initial discovery to the marketplace.

¹⁶ Milken Institute. COVID-19 Treatment and Vaccine Tracker. Retrieved March 28, 2020, from <https://milkeninstitute.org/covid-19-tracker>

Clinical trials usually take six to seven years.¹⁷ The cost of developing a new drug can be in the billions, so the likelihood of a novel compound being developed and released in the coming months is relatively low.

That's why the attention of experts¹⁸ turns to re-purposing treatments that are already well understood. Hydroxychloroquine is one such example, having been used in the treatment of conditions such as malaria since the mid-1900s, and more recently in rheumatoid arthritis. Because these drugs are already well-known, the testing process is accelerated.

However, at the time of writing, it's uncertain whether any of them will be effective in treating COVID-19. Therefore it's unclear when, or even if, these compounds are likely to be used in treatments.

The blood of patients who have recovered from COVID-19 contains antibodies that may help others to fight off the disease. As of late March 2020, no fewer than 23 studies using antibodies had commenced. However, even assuming the treatments work, the earliest time frames for the completion of clinical trials will be mid-2020.

17 PhRMA. (n.d.). Biopharmaceutical Research & Development: The Process Behind New Medicines. Retrieved March 28, 2020, from http://phrma-docs.phrma.org/sites/default/files/pdf/rd_brochure_022307.pdf

18 Milken Institute. (2020, March). COVID-19 Treatment and Vaccine Tracker. Retrieved March 28, 2020, via <https://milkeninstitute.org/covid-19-tracker>

The big issue with these treatments is that they do not prevent infection. Instead, they reduce its severity among those infected – potentially saving lives, but not stopping people from getting sick in the first place.

It is an important distinction to make, as public health measures may be insufficient to bring COVID-19 under control, and it may take a widespread preventative treatment such as a vaccine, to end the outbreak.

The likely time frame for the development and testing of a new vaccine is 18 months – and that's before any widespread immunisation campaigns can begin.

So, barring the early discovery, development and testing of a simple and unexpected new treatment, it's likely that the Post-Peak Outbreak phase will last at least 18 months.

Containment

The final phase in a pandemic is the Containment Phase, which signals the end of the outbreak.

At this point, the health sector will be able to invest in renewal. There'll be lessons and blame among the government, but, the ripples of COVID-19 will still be apparent.

To get a sense of the scale of these Pandemic Phases, take a look at a scaled timeline.

Patterns of Pandemics

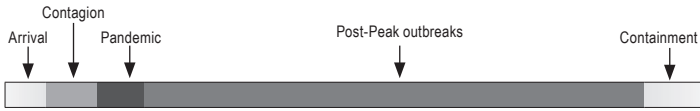


Figure 2: Timeline for outbreak phases

Looking ahead, individuals, businesses and governments would be wise to prepare for 7-12 weeks of severe containment during the Pandemic Phase; 12 to 24 months of continuous vigilance during the Post-Peak Outbreaks Phase; and years of ongoing economic, social, and psychological ripples after the Containment Phase.



PART TWO

Impact on Our Body

A stone-age brain in a modern skull

Homo sapiens made their debut on the East African savannah around 200,000 years ago. With their large skull, tall forehead, small eyebrow ridges and prominent chins they must have cut a fine figure against their stocky, heavy-boned predecessors.

What also distinguished Homo sapiens was the development of a sharp mind and finely tuned observational skills to help them deal with the challenges inherent in living under harsh, unsafe conditions. It turns out that this served them well in addressing their most pressing concerns at the time: survival and reproduction.

According to evolutionary psychologist and Harvard Professor Steven Pinker, Homo sapiens' inbuilt acute stress response is a primitive, yet sophisticated and carefully regulated adaptation that has since been shaped by natural selection because of its advantages for survival.

All this means is that underneath our modern presentation of trendy haircuts, designer clothes and high-tech wearable

gadgetry, our brain is fundamentally the same as it was hundreds of thousands of years ago. It is a state-of-the-art piece of hardware complete with an inbuilt, hair-trigger software that reacts immediately at the slightest hint of a threat.

Current triggers, ancient response

We all experience this system whenever a situation threatens our safety or that of a loved one. Think of the last time you slammed on the brakes as the car ahead sped through a stop sign. Or you had a particularly heated argument with your boss or your partner, or perhaps you had the terrifying experience of temporarily losing sight of your child in a shopping centre. You probably felt your heart jump in your throat, lost track of time and space and became hyper-focused on your immediate surroundings. Afterwards, when adrenaline levels started to come down, you may have experienced nausea, a headache, temporary fatigue and a drop in your motivation.

This is the acute stress response. And there is no better or more intense example of this innate survival mechanism than during the late Contagion and Panic phase of a pandemic.

With COVID-19 sweeping the globe, most readers will be familiar with scenes of unpredictable, aggressive and even violent behaviour in supermarkets by normally

social-etiquette abiding, law-respecting, rational citizens. Outraged videos of these streamed on social media in the early days of the infection.

It's interesting to note that during both the COVID-19 pandemic and the 2003-2004 SARS epidemic, those memes and videos seemed funnier and more bizarre in the early phases. That all changed once the World Health Organization issued a global health alert, and we were swept along with the tide of fear that spread throughout the planet.

Many of us labelled those behaviours shocking and inexcusable – and they certainly are if we judge them from a modern, ethical perspective. Yet they make perfect sense when looked at through an evolutionary lens. They are the default panic mode of an ancestral brain, perfected over hundreds of thousands of years. Without exception, they follow the brief to react urgently to severe and imminent threats to survival.

Open any history book, and you will encounter many stories and examples of irrational human behaviour when faced with life or death situations.

In his controversial book, *Homo Deus*, eminent historian Yuval Noah Harari provides a harrowing description of the French famine of 1694. People were so desperate to prolong their lives that they resorted to eating cats, the

flesh of dead horses cast upon dung piles and blood flowing from slaughtered cattle in abattoirs.

The 1330 pandemic plague killed nearly 50 million people worldwide and became known as the Black Death. During that time, some believed that evil gods flew from village to village at night, infecting people with the dreaded disease. Others thought that it was black magic, and both priests and doctors were consulted for a cure.¹⁹

Closer to our time, both the SARS and COVID-19 infections saw fake news on social media abounding with supposed meanings of these plagues. Microsoft billionaire Bill Gates was recently ‘fake-newsed’ as having written a social media post asking people to reflect positively on the spiritual purpose behind COVID-19.²⁰ The internet currently abounds with reshares of Martin Luther’s quote about the bubonic plague being a temptation that tests and proves our faith.²¹ One of the most significant health crises

19 Harari, Y. N. (2017). *Homo deus*. London: Vintage.

20 Goodman, J. (2020, March 28). Coronavirus: The fake Bill Gates post and other claims to ignore. BBC News. Retrieved from <https://www.bbc.com/news/52039642>

21 Faithwire, T. (2020, March 13). What C.S. Lewis and Martin Luther Would Say About Our Coronavirus Panic. CBN News. Retrieved from <https://www1.cbn.com/cbnnews/cwn/2020/march/what-c-s-lewis-martin-luther-would-say-about-our-coronavirus-panic>

of the last 100 years, the HIV/AIDS pandemic, was – and still is in some circles – described as ‘divine judgement’.²²

For all our technological advancements, we still cannot override our inbuilt mechanisms for survival. When struck by uncertainty and the fear that accompanies it, most people will look for solace in some kind of explanation – whether rational or imagined – depending on their own belief and values system. The National Institute of Mental Health defines stress as the brain and body’s response to any demand.²³ It is the length and type of stress we experience that can turn it from positive to harmful. The more intense the stress, the more likely we are to look for someone or something to blame to help us make sense of random, intense events.

On 18 March 2020, Australian Prime Minister Scott Morrison told Australians to stop hoarding and panic buying. In an emergency press conference, he said it was “ridiculous, un-Australian, and it must stop”.²⁴ He was basing his comments on the country’s value of mateship.

22 Blumberg, A. (2017, December 7). Shocking Number Of Americans Believe AIDS Could Be Punishment From God. Huffpost. Retrieved from https://www.huffingtonpost.com.au/entry/aids-hiv-gods-punishment_n_4876381?ri18n=true

23 Things You Should Know About Stress. (n.d.). NIH. Retrieved from <https://www.nlm.nih.gov/health/publications/stress/index.shtml>

24 ‘It’s un-Australian, and it must stop’: Scott Morrison tells Australians to cease panic buying. (2020, March 17). SBS News. Retrieved from <https://www.sbs.com.au/news/it-s-un-australian-and-it-must-stop-scott-morrison-tells-australians-to-cess-panic-buying>

But here's the thing: human survival instinct trumps any value. While the behaviour was distinctly *un-Australian*, it was most distinctly *human*.

Despite our modern technological advances and aspirational value system, we have witnessed images of middle-aged men being tasered and women scratching and slapping each other over the promise of a pack of 24 toilet rolls. Strong evidence that you can take the human out of the Stone Age, but you can't take the Stone Age out of the human.

Searching for patterns

The human brain is wired for pattern recognition. Finding patterns helps us understand the rules to navigate the unknown, improve our learning and make decisions about the future in a way that is also energy efficient at a cognitive level. After all, once we've worked out that putting a hand on an open flame is painful and harmful, our brain doesn't want to keep re-evaluating those circumstances every time to come to the same conclusion.

The brain needs to feed on constant information to find patterns from which it can extrapolate rules or meaning. Dr Ian Krajbich, neuro-economist and Assistant Professor of Psychology and Economics at Ohio State University,

explains that ‘it’s not just about predicting what’s coming next. It is looking for rules to help predict better and faster.’²⁵

During pandemics, however, it is challenging to find patterns. We are bombarded with information from various sources: news, social media, family, friends, schools, work environments. The government keeps revising recommendations and rules to slow down and contain the exponential spread of the virus. The combination of daily bad news, ever-changing statistics (according to which news site you read) and almost daily ‘change of plan’ scenarios, trigger our already highly suspicious brain. If it smells like fire, the brain will assume it needs to mobilise every part of our body to deal with a fire emergency.

Because of our heightened fear levels, the continuous alarm signals going off in our brain mean our attention becomes scattered.

Brain response to stress

In the initial phase of pandemic stress, our brain activates an ancient motivational system that revolves around the neurotransmitter dopamine. This manifests initially as a high energy state that triggers a desire to take immediate protective action. It is what we witnessed in the case of

25 This is your brain detecting patterns. (2018, May 31). Science Daily. Retrieved from <https://www.sciencedaily.com/releases/2018/05/180531114642.htm>

entire households busy stockpiling their garage with pasta and toilet rolls.

Dopamine works by tracking expected results, such as being able to get your hands on a 24-pack of toilet rolls, or that last remaining packet of lentil pasta. (Incidentally, we bet that will be stuck at the back of most people's pantries well after the pandemic has ended.) These results qualify in the brain as a major 'tick' against the expectations box. In turn, dopamine increases further and triggers the release of euphoric, feel-good peptides called endorphins. So far, so good. There's nothing wrong with some self-induced, stone-age driven euphoria.

However, if you are prone to not breaking down dopamine very well – a common genetic occurrence in about forty per cent of the population – the increased energy and vitality will also start to tip into less desirable responses. Irritability – 'Urgh, no toilet paper – again!' Anger – 'I was here first, give me that toilet paper!' Anxiety – 'Will there ever be any toilet paper again?' Judgement – 'I can't believe how selfish other people are, hogging all the toilet paper.' Or even rage – 'I'm going to kill someone if I can't find any toilet paper today!'

Dopamine breaks down into adrenaline – another ancestral neurotransmitter that is associated with an acute stress response. Even though stress is experienced both in our body and our mind, a complex biochemical reaction occurs in a part of the brain called the amygdala. All this

happens before the wiser, more rational part of the brain – the cortex – even gets the chance to have a say.

Of course, this is not an excuse for behaving aggressively. People can control their impulses with some training, which is the information and strategies we will share with you in the chapter on Mind Safety.

It is essential to be aware and acknowledge that this biological mechanism is our default system. And while we can learn to achieve mastery and control over it, we cannot completely override it.

These changes occur in your body, whether you like it or not. They are mostly genetically driven. In other words, while the brain's response to stress is inbuilt, the speed and intensity of the reaction that stress elicits from your brain is genetically driven. Your unique genetic blueprint, is acquired at birth – fifty per cent from mum and fifty per cent from dad. It is shaped by early life attachment to your primary carers as well as social interactions. Someone with a strong genetic predisposition towards anxiety, who was deprived of secure attachment as a child and perhaps exposed to traumatic or chronically stressful events will experience a super quick biological response to experiencing life during a pandemic. This reaction happens as the stress genes acquired at birth become 'expressed' or active.

Even after the threat of toilet paper wars has ended, you may suffer from the unpleasant consequences of your biological stress response. This will depend on your genetic make-up and how well practised you are at switching on your rational prefrontal cortex to gain the upper hand. Adrenaline can take hours or days to break down in the body.

So what was meant to be a simple thirty-minute supermarket trip ends up affecting your mood, your energy, your productivity, your performance and even communication with your family, friends and colleagues – potentially for as long as the next 48 hours.

As adrenaline, noradrenaline (also derived from dopamine) and cortisol increase, our sugar levels go up, our senses sharpen and our ability to focus improves. Have you ever been so startled by a sound, that you nearly jumped out of your skin? The massive release of adrenaline and cortisol at that moment probably gave you almost superhuman powers: your pupils dilated, your heart rate increased rapidly, and your mental faculties and senses grew super sharp. You became hyper-alert to your environment and were ready to sprint should it be needed.

Cognitive performance and a sense of increased energy are widespread in the initial phase of stress because of this chemical cascade. During a pandemic this manifests as panic buying, working much longer hours, and having a feeling of super faculties and energy. It's an evolutionary

mechanism that allows our brains to be super alert by having sharper hearing, sight and sense of smell as well as an increased ability to tune in to environmental changes.²⁶ Unfortunately, as we move into the Endurance stage, we are at risk of becoming stuck in chronic stress mode. Those same neurotransmitters that powered our immediate defence response start to create havoc in our brain.

Memory

Chemicals released in acute stress conditions also boost memory. Stress turns on several brain networks involved in memory formation and this explains why emotional arousal plays such an essential part in how well we can remember things.

Earlier in the stress response, noradrenaline is released in different parts of the brain that are essential for memory consolidation after acute stress. However, studies show that if stress levels are sustained over time, this leads to physical and functional changes in a part of the brain called the hippocampus, which is involved in memory formation. Stress not only decreases the size of the hippocampus, but it also reduces the number of branches (dendrites) that

26 Bloomfield, M. A., McCutcheon, R. A., Kempton, M., Freeman, T. P., & Howes, O. (2019, November 12). The effects of psychosocial stress on dopaminergic function and the acute stress response. *eLife*. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6850765/>

help neurons communicate with one another.²⁷ At times of chronic stress, you may find your memory becoming patchy and find it harder to remember to do tasks, or why you've walked into a room, or where you've placed your keys.

Energy levels

The human brain always prioritises itself when it comes to energy levels. When we're experiencing times of change and uncertainty such as during the Panic phase of a pandemic, the brain goes into default mode to demand more energy. If unable to find recognisable environmental patterns to use for survival reassurance, the brain adopts a 'stockpiling' strategy by requiring more energy to try and reduce uncertainty.²⁸

As a result, there is a higher demand to produce cortisol which in turn mobilises blood sugar from fat stores to be ready for fight or flight. Short-term stress also increases levels of glutamate. You can think of glutamate as the match that lights up the fire inside brain cells to function. It is essential for us to speak, think and process information.

27 Yaribeygi, H., Panahi, Y., Sahraei, H., Johnston, T. P., & Sahebkar, A. (2017, July 21). The impact of stress on body function: EXCLI Journal. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5579396/>

28 Peters, A., McEwen, B., Friston, K. (2017, May 30). Uncertainty and stress: Why it causes diseases and how it is mastered by the brain. Science Direct. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0301008217300369>

Even though you've probably never heard of glutamate, it is the most abundant neurotransmitter in the brain. It's a bit like the Kardashians; you don't need to know anything about them other than that they're there. And just like the Kardashians, too much of it is not necessarily a good thing. High levels of glutamate trigger the 'brain on fire' syndrome when brain cells get too excited and just can't communicate with each other appropriately. An excess of this neurotransmitter leads to increased levels of anxiety, rumination and insomnia. Many of our clients present with insomnia, anxiety disorders, migraines or hyperactivity. They experience a reduction in symptoms once their glutamate levels are reduced. An excess of glutamate also triggers inflammation in the brain, which is one of the most recent theories behind depression.

However, prolonged stress eventually leads to the opposite, in what is described as burnout, because as uncertainty persists, the brain experiences an energy crisis.²⁹

The brain downregulates the energy neurotransmitters such as dopamine, glutamate and adrenaline, and it even struggles to produce calming neurotransmitters such as GABA. When stress levels remain high, GABA levels plummet and the result is a combination of feeling wired and tired, where anxiety starts to become chronic. In time, we feel exhausted, and anxiety starts to give way to a more depressed state. This is particularly significant for

29 *ibid.*

people with a genetic predisposition towards low levels of dopamine. Long-term social isolation and a lack of variety in daily routines and environments reduce our balance of dopamine in the brain. When dopamine is low, we feel demotivated, disengaged and depressed.

In the Endurance phase of pandemics, when stress becomes chronic, and the monotony of self-isolation keeps dampening our spirits, the production of energy and longevity hormones such DHEA slows down. DHEA is the precursor to many other hormones in the body such as cortisol, progesterone and testosterone. When testosterone decreases, there is a loss of sense of identity and purpose in men, as this hormone is essential for them to have a sense of direction and feeling in control.

To a certain extent, this is true for women too, but it's more the loss of progesterone that affects their energy. Low progesterone in women, especially in the peri-menopausal period, leads to symptoms of brain fog and mental spaciness as well as lapses in memory and focus. Like a factory production line being halted or slowed down when the supply chain fails due to lack of raw materials, our bodies cannot sustain the high intensity of hormonal and neurotransmitter output that chronic stress demands. When levels of DHEA fall below 2-3umol/L in the blood, we experience full burnout or significant exhaustion.

This happens more frequently and quickly than you might think. We all want to put in place measures to prevent

slipping into this stage. The key is to regain control over our daily behaviours that support a healthy, rather than chronic stress response as well as allow us to regain control over our emotions.

This book aims to show you that if your brain and body's biochemistry are balanced, and you keep practising Mind Safety skills as outlined in Chapter Five, you're giving yourself the best chance to thrive and not just survive the intensity of a pandemic.

Digestion

We'd hazard a guess that if you've ever been in a highly stressful situation such as a heated argument with a friend or partner for being late for an important meeting, the last thing on your mind at the time was a burger with chips. You may well have gone to buy the meal (and supersized while you were at it) once you had calmed down afterwards, but it's doubtful during the stressful event itself.

Both the fight or flight and the rest and digest branches of our nervous system interact with a less well known neurological system called the enteric nervous system, which regulates digestion. We have no control over this system, which is dubbed the 'second brain' because it relies on the same types of nerve cells and neurotransmitters that are found in the brain and spinal cord.

When food enters the digestive tract, the enteric nervous system communicates with the brain through neurotransmitters such as serotonin. We describe this as the gut-brain axis – a superfast highway that connects our digestion to our nervous system. When we are stressed, the feedback highway slows or even stops, digestion so that all energy is diverted away from the gut towards more essential bodily functions. This is our way to deal with a real or perceived threat.

If stress is less severe but chronic, this can manifest as heartburn or reflux, bloating, pain or distention.

Chronic stress, such as faced during the Endurance phase of pandemics, also has a profound effect on our gut microbiome, which in turn negatively affects our immune system, digestion and mental health.

Of course, having poor digestion is not going to affect your immediate safety during a pandemic, but it may affect how well your body deals with the infection. We have no confirmed evidence for this right now, other than knowing that people with specific patterns of IBS have reduced numbers of immune T cells, which help with infection.³⁰

Recent studies have highlighted that people with chronic digestive issues have decreased levels of personal resilience

30 Mavrangelos, C., Campaniello, M. A., Andrews, J. M., Bampton, P. A., Hughes, P. A., (2017). Longitudinal analysis indicates symptom severity influences immune profile in irritable bowel syndrome. *Gut*.

and altered stress response due to changes in their cortisol metabolism. As we enter the Endurance phase of pandemics, optimal digestion is going to offer a much better shot at sustaining a high quality of life, mental wellbeing and the ability to get through the ongoing challenges.³¹

Libido

In the initial phase of stress, dopamine usually is released in higher amounts leading to hyperarousal. For some people, this can lead to a temporary increase in libido.³² However, chronic stress has a considerable impact on our sex hormones. Under prolonged stress, our body and brain demand a sustained production of the stress hormone cortisol. Cortisol in time starts to block the anterior pituitary, the part of the brain involved in hormone regulation, to turn down the production of sex hormones.

The net effect in women is a decrease in the luteinising hormone, which usually spikes before ovulation. Low luteinising hormone, in turn, affects a woman's libido. The increase in stress and anger also increases vasopressin,

31 Park, S. H., Naliboff, B. D., Shih, W., Presson, A. P., Videlock, E. J., Ju, T., Kilpatrick, L., Gupta, A., Mayer, E. A., Chang, L. (2017, July 18). Resilience is decreased in irritable bowel syndrome and associated with symptoms and cortisol response. Wiley Online Library. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/nmo.13155>

32 Bloomfield, M. A., McCutcheon, R. A., Kempton, M., Freeman, T. P., & Howes, O. (2019, November 12). The effects of psychosocial stress on dopaminergic function and the acute stress response. eLife. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6850765/>

which further reduces sexual desire. The result of this hormonal cascade is often irregular periods, a change in the length of their cycle, missed or erratic ovulation and decreased fertility.

For men, a down-regulation of testosterone leads to a loss of libido and the ability to achieve and maintain erections. It is one of the reasons why couples, without any physiological abnormality and who are struggling to conceive, are usually advised to adopt stress-management techniques to facilitate conception.³³

A final thought about stress

The stress response is a protective, evolutionary mechanism for survival. Both acute and chronic stress trigger the release of chemicals in the body that are beyond our control. Stress reactivity depends upon our genetics as well as our current biochemical balance. Both acute and chronic stress affect our cognitive performance, focus, memory, emotions, energy, libido and digestion as a result of the up or down-regulation of chemicals.

Understanding ourselves within the biological context can help us know how to manage our body and keep it safe.

33 Tsigos, C., Kyrrou, I., Kassi, E., Chrousos, G. (2016, March 10). Stress, Endocrine Physiology and Pathophysiology. Endotext. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK278995/>

Impact on Our Mind

In a pandemic, the ground feels shaky, and it's hard to know what to believe. As new information emerges, the situation is constantly changing. The impact is far more significant than we could ever imagine, not only from the effect of the virus but also the way we manage it. This chapter is about the impact of pandemics on our minds.

Information bombardment

Accessing information in real-time on a global scale means news is available from different angles, 24 hours a day, 7 days a week. Social media on multiple channels provides a further source of information overload. Every conversation seems to revolve around the impact of the virus. Our brains are incapable of processing this much information. It is a total bombardment of the senses.

Concerns arise

On many different fronts, the most common experience is worry. We are aware of the potential of economic downturn. We may experience employment or income

insecurities. We may be uneasy about our investments, assets and planned business deals. There may be concerns about our health or that of loved ones. It may be hard to convince those we love to stay inside and abide by the recommendations. Future planned events are in doubt, but for how long, we don't know. We feel anxious for children and their wellbeing, their schooling and future opportunities – especially when we are unable to answer their fears, worries and questions. This all-encompassing concern fills much of our conversation and starts to weigh heavy on our minds. What should we do to prepare? How can we get ready?

Confusion grows

While our political leaders wrestle with making decisions in our best interests, there is distrust and uncertainty about their actions. We are subject to the biases and misinformation that underly many of our news sources, and the differing opinions of experts and public figures. Having been accustomed to certainty, these hourly-changing times leave us unsure that any new rule or perspective will still be relevant tomorrow.

There is little evidence of world leaders uniting in this world crisis, so there are many different responses to assess and judge. Closer to home, our national leaders are confused and appear to have no greater awareness or understanding

of the changes in health or the economy than we do. Our employers also have varying reactions.

With limited certainty and shifting ground, we are experiencing a loss of the known – recognising that things are going to change, but unable to predict the speed or our involvement in it. The very fabric of society appears to be thin as what was relied upon as ‘normal’ starts to unravel. What is to come if the people around us don’t play by the usual rules? What danger are we in if support services are stretched or incapacitated? When the rules are broken, the boundaries are unclear, the future uncertain, and our experience is a mixture of hysteria and apathy.

Panic builds

We have observed intense and fast forming panic, where people are hoarding and driven to self-preserve. There is nothing rational about stockpiling toilet paper. While it may look selfish, it is driven by panic. Our brains get triggered into such an anxious state, fuelled by confusion and overwhelm of information, that we make irrational choices. In panic mode, we are on autopilot and the very opposite of rational. We are in flight or fight mode and react to our environment with very little cognition. If people are buying toilet paper, and the news is talking about others who are buying toilet paper, then we will likely follow the herd and do the same.

Experiencing emotional distress for a period of fewer than four weeks is labelled as acute. Anything more than four weeks is considered chronic.

The difference between acute and chronic is crucial. While the same emotions are experienced, their presentation will differ. Acute anxiety is different from chronic anxiety, and acute sadness is different from chronic sadness – which we generally call depression. Understanding and noticing when we move from one to the other is crucial in self-management.

Fear escalates

While panic is sharp and painful, confusing and overwhelming, chronic anxiety is pervasive, all-encompassing and appears never-ending. Here are some of the symptoms and categories for chronic anxiety.

- *Obsessive compulsivity*

One of the dangers of increased anxiety is that we can start to develop obsessive-compulsive habits. For example, we may find ourselves constantly checking our phones for updated news, or refreshing social sites to get more information or connection. While manageable in the short term, this can quickly become something that creates its a level of anxiety when we can't perform our checking behaviour. It can create a

cycle of anxiety that interrupts our capacity to focus on the things that we want to.

- *Generalised anxiety*

Anxiety is a strange beast. Although it may start attached to one fear, it spreads readily to a wide range of targets. This can lead to a state of chronic heightened anxiety or a frequently triggered state of anxiety.

- *Agoraphobia*

While the real impact of this will show up as we start our reintegration phase, there will be elements of this experience during the Endurance phase of the pandemic. Agoraphobia is the fear of space or the fear of leaving the house. Understandably there will be a certain amount of anxiety experienced by people when they are out as they will want to avoid exposure to the virus. There may be for some a layered anxiety response that occurs due to fear of leaving the house. Again, while an acute phase of this may not have much long term impact for people, a chronic period of this will impact widely.

- *Claustrophobia*

Some people may experience claustrophobia after a period of isolation. Technically this is only diagnosed when there is an irrational fear of not going out or escaping. However, in a pandemic, people may experience similar symptoms of feeling closed-in,

which can lead to heightened physical symptoms of stress and panic.

- *Health fears*

Health anxiety is characterised by the excessive identification of physical symptoms. When we tune in to our physical symptoms, there is much we could watch for or notice. Hyper-awareness is often unhelpful as many of the physical symptoms we experience are normal or without reason.

Sadness magnifies

There is much to be sad about during a pandemic. People will experience severe loss in many dimensions of their lives.

These are some of the losses we know that people will encounter.

- *Loss of structure and routine*

Routine has long helped humans to maximise their functioning. The absence of structure will heighten our sense of insecurity and lack of normality. It can be extremely detrimental to our wellbeing to lose the predictability and reliability that routine affords.

- *Loss of employment*

As businesses struggle to justify the cost of employees, cuts will be made, and people will lose their jobs. Perhaps these will come with a promise of returning in the future, but possibly not. There will be some new jobs as many industries will still require more staff (e.g. supply chain, care workers, government support agencies). However, the loss of employment will be felt intensely by those who have had that security.

There is a sense of certainty that goes hand in hand with employment. People like being employed even if they don't like their job! Being part of something is very important, and the loss of employment will have significant effects. Those who are strongly attached to the purpose of their role will forego a big part of their identity. Those deeply connected to their colleagues will feel a sense of abandonment and rejection. Those who identify with the esteem of their role will feel a sense of shame to be made redundant, and empty of a sense of purpose. There may also be anger and blame towards employers or ex-employers. These emotions are significant and far-reaching.

- *Loss of income*

Not having an income, or having a reduced income, is powerfully destabilising. In the western world, money is linked inextricably to our sense of safety. It can be intensely threatening to our identity, but a pandemic

is indiscriminate by nature. It impacts highly qualified individuals such as pilots, just as much as those with no qualifications at all. What support will people have to pay their living expenses? What surety will they have to know that their familiar world will return and enable their careers?

- *Loss of experiences*

As we self-isolate, our range of activities is restricted as outings and experiences are cancelled. There are no more live shows, no more playing sport, no more spectator matches or teams to support. No more meeting people in bars or cafés, no more trips to the library or the garden centre. The list goes on and on as the breadth of our experiences narrows.

- *Loss of planned events*

With plans wiped out of our diaries, there is little to look forward to. This lack of events could have a fundamental impact on our wellbeing. There will be none of the forward-thinking that we are both accustomed to and depend upon. We will struggle to look ahead.

Much of our emotional wellbeing is attached to thinking about the future. Not just in terms of looking forward with joy, but in helping to channel our choices and our efforts. For example, when heading towards an event such as participating in a

charity fun run, we know what to do to get ready. Without a list of things to prepare for, it is difficult to make decisions about what to do right now.

- *Loss of social interaction*

The absence of social interaction has an enormous impact. Humans are pack animals who require each other to function effectively. We depend on each other for survival, and we look to each other for safety and comfort. In a pandemic, there is much to unite us, to join us in shared solutions, compassion, service and even fun games to pass the time.

But for the most part, the pandemic leads to a loss of social interaction, the likes of which none of us has experienced. For those who live alone, it is tough, with little opportunity for any social contact outside the house. For those whose home is not their safe place because they live with someone abusive, it is tragic. The loss of social interaction leads quickly to too much time spent thinking and reflecting. This can cause rumination (worry) and sadness if not replaced by another social activity. Loneliness or missing people are likely.

- *Loss of physical interaction*

Social isolation is not just social; it is physical. We will have a significant drop in physical contact with people. Everything from handshakes to arms on shoulders, to

hugs and sex. Physical contact and stroking is a primal human need, with the core function of giving a sense of safety. Some will notice this absence, while others less so, but all will be impacted by it.

- *Death of loved ones*

There are enormous numbers of lives lost during a pandemic. This is indeed the deepest of loss. The virus spreads through physical contact; therefore, there will likely be multiple deaths for any family that is caught by the virus or any who share a social space. For some, there will be a 'stacking' of bereavements, with little time to process and move through grief before another death hits. Also, there may be many people in the same social networks grieving simultaneously for different people. Preparing our bodies and our minds for this is essential if we are to cope with courage.

- *Loss of hope*

In the Endurance phase of the pandemic, people will experience the loss of hope in ways related to any of the losses described above. While sadness is awful and consuming, the loss of hope is very worrying. Hopelessness is the key indicator of suicide risk.

These primary responses to the Endurance phase are all possible, and, to some extent, completely natural. But this is unprecedented in our lifetime, and the extent of loss and fear is unparalleled on a global scale.

Usual Coping Strategies

While some feelings we have had in the past are similar to those we may experience in a pandemic, there is a key difference. Many of us will be familiar with loss and with fear, confusion and concern, but potentially not at this scale, this compounded or this global.

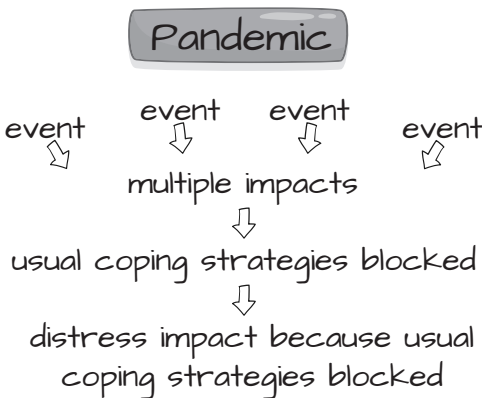
Not only are our difficult emotions triggered enormously, but there is also a difference in the way in which we deal with these emotions. When we have difficult emotions in 'normal' times, known and usual rituals and behaviours help us travel through. Those ways in which we usually cope with difficult circumstances include:

- Seeking comfort and touch (hugs, handshakes, hands around each other's shoulders) from other people who can assist in lifting and restoring us
- Distracting ourselves with hobbies or entertainment
- Problem-solving a way around or through the situation
- Seeking solace in social situations
- Sticking to routines to carry us through

During a pandemic, regular coping strategies are severely compromised. Without access to these, suffering may stay unresolved or become magnified, as there are reduced experiences and therefore limited distraction to make us feel better.

If your regular coping strategies are possible to implement now and they are helpful, then use them. Perhaps you are finding new ones in this time of resourcefulness and innovation. If so, please share them to help others.

Now may also be the time to learn new skills, new ways to manage your emotions and keep yourself psychologically safe.



Recovery impaired

The impact of a pandemic on our mind is immense. It cannot be under-estimated. It is essential to understand how we are affected so that we can monitor ourselves – and others – for risks to wellbeing. Understanding the pressure our mind is under during and after pandemics can help us come from a place of self-compassion rather than a place of shame or criticism.

When our usual coping strategies are impaired, we must turn towards new ways of behaving. For us to travel through this safely, we must develop heightened skills to manage ourselves effectively. If not now, then when?

Physical Safety

Let's start with the basics. Your main priority is to keep yourself and your family safe, as well as the community at large. It seems obvious, but we have been amazed at the number of people who are not heeding government advice about staying at home. Unless, of course, you are a first-responder or do a job that is considered an essential service.

The safest way to avoid infection in a pandemic is not to be exposed to the pathogen in the first place. Or if you do a job where exposure is inevitable, that you follow the highest standard of hygiene practices. Unfortunately, at times of crisis, some unscrupulous people are determined to get their point across; even when this is not backed by evidence and ends up maliciously or unwittingly disseminating false information.

In this chapter, we want to provide correct information and dispel some myths that have been circulating on the internet.

Truths about transmission, prevention, and treatment of COVID-19

- People of all ages are at risk of infection
- It takes between 2 and 10 days for people who are infected to develop symptoms
- Older adults and those with pre-existing conditions such as Diabetes (Type 1 and 2), heart disease, asthma, cancer, and a compromised immune system appear more vulnerable to becoming severely ill
- To date, there is no recommended medicine or treatment for COVID-19
- The best way to protect yourself is to wash hands frequently with soap and in the absence of water and soap, using an alcohol-based hand rub
- Thermal scanners are effective in detecting fever developed because of the infection. However, they do not identify the virus in people who have not yet developed symptoms or a temperature and who are already infectious
- Vaccines against pneumonia do not protect against the virus
- Antibiotics do not kill viruses; they only kill bacteria
- Hand dryers do not kill the virus
- Spraying alcohol or chlorine on your body will not kill viruses that have already entered the body. It

is also dangerous and can be harmful to skin and mucous membranes

- Eating garlic does not prevent COVID-19 infection (see more information on this in Immune Optimisation below)
- There is no evidence that a saline nasal rinse prevents infection (see Immune Optimisation below)
- Cold weather, cold water and ice baths do not kill the virus³⁴

How soon can we expect a safe treatment or vaccine against COVID-19?

At the time of writing, there are 39 vaccines in various stages of development, 19 antibody-based potential treatments, 12 anti-viral treatments, 3 cell-based therapies, 4 RNA-based treatments and 8 existing compounds that could potentially be repurposed.

Among the treatments, the first to enter Phase 3 trials, where safety is tested on large cohorts, will be a drug that has already been undergoing clinical trials for Ebola. Known as the SOLIDARITY trial, it is co-sponsored by Gilead and the World Health Organization (WHO).³⁵

34 Myth busters. (n.d.). Retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters>

35 COVID-19 Treatment and Vaccine Tracker. (2020, March). Milken Institute. Retrieved from: <https://milkeninstitute.org/sites/default/files/2020-03/Covid19-Tracker-3-36-20-FINAL.pdf>

Most vaccines are still at the pre-clinical phase of development except for a modest handful that are starting Phase One trials. It is the first step in vaccine testing or drug safety in humans. Bear in mind that Phase One usually takes 6-12 months and then there are three more phases, which can take from 1-3 years.

Recently we spoke to George Vlachos, Director of Clinical Trials at Akesa Pharma, and asked his opinion on a realistic timeline to a commercially available vaccine. He said that ‘Based on information gathered in this current time, the search for a vaccine and the timelines stated on when this will be available are vastly varied. Some politicians like President Trump predict a vaccine will be available in two to three months, whereas at the opposite end of the spectrum, some experts in the field are predicting around 18 months. The most likely scenario is that the timeline will be somewhere in the middle. The first line of treatment will be medications that are currently registered for other indications, and that are now in clinical trials to assess the effectiveness against COVID-19 disease.’³⁶ Mr Vlachos was referring here to the co-sponsored WHO Gilead SOLIDARITY trial mentioned above.

As you can see, vaccines and treatments now are not currently an option. The only proven way to stay healthy is to completely self-isolate and avoid exposure to the virus. What follows is a series of steps that will decrease

36 Telephone communication 29 Mar 2020

your risk of infection. They will strengthen your physical wellbeing and resilience to support you to come out of the COVID-19 period in optimal health.

STEP 1: Evidence-based recommendations for personal safety

Here are reminders on how to maintain the highest hygiene standard to reduce the risk of infection.

Use travel clothes

If you're an essential services worker, and particularly if you are often potentially exposed to people who are already infected, utilise the protective equipment provided by your employer. Wear different clothes for driving home to minimise the risk of spread of infection into your household. If this is not possible, put your clothes in the laundry as soon as you get home.

Sanitise hands at the door

Keep an anti-bacterial gel or spray at the front door. Take shoes off to reduce the load of bacteria and mould in the house. This is general household hygiene, not specific for COVID-19. Where possible, spray your hands before entering the house. Once inside, wash your hands. You might want to apply moisturising lotion afterwards as frequent use of anti-bacterial gel and handwashing can dry out the skin, leaving it more susceptible to cracking.

Wash hands with soap, then moisturise

We've all read this recommendation countless times, yet many do not wash their hands often or for long enough.

To wash your hands:

1. Wet your hands with cool running water. (There is no evidence that using warm water improves the removal of microbes.)
2. Apply soap and turn off the tap. (There is no evidence showing that turning off the tap contributes to the transmission of microbes between the hands and the tap.) There is no need to use a soap containing anti-bacterial agents. The FDA issued a final ruling in 2016 finding that 19 anti-microbial agents such as triclosan were no more effective than ordinary soap.³⁷
3. Lather your hands: rub your palms, back of the hands, in between the fingers and under your nails. Rubbing helps lift microbes from the skin.³⁸ Do this for at least 20 seconds or the time equivalent of singing the 'Happy Birthday' tune twice. Evidence suggests that

37 Show Me the Science – How to Wash Your Hands. (2020, March 4). Retrieved from <https://www.cdc.gov/handwashing/show-me-the-science-handwashing.html>

38 Lin C.M., Wu F. M., Kim H. K., Doyle M. P., Michael B. S., & Williams L. K., (2003 Dec). A comparison of handwashing techniques to remove *Escherichia coli* and caliciviruses under natural or artificial fingernails. *J Food Prot.*, 66(12):2296-301.

washing hands for about 15-30 seconds removes the most micro-organisms.³⁹

4. Rinse with cool running water, to help remove microbes.
5. Dry your hands using a clean towel or air dryer. Studies have shown that micro-organisms are more easily transferred from wet hands.⁴⁰
6. Apply a hand moisturiser after every handwash. A large epidemiological study in Sweden found that frequent hand washing increases the risk of skin barrier damage,⁴¹ which then defeats the point of washing hands.

Avoid shaking hands

Hands are one of the quickest ways to spread infection as we tend to touch our face frequently. It increases the opportunity for the virus to enter the body via the eyes, mouth and nose.

39 Todd E.C., Michaels B. S., Smith D., Greig J.D., & Bartleson C. A., (2010) Outbreaks where food workers have been implicated in the spread of foodborne disease. Part 9. Washing and drying of hands to reduce microbial contamination. *external icon J Food Prot*,73(10):1937-55.

40 Patrick D.R., Findon G., & Miller T.E. (1997). Residual moisture determines the level of touch-contact-associated bacterial transfer following hand washing. *external icon Epidemiol Infect*, 119(3):319-25.

41 Meding B., Gronhagen C.M., Bergstrom A., Kull I., Wrangsjö K., & Liden C. (2017). Water exposure on the hands in adolescents: a report from the BAMSE cohort. *Acta Derm Venereol*, 97:188–192.

Disinfect your door handles

Do this every time you enter the house. In our households, we have a procedure whereby we welcome the adult who has left the house for groceries at the front door with anti-bacterial spray at the ready. They remove their shoes, we spray their hands, shopping bags, and all boxed groceries before entering the house, and then they change their clothes and wash their hands. We cannot stress enough the importance of the highest standard of hygiene precautions, as well as self-isolation, at this stage.

Disinfect your mobile phone

Do this regularly when you're out of the house and as soon as you've come home.

Disinfect steering wheel, and car door handles

Do this every time you get into the car from potential external exposure. Carry an anti-bacterial spray in your pocket or handbag.

Disinfect bank or credit cards

Before you put them back in your wallet when shopping for essentials.

Disinfect laptops, tablets and all surfaces regularly

For laptops and keyboards, you can also use an anti-bacterial spray.

Increase house ventilation

Open your windows frequently to let in fresh air.

Keep your house temperature above 18 degrees

Cold air inflames the lungs and increases the risk of respiratory conditions such as asthma. The World Health Organization recommends keeping the indoor temperature above 18 degrees Celsius, especially for households with children, older adults and those with pre-existing respiratory conditions.⁴²

Cut your nails

Keep your nails short, free of nail polish or artificial nails (gels, SNS).

Do not touch your face

When you consider that, on average, we touch our face 23 times per hour, it is easy to see why this is such a critical behaviour change to decrease viral transmission.⁴³ When you are going out to buy essential groceries, avoid touching your face to reduce the transfer of the virus from your hands to your nose, mouth and eyes.

42 WHO Housing and Health Guidelines. Geneva: World Health Organization; 2018. 4, Low indoor temperatures and insulation.

43 Kwok Y.L., Galton J., & McLaws M.L., (2015 Feb). Face touching: a frequent habit that has implications for hand hygiene. *Am J Infect Control*. 43(2):112-4. doi: 10.1016/j.ajic.2014.10.015. Retrieved from: ncbi.nlm.nih.gov/pubmed/25637115

You can easily do this by tying back long hair and keeping facial hair to a minimum to reduce the risk of itching.

Avoid wearing a mask unless you are a health care professional or you are unwell. Unless you are entirely free of facial hair (and this includes stubble), your mask will not fit properly. Moreover, there is a global shortage of masks and disposable gloves, which are essential for health care workers. Please regularly check the World Health Organization website <https://www.who.int/emergencies/diseases/novel-coronavirus-2019> for updates about recommendations related to wearing a mask. New evidence has emerged that particles can reach six metres for a cough and eight metres for a sneeze. At the time of writing, both the WHO and the Australian Medical Association's advice is to limit the use of surgical masks to healthcare facilities and people who are unwell.⁴⁴

Use different hand towels and keep them dry

If someone in your household has to work outside the home, ensure they have their own hand and bath towels to avoid contamination. Change all hand towels daily and keep them dry as wet hand towels provide terrific homes for viruses.

⁴⁴ Willis, O. (2020, April 3). Should we wear face masks even when were not sick with COVID-19? The WHO revisits its advice. Retrieved from <https://www.abc.net.au/news/health/2020-04-03/who-assess-face-mask-use-general-public-coronavirus/12118042>

STEP 2: Strengthen your body

Your first and most important priority is to follow the guidelines above and keep abreast of new recommendations from your local government to ensure your safety.

Please remember that there is currently no supplement, vitamin, diet, lifestyle, exotic food or treatment for which there is any evidence of reducing your risk of contracting COVID-19 or speeding up recovery. We just do not have that data presently.

The following practices are our current recommendations for general wellbeing and immune function optimisation. They are based on evidence for a response to general, non-COVID-19 respiratory infections. They are not meant to offer a false sense of security and should be followed **in addition** to the medical recommendations described above.

Look after your mucous membranes

Mucous membranes are an important physical barrier that represent the first defence against respiratory infections. They are lined with tiny, hair-like protrusions called cilia that help move debris and micro-organisms towards the front of the nose or the back of the throat.

It is essential to look after our mucous membranes, especially in the wintertime, when dry indoor, centrally heated air causes dryness of the nasal passages and sinuses,

which can lead to inflammation and sinusitis. If you have asthma, sinusitis can make it harder to control.

There is evidence that the opening of the nose, called the vestibule, is an area vulnerable to the infection by the COVID-19 virus as its basal layer is high in angiotensin-converting enzyme-2 (ACE2) receptors. These are necessary for the virus to enter our cells. If our mucous membranes are damaged due to dryness, for example, the basal layer is left exposed, and the virus can easily attach to the ACE2 receptors.⁴⁵

Here are some simple suggestions for you to improve the health of your mucous membranes.

Daily saline rinse

Regular saline rinse has proven to be an effective treatment in chronic sinusitis. It has the added benefit of clearing any debris from the nose and keeping mucous membranes well hydrated. The Fess Nasal Rinse kit is very easy to use for both adults and children. Purchase this from your local pharmacy or online. It also comes with saline sachets to add to the pump bottle.

Interestingly, hygiene recommendations for health workers in Wuhan included cleaning the nose with a saline rinse or wiping the nasal vestibule with a cotton swab dipped in

⁴⁵ Yan, Y. et al. (2020). Consensus of Chinese experts on protection of skin and mucous membrane barrier for health-care workers fighting against coronavirus disease 2019. *Dermatologic Therapy*, 13:e13310.

water for three to five rounds to ensure complete cleansing at the end of each shift. We recommend a daily saline rinse for most people.

If you are a healthcare worker, you may like to share the link to the medical paper in the references with your healthcare manager to discuss the appropriateness of the Wuhan guidelines for healthcare workers.⁴⁶

Stay hydrated

Hydration is essential for the maintenance of the optimal health of our mucus membranes. Dehydration combined with dry indoor air leads to dry mucous membranes, which can become easily inflamed. Aim to drink between two and three litres of healthy liquids daily from a combination of the following:

- Filtered or tap water
- Green tea. If you tend to increased anxiety and heart rate and insomnia from drinking caffeine, you may have several genes that deal more slowly with its detoxification, leading to caffeine accumulation in your body. In this case switch to decaf green tea, which is readily available from supermarkets.
- Herbal teas
- Vegetable juices are a fantastic way to stay hydrated and boost levels of electrolytes and vitamins at the

⁴⁶ Ibid.

same time. But the practicality of buying a juicer or having enough fresh vegetables for juicing at this time makes this a prohibitive option. Instead, drink one to two glasses of V8 vegetable juice – buy the low sodium variety that is available from all supermarkets.

- One-pot soups. As we head towards the colder season, a great way to increase your water intake is making one-pot soups. Prepare these in large quantities for healthy, cheap and easy meals for the whole family. You can drink the soup throughout the day. It has the added advantage of using up leftover vegetables in your fridge as well as increasing your liquid intake and fibre. We like the easy-to-make Quick Soup Recipes on Taste.com.au.⁴⁷
- While coffee still counts towards your daily water intake, it is also a diuretic, which increases dehydration, so best not to count it in your 8-10 daily glasses.

Gargle with green tea

Half a cup, three times daily. A recent study found this can substantially reduce the risk of getting a respiratory infection. The tannins (phytochemicals) contained in green tea deactivate viruses on direct contact. There is no evidence of this being the case against COVID-19. But

⁴⁷ Quick soup recipes. (1999, November 30). Retrieved from <https://www.taste.com.au/recipes/collections/quick-soup-recipes>.

there is no harm in doing it, and green tea has a host of other health benefits.⁴⁸

Look after your gut

Seventy per cent of our immune system is located in the mucosa-associated lymphoid tissue that lines our gut. When our immune system is already busy fighting a low-grade, chronic infection in the gut, it does not have spare capacity to be dealing with other infections.⁴⁹

While in self-isolation, we want to ensure that we maintain the highest level of wellbeing to help us stay physically and mentally sharp during the prolonged period of confinement. Chronic gut issues correlate with poor mental health outcomes and an increase in anxiety and depression.⁵⁰

Many of the clients we have helped build mental and physical resilience through the years also had a history of irritable bowel syndrome or ongoing niggly symptoms that are indicative of poor gut health. In many cases, it turned out they harboured undiagnosed parasitic and bacterial infections that, while not life-threatening, increased their

48 Yamada, H., Takuma, N., Daimon, T., & Hara, Y. (2006) Gargling with tea catechin extracts for the prevention of influenza infection in elderly nursing home residents: a prospective clinical study. *The Journal of Alternative & Complementary Medicine*, 12(7), 669-72.

49 Clapp, M. et al. (2017). Gut microbiota's effect on mental health: The gut-brain axis *International Journal of Clinical Practice*, 7(4), 987.

50 Ibid.

risk of anxiety, depression as well as decreased their overall vitality scores.

Red flags of a sub-optimal digestive system

Ten signs to look for:

- Ongoing bloating
- Regular burping
- Loose bowel motions/skipping elimination on some days
- Pain
- Reflux/heartburn
- Gas/flatulence
- Bad breath
- Nausea
- Offensive odour in the stool
- Abdominal discomfort after eating certain foods such as onion and garlic

Experiencing any of these symptoms for longer than a couple of weeks is a sign all is not right in your gut. It could have a significant effect on your immunity, energy, and mental health.

Focus on plant foods

Plants should make up two thirds of our daily food intake with 2x fruits and 5-7 cups of vegetables. These will provide your gut with plenty of fibre for healthy bowel movements, and phytochemicals to favour the growth of beneficial bacteria and vitamins.

Plant-based diets have been shown to modify the composition of our gut bacteria and reduce inflammation.⁵¹

Prebiotic foods

These are foods that feed only beneficial bacteria, increasing their numbers.

Berries, legumes, lentils, beans, chickpeas, asparagus, onions, artichokes whole grains are excellent sources of prebiotic foods.

Fermented foods

Sauerkraut, kimchi and kefir are vegetable or dairy foods that, in the process of fermentation, have become 'live', meaning they are full of probiotics. Regularly eating fermented foods has been shown to reduce the risk of developing an upper respiratory infection.

51 Wong, M. & Yi, Chih-Hsun & Liu, Tso-Tsai & Lei, Wei-Yi & Hung, Jui-Sheng & Lin, Chin-Lon & Lin, Shinn-Zong & Chen, chien-lin. (2018). Impact of vegan diets on gut microbiota: An update on the clinical implications. *Tzu Chi Medical Journal*. 30.

Probiotic supplements

Probiotic supplements have been shown to reduce the incidence of upper respiratory infections. While the evidence does not specifically address COVID-19, probiotics are essential to maintain a healthy immune response in the gut as well as being beneficial at times of stress.⁵²

Yoghurt

Yoghurt merits a special mention as it is probably the most readily available fermented product in all supermarkets. Good brands are Vaalia (as it contains three well-studied strains of probiotics) and Danone Activia.

Garlic

Raw, freshly crushed garlic has long been considered a potent anti-microbial and anti-viral. Unfortunately, there is no current scientific evidence to back this claim. However, in clinical practice, a high dose of raw garlic has yielded fantastic results in terms of shortening the duration of colds. To reap its benefits, you must crush and eat it raw as this activates the anti-microbial chemical allicin. The recommendation is 1-3 chopped or crushed cloves daily. Make sure to mix garlic with food, or it will burn your mouth and possibly cause heartburn. Our favourite way

52 Hao, Q., Lu, Z., Dong, B.R., Huang, C.Q., & Wu, T. (2011). Probiotics for preventing acute upper respiratory tract infections. *Cochrane Database of Systematic Reviews*, 7(9).

to eat this is with mashed avocado and feta cheese on rye sourdough.

Green tea

Green tea is considered a prebiotic food, as some of its components appear to increase the number of beneficial bacteria in the gut. Drink 4-6 cups a day. If you are caffeine sensitive, switch to decaf green tea to obtain the prebiotic benefits.

Stomach acid is essential to digesting protein and triggering effective digestion of fats and carbohydrates in the small intestine. The brain needs amino-acids, the building blocks of protein, to maintain a healthy production of neurotransmitters for strong resilience. The body can create many amino acids itself, but there are several that need to be obtained directly from food.

Stress decreases our digestive capability to break down and absorb protein, leaving our brain often with a deficit of raw material and impacting our mental wellbeing. Having proper levels of stomach acid helps initiate the process of amino acid harvesting from food.

Here are some easy ways to boost your stomach acid to improve protein digestion:

Start your meal with a small salad or bowl of steamed veg with a delicious French vinaigrette dressing. We make one using a 2:1 ratio of extra virgin olive oil and apple cider

vinegar or red wine vinegar with a good dollop of Dijon mustard.

As much as we both enjoy red wine and good quality bubbly, alcohol does not enhance digestion. Several studies have shown that our gut microbiome is negatively impacted within an hour of drinking alcohol.⁵³ Even small amounts of alcohol can irritate the lining of our stomach. While the odd glass here and there probably won't have a significant effect on your wellbeing, it can lead to gastritis for those who are prone to heartburn. It is a painful condition where the stomach lining becomes inflamed.

Look after your immune system

Many vitamins and nutrients are required for the immune system to work efficiently. When deficient in certain micronutrients, our innate and antibody defences against pathogens are impaired. The risk of infections increases, as does the intensity of symptoms and time to recovery. Infections – especially chronic ones – deplete the body of micronutrients. Those at increased risk of micronutrient deficiency include:

- Older people
- Smokers
- Chronic alcoholic abusers

53 Sarkar, D., Jung, M., & Wang, J.(2015). Alcohol and the Immune System. *Alcohol Research*, 37(2), 153–155.

- Pregnant or lactating women
- Those with certain pre-existing medical conditions

The immune system is negatively affected by isolation combined with the chronic stress of living in pandemic times. It is worth remembering that while a robust immune system helps fight a potential infection, a depleted immune system is more prone to produce inflammation.

Inflammation and high stress are a potent combination with significant repercussions on mental health, especially in people who are genetically prone to major depression.

The following is a quick and user-friendly review of some specific nutrients. We are all at risk of becoming deficient in these during isolation, given higher demands on our bodies alongside a decrease in dietary variety.

As we head toward winter, our metabolism slows down, levels of serotonin decrease, and we start to crave more high-calorie foods such as stodgy carbohydrates, creamy sauces and rich, sugary treats. While these offer emotional comfort, they also compound the vulnerability of our already challenged nervous system.

These supplements will not prevent infection by COVID-19, but as essential components of the immune system, they keep us firing at our best.

Supplements are exactly that. They are not meant to replace a healthy diet, but in times of isolation or when demands for optimal food are higher, it might be worth supplementing. Always check with your primary care physician whether a nutritional supplement is appropriate for you, as there may be interactions with your current medication or a pre-existing medical diagnosis.

Vitamin A, C, E, zinc

These four nutrients are essential for maintaining healthy skin and mucous membranes.⁵⁴ Except for vitamin C, they are also necessary for the production of antibodies. They are found in abundance in a diet with plenty of fruit and vegetables.

Zinc is not readily available from vegetarian sources but abundant in meat, poultry, shellfish and pork. Vegetarians can obtain zinc from eggs, legumes, pumpkin seeds and oats, though we would recommend a yearly blood test to look at levels.

Zinc is not stored in the body, so it needs to be obtained daily from food. It is often depleted in people who have long-standing anxiety and is one of the most common deficiencies we see in stressed, driven executives. Zinc levels

54 Maggini, S. Wintergest, E.S., Beveridge, S., & Hornig, D.H. (2007). Selected vitamins and trace elements support immune function by strengthening epithelial barriers and cellular and humoral immune responses. *British Journal of Nutrition*, 98(1), 29-35.

are easily checked via a blood test, which, unfortunately, is not practical to do at present. Signs of zinc deficiency are:

- Altered/loss of sense of taste/smell (please note this can also be due to COVID-19 infection)
- Loss of appetite (though you can still be a voracious eater and have low levels of zinc)
- Chronic anxiety
- Poor immunity
- Poor wound healing

Optimal zinc levels are usually relatively easily restored through a course of zinc supplementation and a balanced diet. This is particularly recommended for people following a vegan or vegetarian diet.

Vitamin D

When it comes to immunity, this is likely the key vitamin, as vitamin D deficiency has been shown to increase susceptibility to infection.⁵⁵ A 2019 meta-analysis found that vitamin D supplementation was safe and protected against acute respiratory infection in people with significant deficiency.⁵⁶

55 Aranow, C. (2011). Vitamin D and the Immune System. *Journal of Investigative Medicine*, 59(6), 881–886.

56 Martineau, A.R., Jolliffe, D.A., Greenberg, L., Aloia, J.F., Bergman, P., Dubnov-Raz G., et al. (2019) Vitamin D supplementation to prevent acute respiratory infections: individual participant data meta-analysis. *Health Technology Assessment*, 23(2).

Look after your routine

The most significant change to make while living in isolation is to set up a daily routine – even more than you had before.

Most isolation professionals, such as astronauts, submariners, polar scientists or monks, have one thing in common: strict routines that break the day into chunks. The reason for this is that our bodies and brains thrive on routines. We are wired to match daily and seasonal changes in our environment and respond to cues such as daylight, temperature, time of eating and exercise. Thousands of peripheral clocks found throughout our body interpret these clues and provide feedback to our brain and our master clock, which sets the time for when our cells need to work and rest.

When we spend so much time indoors, the pauses and breaks we usually have when working from an office blur into a same-same landscape where work, lunch, dinner and relaxation all morph into one. Reinforcing habitual cues helps our brain keep producing healthy amounts of neurotransmitters according to appropriate cycles.

It may seem ridiculous to get fully dressed to work in your lounge or to keep to regular eating times when your fridge is just a short (too short!) walk away.

However, while our genes and brains continue to follow a circadian rhythm, subtle changes mean that your sleep,

appetite and brain energy will start to shift relatively quickly. Studies have shown that people who spent a month in a dark cave still felt sleepy at nighttime and tended to awake roughly at the same time in the morning even without access to watches, light or contact with the outside world.

Make your expectations flexible

We understand that for people with young children (we both have primary school children) it is challenging to get a day's work done. Especially when little people continually interrupt you for more snacks, demand help to find that elusive piece of Lego or need you to referee an argument with a sibling.

Many people have told us that a major source of stress is the feeling that they're falling behind with work. There just isn't enough quality time to work for a few hours straight. The challenge here is not necessarily a lack of time, but the expectation that a productive day must involve hours of uninterrupted work.

From our experience, this is a mindset challenge more than anything else. It is both unrealistic and detrimental to expect to have several hours of uninterrupted time. Feelings of anxiety, fear and frustration will be triggered just from the assumption that you should be expecting the same level of efficiency and productivity.

Science tells us that the human brain works best in 60-minute chunks. If you're used to sitting at your desk for a couple of hours, we will hazard a guess that probably only thirty per cent of that time is highly productive.

If both you and your partner work full-time and have to share the parenting during isolation, we suggest you create a tag-team system. It is where one person acts as the primary carer (perhaps less necessary with older children) at any given time while the other parent works – uninterrupted.

Use that time to do your most important work – anything that requires thinking and concentration. Decide to answer emails two or three times a day. In between, set up an auto-responder telling people when your email times are and to call you for urgent matters.

As you establish a routine (and if your children are old enough to understand this) share your expectations of everyone's behaviour for the day.

Draw up routines on butcher or flipchart paper and Blu Tack them to a wall.

Have a daily family meeting with breakfast, setting up chores for both children and adults, distributing pre-organised craft activities. There are plenty of websites offering free, age-appropriate activities.

Ideally, start the day with some exercise routine. There are plenty of options available:

- Online group PT sessions (most are happy for children to join in too).
- If you have a PlayStation or Xbox, get an aerobic game (our kids love Just Dance on PS4) for your children to stay active while you do exercise.
- For families with toddlers or babies, spend half an hour playing rough and tumble or tickle games which will tick the box of exercise, connection and quality time with family all at the same time.

Other suggestions to create healthy routines

- If you're itching to open your laptop straight away in the morning, remind yourself that most likely this is 'free time' that would otherwise have been spent commuting.
- Set times for breakfast, lunch and dinner.
- Stick to a regular bedtime and get up at the same time every day.
- Get dressed for work in the morning and change into your trackpants at the end of the day to signal an end to work time.
- Clear your desk/dining table/office space at the end of the day. Close all tabs and power down your computer.

- Make time to go outdoors. Even spending ten minutes on a balcony, connecting with the outside world can help your body relax and decrease stress hormones
- In a nutshell, create a routine that will tell your brain when it's time to work, play, eat and sleep.

Protect your sleep

Sleep is non-negotiable. It is the single most important thing you can do to strengthen your body and your mind. Ongoing sleep deprivation increases the risk of depression and mental health imbalances. It decreases our productivity and focus the next day as well as our short-term memory. Lack of sleep depresses the immune function and makes us crave high calorie snacks.

We understand that sometimes night-time is the only time when you may be able to do undisturbed work but it is a recipe for long-term disaster.

If you really cannot get yourself to bed at a reasonable time to ensure at least 6-7 hours of sleep, carve some time out during the day to have one or two micro naps. Fifteen to twenty minutes is all that's required to refresh your brain and put some coins back into your sleep piggy bank.

Red flags that isolation is taking its toll

- You're drinking every day or much more than before self-isolation

- You're eating more frequently and often snacking at night
- You've stopped making an effort with your appearance
- You're working late nights and weekends (and you weren't before)
- Your sleep has a different pattern
- Your energy is decreasing
- You're feeling more irritable and are quick to anger

Use the time spent in isolation as a way to prioritise your self-care. Set routines that help highlight where the work/rest/play boundaries are. Focus on easy to make, healthy, hearty meals to nourish your body and your soul. Be vigilant with your hygiene practices and do your bit to reduce the risk of infection to you and your family so as to protect the health of those working in healthcare services and running the risk of overwhelming hospitals' capacity. Honour your body with rest, play and nourishment and it will reward you with the physical and mental resilience to carry you through and beyond the pandemic crisis.

Mind Safety

Keeping our minds safe is essential during and beyond pandemics. Unless we understand how to do so, we make ourselves vulnerable to short-term and long-term damage. We believe people's most important job during this strange period is to notice and find ways to cope with the impacts of COVID-19. The goal is to come out stronger than when we started and understand more about managing ourselves than we ever have done. This challenging time offers opportunities for humanity to move into greater consciousness and connection.

Psychological safety is key to our wellbeing. It's all about how we handle our emotions so that they remain manageable. How do we keep ourselves and our minds safe while enduring the impact of the pandemic? There are essential skills to master that place us in the best position to be well. This chapter explores ways to keep your mind safe so that you can survive and thrive psychologically throughout the pandemic and beyond.

Your Emotions

How do we feel safe in an unsafe world when strong emotions are compounded, and our usual coping strategies are not accessible?

1. Tune into your negative feelings

Being able to sit with yourself for long enough to feel your feelings is vital. When we sit with our emotions, what we feel most strongly is often masking another experience. For example, we may have the experience of anger, but underneath it comes from a place of anxiety.

Knowing where difficult feelings come from allows us to see a different solution. One of the problems that has arisen in Western societies is that we frequently deny our emotions. Pretending they aren't there or minimising their access to our current feelings doesn't help us to work through them.

Compartmentalising big feelings, stopping them from interfering with everyday life is part of the process of coping, but denying is a dangerous thing to do. Feelings denied have a habit of emerging elsewhere, either later down the track or in a physical manifestation.

Think of it as turning your back on a messy drawer, shoving more and more things in but not looking inside. The more you put in, the closer it gets to overflowing, cracking or bursting. Things will start to come out when you don't

want them to, and the more you try to push them back in, the harder it will be. Better to turn towards the drawer and acknowledge the mess. That is our first stage.

2. Allow space for your thoughts and feelings

Our big emotions may be tangled up, resulting in fear, loss, concern for others or confusion. There may be other feelings in there too. Perhaps it's excitement at the changes, a sense of love for people and maybe even a sense of calm or quiet. It is easy to avoid feeling emotions, and yet there is a huge benefit in being able to sit with them.

Practically this may be just securing some quiet time with yourself. Check where in your body you are experiencing these feelings. Are they pushing down on you or pulling you up? Do you feel them in your chest or some other part of your body? What does this big emotion do to your body? Does it impact the way you walk, talk or look? Does it affect your senses? The way you hear? The things you smell? Your vision? Taste in your mouth? Your sensitivity to touch? Understanding and tuning in to where feelings exist in your body can point you towards a way to soothe yourself.

Experiencing emotions is something we rarely focus on in a busy world. If there is an advantage to this terrible time, perhaps it is in allowing us the space to sit with our feelings rather than ignoring them. Learn about how we experience them and what messages they are trying to send.

Some people find it helpful to write out thoughts and feelings. When you are alone, try to ensure that your critical voice (the one that talks down to ourselves or talks with shame or anger) doesn't come in too loudly. The way to do this is by writing or thinking from your compassionate, non-judgmental mind.

Write down your thoughts and feelings somewhere you can cherish or somewhere you can get rid of easily. Whatever works best for you.

The act of writing has several benefits.

- Thoughts have to slow down as they move to written form. Writing allows you to grab hold of what is going on, rather than it finding it overwhelming. The leaps our brain wants to make by catastrophising or projecting are curtailed when we have to use a pen to write them out.
- Writing externalises your thinking. It weighs less on paper than in your head. By externalising, we have the opportunity to *think* about our thoughts and feelings rather than *being* our thoughts and feelings. It is a powerful technique for creating distance between what is happening in your body, and you. You are not your thoughts. You are not even your feelings. You are merely *experiencing* your thoughts and feelings. It is an important distinction that we will return to shortly.

- Writing helps you turn the incoherent into the coherent. If you are not writing for anyone else to read, then it doesn't matter how intelligible it is, whether complete sentences or dot points, conflicting ideas or clear. However, a strange thing happens as you keep writing – you sort through your thoughts. It helps turn what is often a mess, into an understandable string of words and starts to contain it in some way. You begin to spot themes or categories. You can analyse the function of your feelings and thoughts. In other words, what are these signals trying to send you? What are they trying to say? Can you hear the value in them?
- Writing makes your thoughts and feelings less frenetic. Have you ever had that experience of waking from a vivid dream and then trying to explain it out loud while the facts you knew a minute ago disappear? Characters switch, locations change, something that seemed logical now doesn't have a flow. This can happen when writing out our big emotions and thoughts. Gaps form and the jumps made or the loops got caught in become visible. Threads of thoughts and feelings have less power when we can see the flaws in their story.
- Writing helps you see repeated messages. While it may feel like an overwhelming stream of never-ending thoughts and feelings, often only one or two themes are circulating. This makes it easier to figure out what would be helpful.

This act of writing will help you start to shift the relationship between you and your thoughts and feelings. They are trying to tell you something. Can you tune in to the message are they trying to send? Perhaps fear is telling you to beware, be careful. Sadness is revealing that you are experiencing a loss that needs to be soothed or replaced. Your anger is telling you of a need to respond to the hurt you are feeling. All feelings have a purpose, a message they are giving. When we can hear them and calm them, they don't need to keep shouting. They know you are listening.

Try to practise getting a different dialogue with your feelings. For example, 'I notice I feel irritated today' or 'I've noticed that I'm feeling a little more anxious this afternoon than I was this morning'. As ever, practise being non-judgmental of your feelings.

3. Remind yourself that your feelings are justified

The brain is built to experience feelings and to respond to them. The feelings experienced are natural responses to unfolding situations. They have their place. If we felt no fear, we would be doing things such as having social get-togethers, visiting people who are sick, travelling widely. Fear is good – we need it to protect us. And it's the same for sadness.

Loss is the other side of the coin from love. If we didn't experience love or engagement in something, we wouldn't know loss when love was absent. It is a necessary part of

our existence and prompts us to seek out things that make us happy.

Whatever feelings you are experiencing at this time will be a natural response to the stimulus you are facing.

4. Thank your feelings

While it may feel strange to do, it is important to be grateful to your brain for sending these messages through your emotions.

Without being able to say thank you, we tend to put ourselves in opposition to our feelings, and fighting with them only seems to give them more fuel. It may even lead to secondary emotions such as irritation or criticism of self, or guilt or shame. By taking the time to say thank you, we turn towards the feelings and say, 'I've heard you, I've heard what message you are trying to give me, and I'm trying to extract the meaning for me'. It puts you above the feelings. You are coming from an elevated position. In psychology, we call this meta-awareness, where you look down on your feelings and see them more objectively. They are not you; they are simply an experience that you are having. Thank them for being there, and they will not fight so hard to be heard.

5. Show yourself compassion

This is a difficult time: there is no denying that it is unprecedented for us. We need to recognise this for

ourselves, to notice the pain and to try to nurture ourselves through the pain. Whereas empathy is understanding the emotion, compassion is empathy plus action. When tuning in to our feelings, it is not enough to immerse ourselves in them. Better to think about what you could do to help. Compassion is about action. Here are some questions you may find it useful to consider.

What can I do right now that will help me with this emotion?

What can I do to soothe myself?

If I was to draw on the nurturing part of myself and self-parent, what would I do or recommend I should do?

What can I see/hear/feel right now that gives me comfort or pleasure?

What can I do that will feel good?

If someone who loved me was here, what would they do right now to nurture me?

If I was fully self-compassionate, how would I feel and relate to myself from that position?

You might consider actions as simple as having a bath with candles, or a cosy blanket or a sleep in the garden. Perhaps you want to nurture yourself or your family by making a healthy soup or a smoothie. It could be cuddling with a pet

or a family member. Maybe spend time outside, gardening or creating with your hands, polishing something or doing something repetitive. Perhaps it's a crossword or reading, a pampering ritual or listening to a favourite piece of music. Or finding a smell or a perfume that you enjoy?

The obstacle most of us face here is the concern that it is too indulgent. If that's not you, then great, go and run that bath! But if it is, please remember that this is a super skill of self-management. It might be OK to deny emotions or the need for nurturing when there are usual distractions and coping strategies, but not being able to self-nurture can also lead to resentment, repression and low resilience. Now is definitely the time to practise self-compassion and self-nurturing

6. Tune in to helpful feelings

What other messages do you hear? If fear and sadness are foremost for you right now, they will be drowning out the other singers in the choir of your mind. You are the conductor, so listen for the other voices.

Practically, this might mean that you need to focus your attention on looking for these alternative voices.

Give yourself a pause in the day. Start with a grounding technique (see below for a list of ideas), or just sit and sense your surroundings. Once grounded, turn your attention away from things that promote your sadness or fear (e.g. the news). Take control of the perspective you use when

looking or thinking about something is a super skill that deserves practise. For example, look for the opportunity in an event rather than the costs. That doesn't deny that there are costs; instead it helps you to practise looking for other viewpoints.

Can you see or hear other perspectives and voices? Perhaps the voice of compassion for others? The voice of excitement at the potential shifts that are occurring? Or the voice of satisfaction or pleasure from anything you can see or hear? Encourage these to take their place in your mind. They don't need to outweigh the fear or sadness, but they need to be accessible. Start to tune in to them.

7. Practise gratitude

It may seem hard to feel grateful right now. But as the pandemic shows what we can't have right now, it also helps us turn towards being thankful for what we always have, and continue to have. A practice of gratitude (whether verbal or written) is a powerful way to move from a frame of 'scarcity and loss' to 'we have enough'. Focusing on what we have rather than what we do not, is much more helpful and healthy. Focus on how safe we are; what we can control and all the resources we have around us that can help.

Your Thoughts

1. What's the message?

Your brain is smart and amazing but faulty. The incredible amount of information it takes in from internal and external stimulation is impossible to process, so it has to take short cuts. It has to cut corners and make assumptions, use previous thoughts to help work out what to pay attention to and what messages to extract.

Not only are we biased in our thinking, but we are programmed to look for fear. It magnifies risk for us and channels our attention towards hazards and negative predictions.

In usual situations, this is so. But this is not a usual situation, so there are two questions to ask about the thoughts in your head.

Is this thought true or untrue?

Asking this question offers a chance to look from the perspective of a scientist. Where is the evidence for this thought, and where could I look for evidence that would counter it? For example, if you have the thought, 'I'm going to lose my house', it is useful to consider whether it is true or untrue. Perhaps it may be true but also look for evidence to suggest that you won't lose your house. This process makes sure your brain slows down to consider all the evidence, so it doesn't catastrophise or think in black

and white. You may conclude that the situation isn't as dire as you thought.

Is this thought helpful or unhelpful?

There are times when a difficult thought is real. When this is so, it is worth considering whether it is helpful. If not, then focus on what would be. For example, 'I can't control this', gets too much time in our head. It might be true, but is it helpful? It would be more useful to wonder 'What can I control?'

Asking whether the thought is helpful or unhelpful not only distances us from having to believe them but offers a choice over where to focus your thoughts. Remember that you are not your thoughts, so if they are not helpful, then move your attention onto something else. While not always an easy thing to do, this is a worthy pursuit.

2. Watch out for critical thinking

Although your thinking may provide clear messages, there are some kinds of thinking to watch for.

- **Secondary thoughts:** These criticise you for your initial thoughts, your feelings or your actions. For example, 'You're so stupid for thinking that', 'How dare you be scared when there are people who are in much worse situations' or 'Why aren't you making more productive use of this extra time, you're so lazy'.

- **Absolute thoughts:** When you recognise yourself using words such as: should, shouldn't, must, mustn't, or ought to, remind yourself that this thinking is very sharp and allows you minimal leeway. These absolutes can be hard to live with, as they demand that you behave in a certain way. Usually, they send secondary messages of failure or guilt when you aren't able to keep up with them. Practise listening for them and then see if you can change them to the word 'could' or 'might'. This semantic shift can help to give you a little more compassion, a bit more flexibility with what your thoughts are saying and are, therefore, less likely to trigger feelings such as shame or irritation.

3. Control your attention

Remember that we are trying for a balanced choir, where it is your choice to choose which voice to listen to. You are the conductor. There are times when the voice you want to hear the loudest is fear. At other times the voice of comfort or excitement is needed. Here are some suggestions to help focus your attention.

- Choose a picture or an object and write about it. What does it mean to you? What does it remind you of? Look for the emotion you are trying to turn towards. When an unwanted emotion overrides, notice it, thank it and return to the desired feeling. If it helps, use writing as a combined tool.

- Ground yourself in the moment rather than in the past or the future. Use any mindfulness technique you favour here.
 - ▶ The three-minute breathing space is a script that you either read or listen to. It grounds you in the present by focusing on what you are experiencing and guides you to what can be felt or heard. There are many examples available on the internet.
 - ▶ Notice five things you can see around you, four things you can touch, three things you can hear, two things you can smell and one thing you can taste.
 - ▶ Focus on the feeling of the ground beneath your feet and the clothes on your skin. Move your attention around your body to different parts and focus. Notice what you feel.
 - ▶ Use music to alter your state. Experiment with a variety of genres of music to change your thoughts and feelings. Also try this with different smells by burning distinctive oils or cooking particular foods. We have tremendous potential to alter moods by altering the environment. What could you try today?
 - ▶ Limit the time that you allow yourself to listen to any difficult emotions. In your writing session,

restrict the time you permit this voice to be the focus by setting a limit of, say, 15 minutes.

- Limit the times you worry or focus on your difficult emotions. When one arises, ask yourself if now is the time you would like to spend thinking about it. If it is not, turn towards the feeling, acknowledge and thank it, and reassure it that you will give it full focus at your desired time. Be specific, and set a time to return to those feelings and thoughts, for example, at 3.15pm today. Make sure it is not too far off into the future, so your worries don't need to shout their way back in. Every time they re-emerge, go through the same process – acknowledge, thank it and reassure it that you will return at 3.15pm. Then, at that time, grab your pen and start your writing as planned. You may find that accessing those thoughts is harder than you expected, and, surprisingly, you may not need the full time you allocated. But don't miss this stage. Take a more distant interest in your feelings or stressful thoughts. Imagine yourself as the conductor if that metaphor works for you. We are trying to focus on anything that places a gap between you and what you are experiencing. You are above them, and it reminds you that these feelings will move on and that there will be other ones too.
- ▶ Shift the narrative from 'I am sad' to 'I'm feeling sad', and from 'I am worried' to 'I'm having worries'. It's just a simple semantic trick to remind yourself that you are not your feelings or your thoughts.

- ▶ When you notice an awkward feeling or thought come up, go into observer-perspective, ‘Oh there’s that feeling/thought again’. You can wonder why it’s here and then try to watch it leave. Practise not holding onto it while it is here. Redirect it to your worry slot.

Your Behaviour

1. Watch out!

When emotions are heightened, it is tempting to turn towards behaviours that seem helpful in the short term but are actually damaging in the long term. Take a look at these examples.

- Distraction through drinking or drug-taking (even over the counter drugs). When outside standard social rules, it is not easy to recognise when and how much to use these props. For example, if you are not seeing anyone during the day, it may be easier to start drinking earlier than you would normally. During this time, be extra observant of your behaviour and try to stick to your usual rules. If drinking has always been a social activity for you, then set up a video call with a friend to continue that habit.
- Stay with your usual routines as much as possible. We have written more about this in the chapter on Physical Safety.

- Watching too much news or getting caught on social media is unhelpful for most of us. The level of stimulation and drama, differing perspectives and biased information do not suit our clever, yet fear-seeking brains.

Be aware of how you feel after speaking to some of your friends. Watch for those who make you feel worse. If they wind you up, take a break from talking and switch to texting. Alternatively seek out those who make you feel safe, calm and happy. That doesn't mean denying your feelings or theirs. Just remember the key is to choose the stimulation that comes into your world carefully.

2. Deliberate socialisation

Keep up your social interactions even though planned and incidental connections reduce during the pandemic. You may need to use unorthodox methods of communicating but creating intentional opportunities to connect is crucial. Some innovative ways to socialise are emerging.

Dinner dates with friends via video conferencing and shared experiences such as singing on balconies, all are ways to create social experiences. Keep looking, keep searching for ways to connect in this new world, and importantly, when you find something that works, share it with other people so they can learn too.

3. Compassion towards others

There is much to do and many people who need help. Pushing our thinking to serve others is a beneficial way to travel through a shared crisis. This experience we are all in will take a community response to solve. While we are ‘in’ the pandemic, there is a need to support each other. We are pack animals, and our need to be in social groups is primal.

A helpful way to get out of your own experiences is to put time and energy into others. There is a key benefit in giving to others – while it gives to the others, it also gives to us. There is strong evidence to suggest that feelings of social isolation are reduced by volunteering or contributing to community organisations.⁵⁷

Recognising that our minds are at risk gives a vital perspective of self-care. The impact of our pandemic era requires us to understand how to make ourselves safe. There are valuable techniques that we can and should focus on in times of stress. We have the chance to master ourselves, learn to control our emotions, thoughts and behaviours – despite the context of our world. One of the gifts of COVID-19 is that we have the opportunity to excel at self-management and mind safety.

57 Flood, M. (2005). Mapping Loneliness in Australia. The Australian Institute. Retrieved from <https://www.tai.org.au/node/939>



PART THREE

Thrive Beyond the Flattening of the Curve

It is likely that for most readers of this book, the experience of a pandemic is unprecedented. We know the impact of this is far reaching for most of us. If you would like to get a quick read on how you are doing right now, please visit www.braceforimpact.com.au to complete a quick diagnostic. The results will help you navigate where to focus your attention while you survive and thrive through this pandemic.

At a social, psychological and business level, the impact of this pandemic is actually not new to humankind. Author Simon Sinek highlights the fact that many times in recent history, unexpected events have radically changed the business landscape in a very short period. Think of the rapid rise of the internet and the disruption and subsequent demise of many businesses that would not switch to an online model. Every video store in the Western world was

put out of business when streaming became available as they couldn't reinvent themselves. More recently, Uber is squeezing the taxi industry out of business – not because of Uber itself – but because taxis are failing to reinvent their business model.⁵⁸

During the Contagion and Pandemic Phases of a global infection, we are forced into self-isolation as governments, businesses and individuals take the necessary measures for containment. Life feels hard, reduced, limited. We grapple with fear, anxiety and uncertainty. We fear for our safety as well as that of our loved ones. We face an ongoing threat to our livelihood and financial security. There is a sense of entrapment, and we feel prisoners in our own homes, without a foreseeable way out. This is what Sinek describes as being 'stuck inside a dark tunnel'. We know there will be a light at the end, but we can't quite see it yet.

Yet this is precisely the time to start thinking – not about when the tunnel will end, but what will the train look like as we exit. It is time to make brave decisions about our future self so that instead of remaining stuck in survival mode trying to hold on for dear life to what we've always done, we can take a leap forward and evolve.

58 Sinek, S. (2020, April 1). Simon Sinek on LinkedIn: Simon shared some inspiring thoughts on our last company Huddle. Retrieved April 3, 2020, from http://www.linkedin.com/posts/simonsinek_simon-shared-some-inspiring-thoughts-on-our-activity-6649390579530649600-jrw1

The human mind is remarkable. We are full of hope that this extraordinary period will leave a positive, mark on humanity. We wish that it moves us towards a more considered life, a more blended home and work environment, more respect for each other and greater awareness of our interdependence.

While there is pain to endure first, we must give careful thought to how we reintegrate back into normal life after the curve has declined. We will need to be thoughtful of our physical and psychological safety. For our performance to be optimal, and for communication and connection to be courageous, we must prepare for a new world. This world requires more consciousness and personal responsibility than ever before. While we cannot control the world around us, we can control how we respond, how we lead, and how we lift others.

To be spectacular leaders, entrepreneurs and human beings requires more than just resilience. We have to be prepared to thrive regardless of what is to be faced.

We must emerge from the cocoon of our pandemic with new wings. There is much groundwork to do, both during the curve and afterwards. Evolving is necessary but not automatic. Care and attention are needed beyond the curve to keep well, healthy, and at optimal functioning in the social environment of work.

Know your emotional signature

Is resilience innate or acquired? This question has preoccupied psychological researchers for several decades. From our perspective, it is both. Why is it that some people seem to take adversity on the chin while others struggle to adjust to change and challenge? As seen in earlier chapters, the body releases chemicals that are translated into the 'feeling' of emotion.

There is no doubt that some of us are born with a genetic blueprint primed for the development of healthy resilience. There is a considerable advantage in having the ability to produce optimal levels of the chemicals that fire up our brain at times of hardship and break down biological stress so that our minds do not remain in scatter mode. We have seen many cases in clinical practice where a simple biochemical adjustment or a change in dietary or lifestyle pattern has an enormous benefit. By ensuring a match to the needs of their DNA, we can help someone operate optimally with much more resilience.

On the other hand, a growing body of research suggests that resilience is learned, like a new language or sports skill. Exposure to situations that require testing of our identity or our expectations can increase our capacity to deal effectively with adversity. Resilience appears to grow as we are exposed to stressful situations, implying that it can be a learned behaviour.

What about you?

Looking back at the pattern of your life, ask yourself this question: Do I usually see adversity as a challenge to overcome, or do I tend to collapse under the weight of fear, feeling paralysed by overwhelm and uncertainty?

We have all experienced the latter at times. What matters is learning to recognise this pattern of reaction and permitting ourselves to believe that there is another way. Just because we have always had the same response pattern to adversity does not mean that it will continue to be the most relevant or useful.

Associate Professor of Psychiatry George Everly, says that ‘in the wake of war, natural disaster, and severe abuse, social support networks are the best predictor of immunity to stress, along with optimism, perseverance, responsibility, and integrity.’⁵⁹

These factors can be learned, practised and mastered.

While agreeing with Professor Everly, we believe that a more successful path to resilience and beyond starts with a better understanding of your emotional signature. Once you regularly pay attention to your default starting position, you can begin to make changes to your biochemistry and your mental and emotional patterns.

⁵⁹ Levine, I. (2011, June 10). Mind Matters: Resilience. Retrieved April 1, 2020, from <https://www.sciencemag.org/careers/2011/06/mind-matters-resilience>

Do you tend to anger and a feeling of loss of control when stressed? Do you tend to sadness and a sense of ‘being alone in this’? Or do you naturally jump onto the anxiety speed train and allow your mind to catastrophise?

Balancing your biological chemistry through specific lifestyle strategies can soften many of these innate emotional signatures. With that comes a more stable platform from which to start a new journey of resilience-building through new, more resourceful, learned safety behaviours.

**Keep it simple. Keep it fast.
Evolve immediately.**

COVID-19 is the latest in a chain of pandemics, environmental disasters and global financial crashes. It is not the first global crisis, nor will it be the last.

Many have been surprised by the complexity of the almost overnight changes that COVID-19 has triggered. If that is you too, then you will be shocked to hear that we believe you should start to live your life and lead your business with the assumption that such catastrophic events will happen regularly from now on.

By choosing a wait-and-see approach, we run the risk of no longer being relevant by the time this crisis is over. Companies will increasingly look to hire robust, flexible individuals who can fit within a responsive team, able to pivot quickly – army style – and efficiently adopt new ways

of working. Customers will switch their dollar loyalty to brands and businesses that can deliver, no matter what and provide them with a sense of normalcy.

As disruption becomes the norm, innovative and anti-fragile businesses that can evolve quickly and thrive from the disruption will take clients, sales and jobs from those companies who have either refused to adapt or were waiting for a return to business as usual. But business as usual is over. In the words of Bright Arena CEO, Dougal Edwards, your aim should be to ‘keep it simple, keep it fast, evolve immediately.’⁶⁰

Many well-meaning experts are currently advising people to wait, lick their wounds, go slow and wait until they are ready. And from the perspective of self-compassion, that might be fine. But we believe that this advice takes away from the urgency communicated to you in this book. There is no time to wait.

Three months ago, no one had heard of COVID-19. Now, within a very short period, we have been separated from our families and loved ones. Hospitals are full to the brim, and streets and shops have emptied. Fortune 500 and ASX listed companies have either halved or doubled their worth, and many people’s financial security and retirement nest eggs are at risk.

⁶⁰ Edwards, D. (2019, June 5). Values | Bright Arena. Retrieved April 5, 2020, from <https://brightarena.com/values/>

In three months you may be out of a job, and so may the people who employ you. Larger companies have a ticking bomb of depressed, stressed, frustrated people who are productive but disengaged. In the last two weeks, sixty-two per cent of Britons responding to a nationwide survey, said they were finding it harder to think positively about the future compared with before COVID-19.⁶¹ A recent review in the prestigious medical paper the *Lancet* found that the impact of quarantine can be so intense as to cause post-traumatic stress symptoms, confusion and anger.⁶²

We each need to take action now. First and foremost, decide what kind of person you're going to be when you exit the tunnel. Will you remain fragile and despondent, blaming others? Or are you using this time to develop your self-management skills? Will you accept that you need to change the way you manage your mind, your body, your behaviours to build your robustness? Will you be able to weather the storms ahead and become one of the few who can lift themselves and others through disruption?

61 How will humans, by nature social animals, fare when isolated? (2020, April 4). Retrieved April 7, 2020, from https://www.economist.com/international/2020/04/04/how-will-humans-by-nature-social-animals-fare-when-isolated?fsrc=newsletter&utm_campaign=the-economist-today&utm_medium=newsletter&utm_source=salesforce-marketing-cloud&utm_term=2020-04-03&utm_content=article-link-1

62 Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, 395(10227), 912–920. [https://doi.org/10.1016/s0140-6736\(20\)30460-8](https://doi.org/10.1016/s0140-6736(20)30460-8)

Prepare your body, prepare your mind. If you're a leader, prepare yourself and your team. If you're a CEO, make the entire organisation ready by upskilling your people in mind-body safety. Replace rigidity with flexibility, complexity with simplicity, and labour with ease.

We, the authors, are on the conscious path of building better selves by evolving our skills to cope with whatever we face. We hope you are equally charged with the responsibility of growing your self-management and those same skills in others around you. When we emerge from COVID-19, we will be forever changed. Our belief is that this will be a change for the better, that we will have learnt how to strengthen our minds and bodies in a way that will help us brace for any impact.

About the Authors

Dr Amy Silver ClinPsyD MPhil MA BSc(Hons) DipCAT MAPS is a psychologist, speaker, mentor and author. She is a leading expert in safety mindsets, how we create them for our own wellbeing, and for each other when teaming for high performance. She is passionate about helping people feel safe enough to be courageous in their connection to self and others. Her clients build psychologically safe cultures, teams that are full of trust, honesty and accountability, and individuals who master courage over fear.

Amy has a Doctorate in Clinical Psychology, Masters in Forensic Psychiatry, Masters in Performance, Bachelor with Honours in Psychology and further therapeutic training in cognitive therapies such as Cognitive Analytic Therapy (CAT), Compassion Therapy (CT) and Acceptance & Commitment Therapy (ACT). She was an Academic Researcher and Tutor at Oxford University for three years.

She is a contributing author in many books, including the acclaimed *Oxford Handbook of Behavioural Experiments* (Oxford University). Her own book, *Conversations Create Growth*, is for managers who wish to have better

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More can be found about Amy, her clients, free downloads and her programs at her website www.DrAmySilver.com or on all socials @DrAmySilver

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Alessandra is passionate about helping people understand their own genetic limits so they can achieve their maximum potential. She mentors Fortune 500 and ASX executives and their teams in how to harness the power of genetics to reach their highest level of physical and mental performance.

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Brent Hodgson is a marketing strategist, facilitator and coach who helps organisations to identify and exploit untapped opportunities for revenue growth, and to predict the marketing strategies that will perform best in uncertain times.

His unique analytical approach allows his clients to learn from past results, to predict future outcomes, and then to hone in on the few pieces of a business strategy that can be tweaked for the fastest, easiest and largest revenue gains. This analytical approach is perhaps best known through Brent's work as co-founder of the wildly popular Market Samurai SEO analysis software, which is used by over 300,000 individuals and marketing agencies worldwide.

He is the author of *Unassailable: The Tiny Tweaks That Create an Unbeatable Advantage in your marketing* and *Beyond the Booth: Trade Show Marketing Tactics For When Sales Matter*. Find out more about Brent and his work at <http://www.BrentHodgson.com>- or request a free digital copy of “Unassailable” and “Beyond The Booth” by emailing books@brenthodgson.com

“This is the most important book you’ll read this year. It could save your life, or at the very least, your sanity while navigating the uncertain times ahead.”

– Peter Cook, Chairperson, Thought Leaders

We are in the era of pandemics.

Despite the uncertainty and ravages they bring, their patterns are known and predictable.

So too are the immense impacts on our body and mind.

To survive and thrive, we must become masterful at managing ourselves despite the risks.

With a focus on the double-sided coin of mind and body, **Brace for Impact** is your guidebook for surviving and thriving in the face of pandemics.

Authors Alessandra Edwards and Dr Amy Silver have decades of knowledge gathering and experience in physical, genetic, behavioural, social and psychological strength.

They want you to know what they know.

They want you to be strong going into this pandemic and even stronger coming out.

Full of practical advice to survive and thrive, this book is essential reading to keep yourself and those you love safe.



Alessandra Edwards is a high-performance mentor to Fortune 500 and ASX executives, and an international speaker. With a background in Nutritional Psychiatry and Nutrigenomics she helps leaders and teams achieve outstanding performance through DNA-based strategies.



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