



rcsi.com

**RCSI**

UNIVERSITY  
OF MEDICINE  
AND HEALTH  
SCIENCES

~  
*centre for  
positive psychology  
and health*

**The Science of Health  
AND Happiness**

resource manual

~  
*centre for  
positive psychology  
and health*

# The Science of Health AND Happiness

**LECTURE 1**

Professor Ciaran O'Boyle

resource manual

# RCSI Science of Health and Happiness: NOTES LECTURE 1

- **WHO definition of health** as '*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*' <https://www.who.int/about/who-we-are/frequently-asked-questions>
- **20<sup>th</sup>/21<sup>st</sup> century:** modernisation and rapid rise chronic diseases associated with lifestyle: (decreasing activity, obesity, high processed diet, smoking and alcohol)
- **Five conditions** – diabetes, cardiovascular diseases, cancer, chronic respiratory diseases and mental health disorders – account for an estimated **86%** of the deaths and **77%** of the disease burden in the European Region. <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>
- **The biomedical model:** body seen as machine – limited view – alternative: bio-psycho-social model
- **New discoveries:** gut-brain interactions, low grade inflammation (metaflammation)
- **Lifestyle Medicine** focuses on educating and motivating people to change their personal habits and behaviors in relation to nutrition, physical activity, sleep, managing stress, avoiding risky substances and building and maintaining positive social relationships.
- **Mental health:** a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. [https://www.who.int/features/factfiles/mental\\_health/en](https://www.who.int/features/factfiles/mental_health/en)

# RCSI Science of Health and Happiness: NOTES LECTURE 1

- **Positive Psychology** is the scientific study of optimal human functioning that aims to discover and promote the factors that allow individuals and communities to thrive
- **Hedonic tradition:** pleasures; happiness here seen as the good life in terms of seeking pleasure and avoiding pain
- **Eudaimonic tradition:** gratifications; happiness seen as achieving one's full potential; the pursuit of virtue and meaning
- The **pleasant life** is devoted to the pursuit of positive emotions (hedonic well-being)
- The **good life** involves using ones dominant characteristics to engage fully in things – to create a state of **flow**
- The **meaningful life** is about using your strengths in the service of something greater than yourself
- **Temperament:** 50% genetic; 10% circumstances; 40% under our own control
- **The PERMA Model of Happiness.** Positive Emotions; Engagement; Relationships; Meaning; Accomplishment.
- **Increasing PERMA:** *Positive Emotions*: The 3 good things exercise; *Engagement*: Learning to use your best strengths especially for things you don't like doing; *Relationships*: Improving relationships through improved compassion and communication skill; *Meaning*: Considering your values, goals and purpose in life. Writing your vision and your obituary (through your grandchild's eyes!); *Accomplishment*: Achieving through self-discipline and grit – savouring your accomplishments

# RCSI Science of Health and Happiness: NOTES LECTURE 1

**Optimism** is characterized as the general expectation that good things will happen, or the belief that the future will be favorable because one can control important outcomes. Linked to a range of positive outcomes including how long we live.

**Tackling pessimism:** (i) Tune in to your most catastrophic thoughts; (ii) Treat them as if said to you by someone whose goal in life is to make you miserable; (iii) Argue back and dispute as you would to a person, rationally; (iv) Imagine worst scenario; (v)Imagine best scenario; (vi) Imagine most REALISTIC scenario; (vii) Plan accordingly.

## Further reading:

- Bonniwell I. (2012) *Positive Psychology in a Nutshell*. Milton Keynes, Open University Press.
- Carr A. (2020) *Positive Psychology and You*. Oxford, Routledge.
- Chaterjee R. (2017) The 4 Pillar Plan. London, Penguin Life.
- Siegel RD (2016) *Positive Psychology: Harnessing the Power of Happiness, Mindfulness and Inner Strength*. Boston, Harvard Medical School.

# References 1

- O’Boyle C (2020). The “Positive Paradigm” and the Future of Healthcare. Future Health Summit Blog: <https://futurehealthsummit.com/fhs-blog/the-positive-paradigm-and-the-future-of-healthcare/>
- Rozanski A, Bavishi C, Kubzansky LD, Cohen R. Association of Optimism With Cardiovascular Events and All-Cause Mortality: A Systematic Review and Meta-analysis. *JAMA Netw Open*. 2019;2(9):e1912200.  
doi:10.1001/jamanetworkopen.2019.12200
- Seligman M. (1998) *Learned Optimism*. NY, Alfred Knopf
- Seligman M (2002) *Authentic Happiness*. New York, Free Press
- Seligman MEP (2011) *Flourish*. NY: Free Press
- Seligman MEP, Csikszentmihalyi M (2000). Positive Psychology: an introduction. *American Psychologist*, 55, 5-14.
- Sherwin E, Dinan TG, Cryan JF. (2018) Recent developments in understanding the role of the gut microbiota in brain health and disease. *Ann N Y Acad Sci* 1420, 5-25.

# References 2

- Bonniwell I, Tunariu AD. (2019). Positive Psychology; Theory, Research and Applications. London, Oxford University Press.
- Bullmore E. (2018) *The Inflamed Mind*. Picador
- Diener et al (1985). The Satisfaction With Life Scale. J Pers Ass 49(1), 71-75
- Lee LO et al (2019). Optimism is associated with exceptional longevity in 2 epidemiologic cohorts of men and women Proc Natl Acad Sci USA, <https://www.pnas.org/content/pnas/early/2019/08/20/1900712116.full.pdf>
- Ince S. (2011). Positive Psychology: Harnessing the power of happiness, mindfulness, and personal growth. Harvard Medical School Special Health Report. Harvard, MA.
- Lopez SJ, Snyder CR (2009) *The Oxford Handbook of Positive Psychology (2<sup>nd</sup> Ed.)* Oxford, Oxford University Press.
- Lyubomirsky S. (2007) *The How of Happiness*. New York: Penguin

## Further exploration – videos/websites

**Rangan Chatterjee. How To Make Diseases Disappear**

<https://www.youtube.com/watch?v=gaY4m00wXpw>

**Beth Frates: RCSI MyHealth: Paving the Path to Wellness**

<https://www.youtube.com/watch?v=aSv6-jvT02M>

**Martin Seligman: The New Era of Positive Psychology.**

[https://www.ted.com/talks/martin\\_seligman\\_the\\_new\\_era\\_of\\_positive\\_psychology?language=en](https://www.ted.com/talks/martin_seligman_the_new_era_of_positive_psychology?language=en)

**RCSI MyHealth Series**

<https://www.rcsi.com/society/national-leadership/myhealth/lecture-series>

**RCSI Science of Health and Happiness:** <http://rcsi.com/happinessresources>

**RCSI Coronavirus Hub:** <https://www.rcsi.com/dublin/coronavirus/information-for-the-public/positive-mental-health>

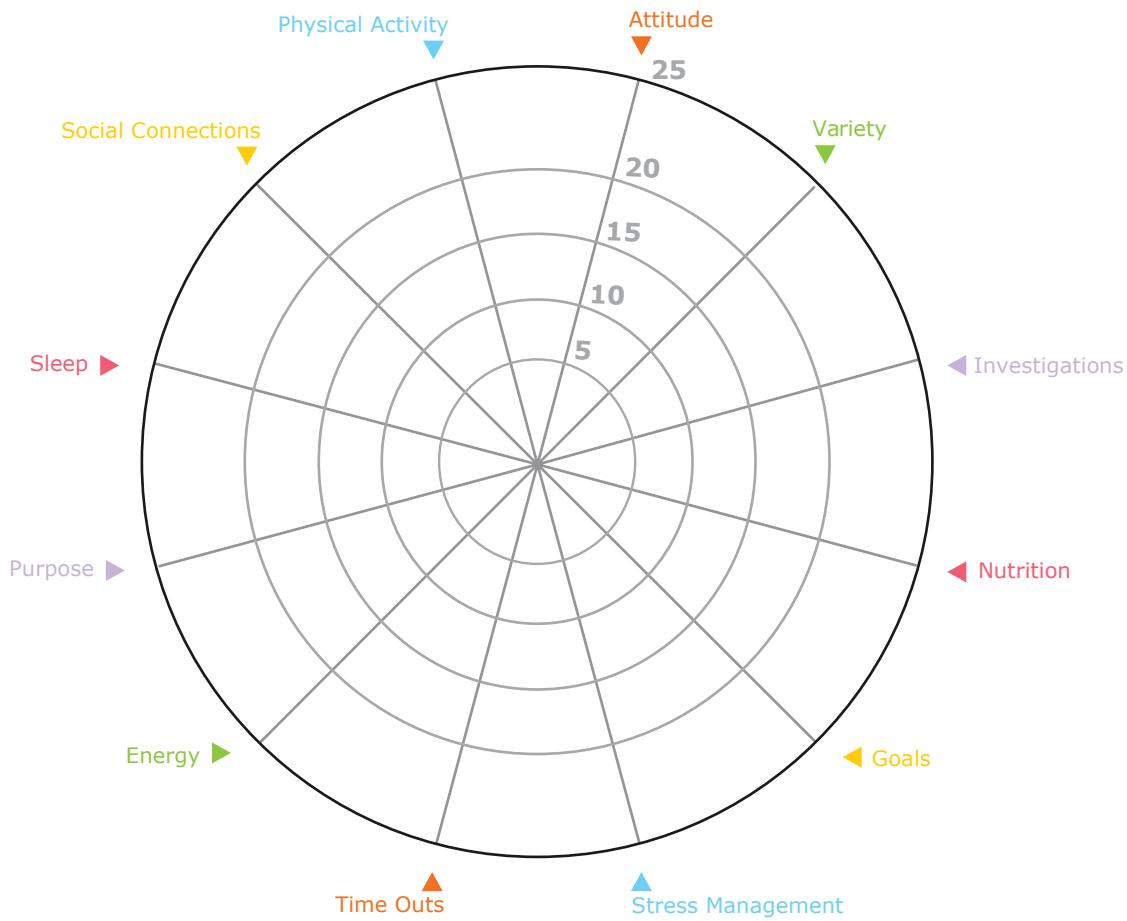
**RCSI Coronavirus: Information for the public:** <https://www.rcsi.com/dublin/coronavirus/information-for-the-public>



# PAVING the Path to Wellness

## KNOWme

### Measuring your Overall Wellness Using the PAVING Wheel



#### HOW TO USE THIS PAVING WHEEL

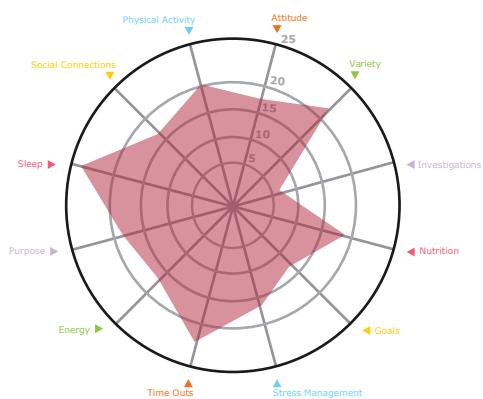
**SCORE** Plot your total scores for each component of the PAVING Wheel.

**CONNECT** Connect your scores.

**EVALUATE** Use the resulting PAVING Wheel (see example to the right) to evaluate areas where you may want to improve and consult the corresponding Module for more guidance.

**RE-EVALUATE** regularly by re-using this PAVING Wheel whenever you want to gauge your overall wellness and areas where you may want to improve.

#### EXAMPLE



**BETH SAYS**

There are no right or wrong answers. No scores are good or bad. Using the PAVING Wheel is for you alone to assess your Wellness and identify areas to improve your own personal Wellness.



## INSTRUCTIONS

Rank each item on a scale of 1-5. The Key is below. Calculate the subtotal of each of the 12 sections and plot them on the PAVING Wheel on page 1.

1 Never do this	2 Only rarely do this	3 Sometimes do this	4 Often do this	5 Do this regularly as part of my routine
<b>MODULE 1 Physical Activity</b>				
I exercise 5 days in the week for about a half an hour.				
I enjoy myself when I exercise.				
I perform strength training exercises twice a week.				
I perform flexibility exercises routinely.				
I perform balance exercises routinely.				
Physical Activity Total:				
<b>MODULE 1 Stress</b>				
I have learned about stress and its effect on the mind and body.				
I am familiar with stress reduction techniques, and I use at least one when I feel that I am anxious, annoyed, or worried.				
I know about stress resiliency, and I practice enhancing my resiliency on a regular basis.				
I don't get angry easily.				
I meditate, take deep breaths, practice yoga, or do mindfulness based stress reduction (MBSR) regularly.				
Stress Total:				
<b>MODULE 2 Attitude</b>				
I use mistakes as opportunities to learn and grow.				
I write thank you notes or express my gratitude verbally.				
I celebrate success when it happens.				
I concentrate on the task at hand fully without distraction.				
I am optimistic about the day.				
Attitude Total:				
<b>MODULE 2 Time outs</b>				
If I sit for over an hour, I stand up and take a break for five minutes each hour.				
If I feel frustrated and annoyed, I take a few deep breaths to calm down.				
I take my vacation every year.				
When I am at home, I make sure to turn off my computer and put my work projects away at least for an hour at dinner time.				
After working on the same project for a few hours, I step away from it to get perspective on it.				
Time Outs Total:				
<b>MODULE 3 Variety</b>				
I do a variety of different exercises.				
I try to have a rainbow of colors on my plate.				
I enjoy a variety of fruits and vegetables.				
I like to try new activities.				
I spend time and connect with a wide range of friends.				
Variety Total:				
<b>MODULE 3 Energy</b>				
I have a friend who I know energizes me.				
I have identified at least one activity that brings me joy and energy.				
I am able to avoid situations and people that drain my energy.				
I only drink two cups of coffee a day.				
I don't rely on sugar/sweets or cookies for a quick energy fix.				
Energy Total:				
<b>MODULE 4 Investigations</b>				
I perform mini experiments on myself regularly.				
I am curious as to what foods are good for my body.				
I am curious as to what effect physical activity has on my body.				
I read about the latest research findings in medicine, nutrition, sleep, stress management, and/or exercise.				
I talk about health with family and friends.				
Investigations Total:				
<b>MODULE 4 Purpose</b>				
I feel that I have a clear purpose in life.				
I am able to prioritize my activities and projects easily.				
I make sure that my activities and projects are in alignment with my values.				
I have identified the people and activities that are most important to me.				
I am using my strengths to fulfill my purpose.				
Purpose Total:				
<b>MODULE 5 Nutrition</b>				
I eat 4 fruits a day.				
I eat 5 or more vegetables a day.				
				I know proper portions for protein, carbohydrates, and fats, and I eat those portions.
				I think about the food that I eat and ask myself if it is good for my body.
				I view food as fuel, as medicine, and enjoyment too.
Nutrition Total:				
<b>MODULE 5 Sleep</b>				
I sleep 7-8 hours a night.				
I don't drink coffee after noon time.				
I have a bedtime routine in which I relax before bed.				
I don't sleep with my phone on in the bedroom.				
I take 20 minute naps when I am over tired.				
Sleep Total:				
<b>MODULE 6 Goals</b>				
I set long-term goals for myself, share them with someone, and review them.				
I set three-month goals for myself, share them with someone, and work toward them.				
I set monthly goals and share them with someone.				
I set weekly goals and share them with someone.				
I set daily goals for myself and keep myself accountable for them.				
Goals Total:				
<b>MODULE 6 Social</b>				
I can name at least one person who brings me strength.				
I am involved with a group (activity, exercise class, art class, religious affiliation or the like)				
I visit with friends on the phone or in person at least 5 times a week.				
I have a healthy relationship with my spouse, partner, or best friend.				
I have a pet or plant that I can nurture and spend time with every day.				
Social Total:				

~  
*centre for  
positive psychology  
and health*

# The Science of Health AND Happiness

**LECTURE 2**

Dr Pádraic Dunne

resource manual

# RCSI Science of Health and Happiness: NOTES LECTURE 2

## The biology of mind-body connections

- We have an immensely complex body with many integrated systems – it has been estimated that the human body contains approximately 37.2 trillion cells.
- Our brains and minds are intimately connected to the rest of the body, as well as our social and physical environments; *happiness is dependent on healthy interactions between all of these systems.*
- The human brain can be divided into hemispheres – although, the reality is more complex, broadly speaking, the *right hemisphere* is concerned with spatial, and tactile awareness as well as creativity; *it carries the music of events.* The left hemisphere is associated with *facts & stats – it does the talking.*
- The brain was built from the bottom up (evolutionary and developmentally speaking) – the downstairs (*reptilian brain*) maintains activities related to survival (breathing, heart rate, etc.); the downstairs (*limbic system*) perceives threat and monitors danger, generates emotions, including fear; monitors danger; defines pleasure and pain; activates fight or flight responses; makes hormones; and regulates immune function. The upstairs brain (*neocortex*) is largest in humans and is dedicated to rational thinking; perceives time; promotes organisation and goal setting.



# RCSI Science of Health and Happiness: NOTES LECTURE 2

## The biology of mind-body connections

- Threat can be perceived in a number of ways – by neuroception and via your thinking process.
- Neuroception – awareness and sensing of the external environmental via the five senses; limbic system (downstairs brain) activates immediately, in response to neuroception; does not require conscious thought or decision-making.
- Negative thinking can activate the limbic system when we ruminate over past threats or worry about the potential of future threats.
- The limbic system subsequently activates a family of nerves (the autonomic nervous system) and the production of chemical messengers (hormones).
- The autonomic nervous system – divided into the accelerator (sympathetic nerves) and the break (parasympathetic nerves); also associated with *fight or flight* versus *rest & digest* responses.



# RCSI Science of Health and Happiness: NOTES LECTURE 2

## The biology of mind-body connections

- Sympathetic nerves produce the neurotransmitter **Adrenaline**; adrenaline is also made by cells of the adrenal glands – when produced by cells (as opposed by nerves), adrenaline is called a hormone.
- Adrenaline and other stress-related neurotransmitters can cause the following symptoms: *accelerated heart rate and breathing, high blood pressure, reduced appetite and digestion, reduced libido, enhanced glucose (sugar) release and increased energy production, dry mouth, sweating, and dilated pupils.*
- Adrenaline activates the immune response.
- **Cortisol** - a stress hormone (chemical messenger), production of which is initiated by the limbic system (downstairs brain); cortisol is also made in the adrenal glands; *the purpose of cortisol is to inhibit the immune response and act as part of a negative feedback loop to limit the stress response in the brain.*
- Stress occurring longer than 6 weeks is called **chronic stress**, which can cause damage in the body, if left unchecked.



# RCSI Science of Health and Happiness: NOTES LECTURE 2

## The biology of mind-body connections

- Stress, in the form of **adrenaline** and **noradrenaline**, can activate the anti-bacterial part of the immune system, while simultaneously dialling down the **anti-viral** part.
- Immunologists believe that humans evolved to prime the immune response against bacterial infection in response to stress, as protection against bites from predators and cuts from infected environments.
- **What might this bias toward an antibacterial immune response (caused by stress) mean during a global pandemic?**
- **Sickness behaviour**, caused by the stress response, evolved to protect us from additional danger and allow us to heal and recuperate from injury and/or infection.
- Symptoms of sickness behaviour includes: isolation and anti-social behaviour, reduced appetite and libido, fatigue, apathy and disinterest, as well as and a need to sleep.
- 21<sup>st</sup> century-related stress can cause sickness behaviour in the absence of an infection or threat from wild animals.



## RCSI Science of Health and Happiness: NOTES LECTURE 2

### The biology of mind-body connections

- It is important to realise that our minds can exert a physical effect on our bodies and vice-versa.
- Whole health contributes to happiness and involves the brain, mind, and body, interacting with our social and environmental worlds.
- Mind your thinking and manage stress!



# Homework

*Awesome Breathing* (pacer for meditation and stress)  
from the Apple App Store or Google Play

Alternatively for PC: [xhalr.com](http://xhalr.com)

**Practice breathing for 2 minutes, twice daily.**

# References

## SCIENTIFIC REVIEW:

Irwin, M. *Reciprocal regulation of the neural and innate immune systems*. Nature Reviews Immunology 11, 625–632 (2011).

## ARTICLE:

*How many cells in your body?* National Geographic – Carl Zimmer – October 23, 2013

## BOOK:

*Why Zebras Don't Get Ulcers* by Dr Robert M. Sapolsky. St. Martins Press; revised and updated edition (1 Jan. 2004).

# Further exploration – videos/websites

**Cellular landscape cross-section through a eukaryotic cell, by Evan Ingersoll & Gael McGill.**  
[McGill.gaelmcgill.artstation.com/projects/PmoJL1](https://gaelmcgill.artstation.com/projects/PmoJL1)

***Why Zebras Don't Get Ulcers* by Dr Robert Sapolsky. Stanford University – Inaugural Fenton-Rhodes Lecture on Proactive Wellness**

[www.youtube.com/watch?v=D9H9qTdserM](https://www.youtube.com/watch?v=D9H9qTdserM)

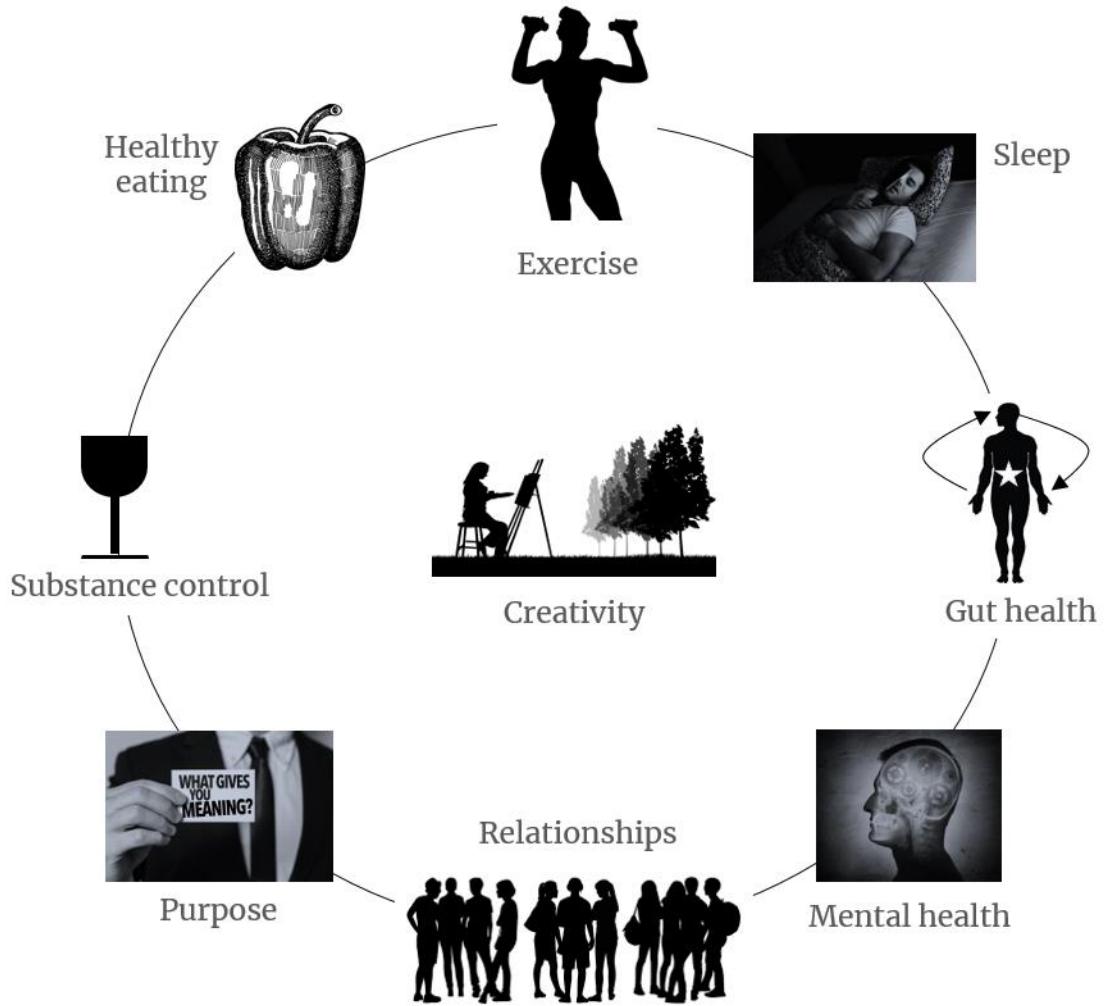
~  
*centre for  
positive psychology  
and health*

# The Science of Health AND Happiness

## LECTURE 3: WHOLE PERSON HEALTH

Dr Pádraic Dunne

resource manual



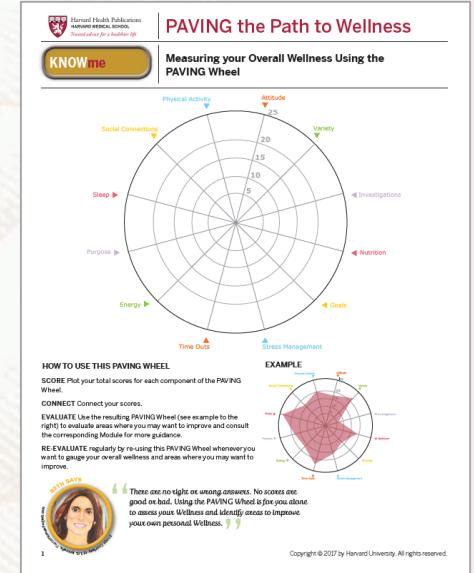
# Components of whole person health

## Make a table

Score yourself out of 10; if you score lower than 6, you need to make a plan to improve your score.

Activity	1 to 10
Exercise	6
Diet	7
Meaning	3
Relationships	5
Sleep	2
Substance control	7
Gut health	3
Creativity	5

(1 = poor; 10 = good)



# RCSI Science of Health and Happiness: NOTES LECTURE 3

## Whole Person Health

- Lifestyle Medicine and Integrative Medicine represent emerging, evidence-based approaches to medicine that place the patient at the centre of healthcare.
- These models take an inclusive, integrated approach to prevention and care of disease by focusing on whole person health that includes physical, mental, social and the environment.
- The six pillars of lifestyle medicine include: exercise, diet, sleep, mental health, relationships and substance control.
- We use the following to make it easy to remember aspects of whole person health: **brain, body, belly, bed & best-friends.**



# RCSI Science of Health and Happiness: NOTES LECTURE 3

## Whole Person Health

- Approximately 20 years ago, five geographical locations were noted to have a greater number of centenarians (humans who live 100 years and older) than anywhere else.
- These locations include: Loma Linda (US); Nicoya Peninsula (Costa Rica); Nuoro Province, Sardinia (Italy); Ikaria (Greece); Okinawa (Japan).
- These regions were subsequently called, **the blue zones**.
- Since then, a number of additional regions have been studied.





# Centenarian rates in the blue zones

**Table 1:**  
**Centenarian Rate (CR) for the 1900 birth cohort (number of persons surviving to 100 years for 10,000 persons alive at 60 years)**

Country	Females aged 60 in 1960	Females aged 100 in 2000	Female CR	Males aged 60 in 1960	Males aged 100 in 2000	Male CR
Italy	248 571	1 941	78.1	212 849	412	19.4
of which Sardinia	5 889	64	108.7	5 594	25	44.7
Japan	310 764	3 948	127.1	305 703	900	29.5
of which Okinawa	2 925	145	495.7	2 069	17	82.2
France	270 842	2 965	109.5	239 348	450	18.8
The Netherlands	52 213	388	74.4	47 247	83	17.6
Norway	19 652	146	74.3	17 798	27	15.2
Sweden	41 928	315	75.1	39 262	72	18.3
Switzerland	30 877	271	87.8	25 808	59	22.9
Australia	42 812	524	122.5	40 212	84	21.0
Belgium	57 847	300	51.8	50 438	51	10.1
Canada	60 070	1 080	179.8	61 456	244	39.7
Denmark	24 465	160	65.4	22 076	31	14.0
Finland	21 965	90	41.0	16 671	28	16.8
Poland	122 695	336	27.4	97 732	76	7.8
Russia	470 626	1 605	34.1	235 003	201	8.5
UK	318 869	2 438	76.5	270 280	288	10.6
USA	780 115	12 706	162.9	728 821	2 253	30.9

Source: Human Mortality Database (stock data) and national census data available through national statistical institutes for Sardinia and Okinawa.

**Table 1**  
**Comparative figures on centenarian prevalence and sex ratio**

Countries and regions	Date	Prevalence (number of living centenarians per 100.000 inhabitants)	Sex ratio (among living centenarians females/males)
Belgium	January 1st 2002	10.5	7.08
Denmark	July 1st 2002	10.4	6.27
Sweden	January 1st 2003	12.6	5.64
Italy	January 1st 2001	14.1	3.80
Sardinia	January 1st 2001	16.6	2.70
Nuoro province	January 1st 2001	17.9	1.40

Source: statistical offices of respective countries.

# RCSI Science of Health and Happiness: NOTES LECTURE 3

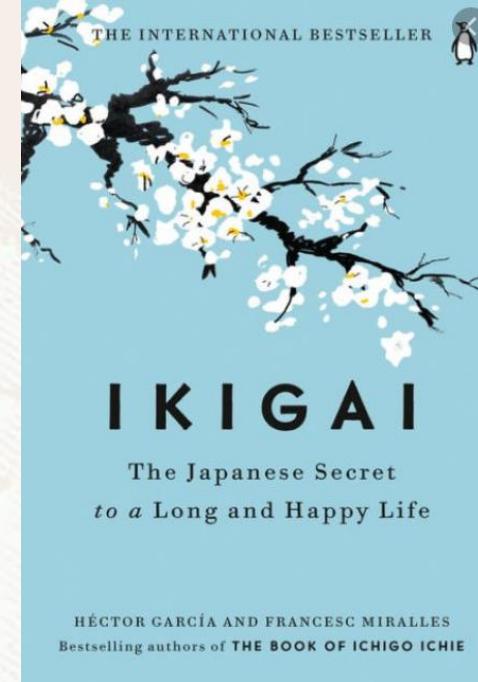
## Whole Person Health

Take home messages from the lifestyles of blue zone citizens:

- Eat mostly plants
- Eat less
- Have a garden and eat fresh
- Engage in daily exercise – natural movement
- Family & community first
- Engage in activities that cultivate meaning, purpose & creativity



# Activities that cultivate meaning, purpose & creativity - *Ikigai*



# Homework

		Facing outward		
Ikigai core concepts related to work and other practices in life	CURRENT JOB – remind yourself why you are doing it	Relationships with others, including charity work	Sport	Creative pursuits
<b>What do you love?</b>  <b>PASSION</b>				
<b>What are you good at?</b>  <b>MISSION</b>				
<b>Does the world need what you are good at?</b>  <b>VOCATION</b>				
<b>Can you get paid for it?</b>				



# Homework example – what is your Ikigai?

		Facing outward		
Ikigai core concepts related to work and other practices in life	CURRENT JOB – remind yourself why you are doing it	Relationships with others, including charity work	Sport	Creative pursuits
<b>What do you love? PASSION</b>	Education and learning	Helping others	Being part of a team	Theatre and performance
<b>What are you good at? MISSION</b>	Helping others understand complicated theories and subjects	Listening	Running	Singing
<b>Does the world need what you are good at? VOCATION</b>	The world always needs good teachers	Yes	We need social interaction	Yes – we need to be entertained
<b>Can you get paid for it?</b>	Definitely	Work on a charity helpline	Join a running club	Join a choir

# References

## Scientific articles

*Michel Poulain, Anne Herm and Gianni Pes. The Blue Zones: areas of exceptional longevity around the world. Vienna Yearbook of Population Research 2013 (Vol. 11), pp. 87–108*

## Books

**Integrative Medicine** by David Rakel. Elsevier; 4th edition (24 May 2017)  
**Lifestyle Medicine** by Garry Egger. Academic Press; 3rd edition (6 April 2017)

## Article

*Essentially, ikigai is the reason why you get up in the morning” Yukari Mitsuhashi; 8th August 2017 – BBC.com*

# Further exploration – videos/websites

## Websites

[integrativemedicine.arizona.edu/](http://integrativemedicine.arizona.edu/)

[online-learning.harvard.edu/course/introduction-lifestyle-medicine-o?delta=0](https://online-learning.harvard.edu/course/introduction-lifestyle-medicine-o?delta=0)

<https://www.instituteoflifestylemedicine.org/>

[www.bethfratesmd.com/](http://www.bethfratesmd.com/)

[rcsi.com/dublin/postgraduate/taught-courses/positive-health/why-rCSI](http://rcsi.com/dublin/postgraduate/taught-courses/positive-health/why-rCSI)

<https://www.bluezones.com/>

## Video links

[www.ted.com/talks/dan\\_buettner\\_how\\_to\\_live\\_to\\_be\\_100](https://www.ted.com/talks/dan_buettner_how_to_live_to_be_100)

~  
*centre for  
positive psychology  
and health*

# The Science of Health AND Happiness

**LECTURE 4: WHAT ARE THE  
ROUTES TO HAPPINESS?**

Professor Ciaran O'Boyle

resource manual

## Notes: Lecture 4: What are the routes to happiness? I

1. **WHO definition of mental health:** a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. [https://www.who.int/features/factfiles/mental\\_health/en/](https://www.who.int/features/factfiles/mental_health/en/)
2. **World Happiness Report:** <https://worldhappiness.report>
3. **The Dichotomy of Control:** “The chief task in life is simply this: to identify and separate matters so that I can say clearly to myself which are externals not under my control, and which have to do with the choices I actually control. Where then do I look for good and evil? Not to the uncontrollable externals, but within myself to the choices that are my own...”Epictetus, Discourses 2.5.4-5
4. **Factors influencing happiness:** Building relationships; Setting highly valued goals; Identifying and using personal strengths; Savouring pleasures; Finding flow; Being grateful; Developing an optimistic outlook; Strengthening couple relationships; Strengthening parent-child relationships; Practising forgiveness; Regular physical exercise; Mindfulness meditation; Progressive muscle relaxation; Problem solving and solution finding; Being courageous; Courageously managing anxiety; Assertively managing anger; Developing grit and resilience; Learning to live with trauma.
5. **Mindsets:** The view you adopt for yourself profoundly affects the way you lead your life; Growth and Fixed Mindsets: <https://www.youtube.com/watch?v=EO5Yz2x0GSk>
6. **Developing a growth mindset:** Embrace challenges; Persist in the face of setbacks; See effort as part of the journey; Learn from criticism; Find lessons and inspiration in the resilience of others; Tap into your “calling”.

## Notes: Lecture 4: What are the routes to happiness? I

- **Gratitude:** (i) An affirmation of goodness; (ii) Sources of this goodness are outside of ourselves; (iii) The social dimension is especially important.
- **Time Perspective:** “A fundamental dimension in the construction of psychological time that emerges from cognitive processes partitioning human experience into past, present and future temporal frames” <https://www.thetimeparadox.com/zimbardo-time-perspective-inventory/>
- **The 5 time perspectives:** past positive; past negative, present fatalistic, present hedonic, future.
- **Flexible Balanced Time Perspective:** Low on past negative; Low on present fatalistic; High on past positive – gives you ROOTS; Moderate on present hedonistic – gives you ENERGY; Moderately high on future- gives you WINGS; Key is being able to adopt a time perspective appropriate to the situation.
- “True happiness is to enjoy the present, without anxious dependence upon the future, not to amuse ourselves with either hopes or fears but to rest satisfied with what we have, which is sufficient, for he that is so wants nothing. The greatest blessings of mankind are within us and within our reach. A wise person is content with his lot whatever it may be, without wishing for what he has not.”  
*-Seneca.*

# Exercises

1. Complete the ***PERMA Profiler*** to assess your current level of happiness. Reflect on the results and how you might use your understanding of the various components of PERMA to increase your happiness. You will find the questionnaire on the Authentic Happiness website at the University of Pennsylvania. You will need to register (for free) to access the questionnaire. <https://www.authentichappiness.sas.upenn.edu/testcenter>
2. Complete the ***Zimbardo Time Perspective Inventory*** and reflect on your scores. Use your profile to become aware of how you currently perceive time and what the implications of your profile are for you. How might you develop more a balanced time perspective? <https://www.thetimeparadox.com/zimbardo-time-perspective-inventory/>
3. Begin to keep a ***gratitude journal***
  - Set aside 10 minutes per day (or weekly), preferably in the evening
  - List three good things that happened today (this week), that you can give other people, a higher spiritual entity or nature some credit for.
  - Visualise the good thing happening and write down:
    - What exactly happened
    - Why you think it happened
    - What it means to you
    - All the reasons you can think of that explain why you think it went well
    - Whether or not you told someone that it happened
    - What you can do to make it happen again, and remember next time to tell someone about it
    - Before and after the exercise rate how you are feeling on a 10 point scale where 1= “extremely sad” and 10 = “extremely happy”

# Further reading

## Suggested popular texts:

- Boniwell I. (2012). *Positive Psychology in a Nutshell*. Maidenhead, Open University Press.
- Carr A. (2020). *Positive Psychology and You: A Self-Development Guide*. Oxon, Routledge
- Dweck CS. (2017). *Mindset: Changing The Way You Think To Fulfil Your Potential*. (Revised ed.) London, Robinson.
- Emmons R (2007). *Thanks: How Practicing Gratitude Can Make You Happier*. Boston MA, Houghton Mifflin.
- Zimbardo P, Boyd J (2008). *The Time Paradox: The New Psychology of Time*. New York, Free Press.

## Technical references:

- Emmons RA, McCullough ME (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *J Pers Soc Psy* 84(2), 377-389
- Emmons RA (2013) *Gratitude Works: A 21 day programme for creating emotional prosperity*. San Franscisco , CA, Jossey-Bass
- Emmons R, McCullough. (2004) *The Psychology of Gratitude*. Oxford, OUP.
- Smith JA et al. (2020). *The Gratitude Project*. Oakland, New Harbinger.

## Further exploration - videos

### **Professor Carol Dweck speaks at the RCSI**

World famous psychologist Professor Carol Dweck, author of *Mindset*, delivered the Foley Lecture at the RCSI University of Medicine and Health Sciences in 2018. A brief edited version of the lecture can be found here.

<https://www.youtube.com/watch?v=EO5Yz2x0GSk>

### **Professor Carol Dweck speaks at Stanford on mindsets**

Here Carol Dweck speaks about developing a growth mindset in children and explains the power of “not yet”.

<https://www.youtube.com/watch?v=hiIEeMN7vbQ>

### **Professor Philip Zimbardo on the psychology of time**

2009 TEDx talk in which Philip Zimbardo, most famous for the Stanford Prison Experiment, does a whistle-stop tour of time perspectives based on his book *The Time Paradox*. For Zimbardo happiness and success are rooted in a trait most of us disregard: the way we orient toward the past, present and future. [https://www.ted.com/talks/philip\\_zimbardo\\_the\\_psychology\\_of\\_time?language=en](https://www.ted.com/talks/philip_zimbardo_the_psychology_of_time?language=en)

### **Oprah Winfrey speaks about her gratitude journal**

In this short, not-even-4-minute video, Oprah focuses on the power of gratitude by discussing what she has learned from her own gratitude journal, an exercise she had been practicing for 16 years at the time of the talk. <https://www.youtube.com/watch?v=sAZWjIlwU8c>

### **Professor Robert Emmons on gratitude**

A short video from 2010 of the world’s leading researcher on the psychology of gratitude speaking about the benefits of gratitude

<https://www.youtube.com/watch?v=RRrnfGf5aWE>

*~*  
centre for  
positive psychology  
and health

# The Science of Health AND Happiness

## LECTURE 5: ROUTES TO HAPPINESS II

Dr Trudy Meehan,  
Lecturer and Senior Clinical Psychologist

resource manual



# Compassion and Empathy

## Empathy

We know that empathy, which is when we feel and understand (but take no action) causes the pain centres of the brain to light up in the person doing the empathy

## Compassion

We know that compassion causes the reward and affiliation centres of the brain to light up



# References

- Chierchia, G., & Singer, T. (2017). Chapter 20 - The Neuroscience of Compassion and Empathy and Their Link to Prosocial Motivation and Behavior (pp. 247-257) . In J.C. Dreher, & L. Tremblay (Eds). *Decision Neuroscience*. Cambridge, MA. Academic Press.
- Claus, L. Decety, J., & Singer, T. (2011). Meta-Analytic Evidence for Common and Distinct Neural Networks Associated with Directly Experienced Pain and Empathy for Pain. *Neuroimage* 54(3), 2492-502.  
<https://doi.org/10.1016/j.neuroimage.2010.10.014>
- Dick, A. S., Goldin-Meadow, S., Hasson, U., Skipper, J. I., & Small, S. L. (2009). Co-speech gestures influence neural activity in brain regions associated with processing semantic information. *Human brain mapping*, 30(11), 3509-3526.
- Fredrickson, B. (2014). *Love 2.0: Creating happiness and health in moments of connection*. New York, New York. Plume Penguin House.
- Hanafin, S., Cosgrove, J., Hanafin, P., Brady, A. M. & Lynch, C. (2020). Professional burnout and its prevalence among public health nurses in Ireland. *British Journal of Community Nursing*, 25(8),370-375  
<https://doi.org/10.12968/bjcn.2020.25.8.370>
- Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: a meta-analytic review. *Perspectives on psychological science*, 10(2), 227-237.
- Hofmeyer, A., Kennedy, K., & Taylor, R. (2020). Contesting the term ‘compassion fatigue’: Integrating findings from social neuroscience and self-care research. *Collegian*, 27(2), 232-237. <https://doi.org/10.1016/j.colegn.2019.07.001>

# References

- Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in psychiatric treatment*, 15(3), 199-208.
- Klimecki, O. M., Leiberg, S., Ricard, M., & Singer, T. (2014). Differential pattern of functional brain plasticity after compassion and empathy training. *Social cognitive and affective neuroscience*, 9(6), 873-879.
- Klimecki, O. M., Leiberg, S., Lamm, C., & Singer, T. (2013). Functional neural plasticity and associated changes in positive affect after compassion training. *Cerebral cortex*, 23(7), 1552-1561.
- Lamm, C., Decety, J., & Singer, T. (2011). Meta-analytic evidence for common and distinct neural networks associated with directly experienced pain and empathy for pain. *Neuroimage*, 54(3), 2492-2502.
- Lown, B. A., Dunne,, H., Muncer, S. J., & Chadwick, R. (2017). How important is compassionate healthcare to you? A comparison of the perceptions of people in the United States and Ireland. *Journal of Research in Nursing* 22(1-2), 60-69.
- Margiotta, F., Crudden, G., Byrne, D. *et al.* Prevalence and co-variates of burnout in consultant hospital doctors: burnout in consultants in Ireland Study (BICDIS). *Ir J Med Sci* 188, 355–364 (2019). <https://doi.org/10.1007/s11845-018-1886-y>

# References

- Neff KD (2003a) Self-compassion. An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, 2, 85–102.
- Neff KD (2003b) The development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223–50.
- Rosenfeld, A. J. (2019). The Neuroscience of Happiness and Well-Being What Brain Findings from Optimism and Compassion. *Child Adolesc Psychiatric Clin N Am* 28, 137–146. <https://doi.org/10.1016/j.chc.2018.11.002>
- Seppala, E., Hutcherson, C., Nguyen, D., Doty, J., & Gross, J. (2014). Loving-kindness meditation: A tool to improve healthcare provider compassion, resilience and patient care. *Journal of Compassionate Health Care*, 1(5), 1-9. <http://dx.doi.org/10.1186/s40639-014-0005-9>
- Stephens, G. J., Silbert, L. J., & Hasson, U. (2010). Speaker-listener neural coupling underlies successful communication. *Proceedings of the National Academy of Sciences of the United States of America*, 107(32), 14425–14430. <https://doi.org/10.1073/pnas.1008662107>
- Trzeciak, S., & Mazzarelli, A. (2019). *Compassionomics: The revolutionary scientific that caring makes a difference*. Pensacola, FL. Studer Group.

# Homework

- Be kind to strangers (Positivity Resonance = Love)
- Loving kindness meditation  
<https://www.youtube.com/watch?v=LkC0K1F8nPk&list=PL6DbJmB3fDQpvwTqepv7LDjx3UqB2Ht5&index=5>
- Compassionate gestures - every time you touch a hot drink/glass of water, do a compassionate gesture
- Do the Self Compassion Questionnaire  
<https://self-compassion.org/test-how-self-compassionate-you-are/>

MARCH 2021

*~*  
*centre for*  
**positive psychology**   **Videos**  
*and health*

- Video on Compassion(Kirstin Neff)  
<https://www.youtube.com/watch?v=rUMF5R7DoOA>
- Video on Love (Barbara Fredrickson)  
<https://www.youtube.com/watch?v=fHoEWUTYnSo>

MARCH 2021

~  
*centre for  
positive psychology  
and health*

# The Science of Health AND Happiness

## LECTURE 6: MEDITATION FOR HEALTH

Dr Pádraic Dunne

resource manual

# Meditation – myths & facts

Meditation is all in your head



Meditation practice integrates the mind and the body; it can have positive impacts on both

Meditation is all about stopping your thoughts and wiping your mind



It is not possible to completely stop your thinking process

You need a meditation stool, bell, series of books, apps, candles and cushions to meditate



All you need to practice meditation is your head and your breath

You need to practice hours a day to receive any benefit from meditation practice



Our research\* shows that positive effects can be observed after only 5 minutes of practice, twice daily for 4 weeks

Meditation is a Buddhist practice that has no real place for those of other religions or atheists



Meditation practice is thousands of years old and has been practiced by members of all global religions, including Christians; you don't have to be religious to gain the benefits



# Proven health benefits of meditation?

*More quality research is needed but significant trends are emerging*

## Enhanced immune function and balanced inflammatory responses

Black, D. S., & Slavich, G. M. (2016). Mindfulness meditation and the immune system: a systematic review of randomized controlled trials. *Annals of the New York Academy of Sciences*, 1373(1), 13–24. <https://doi.org/10.1111/nyas.12998>

## Epigenetic changes of disease modifying genes

Kaliman P. Epigenetics and meditation. *Curr Opin Psychol.* 2019;28:76–80.

## Improved heart health

Levine GN, Lange RA, Bairey-Merz CN, et al. Meditation and Cardiovascular Risk Reduction: A Scientific Statement From the American Heart Association. *J Am Heart Assoc.* 2017;6(10):e002218. Published 2017 Sep 28.

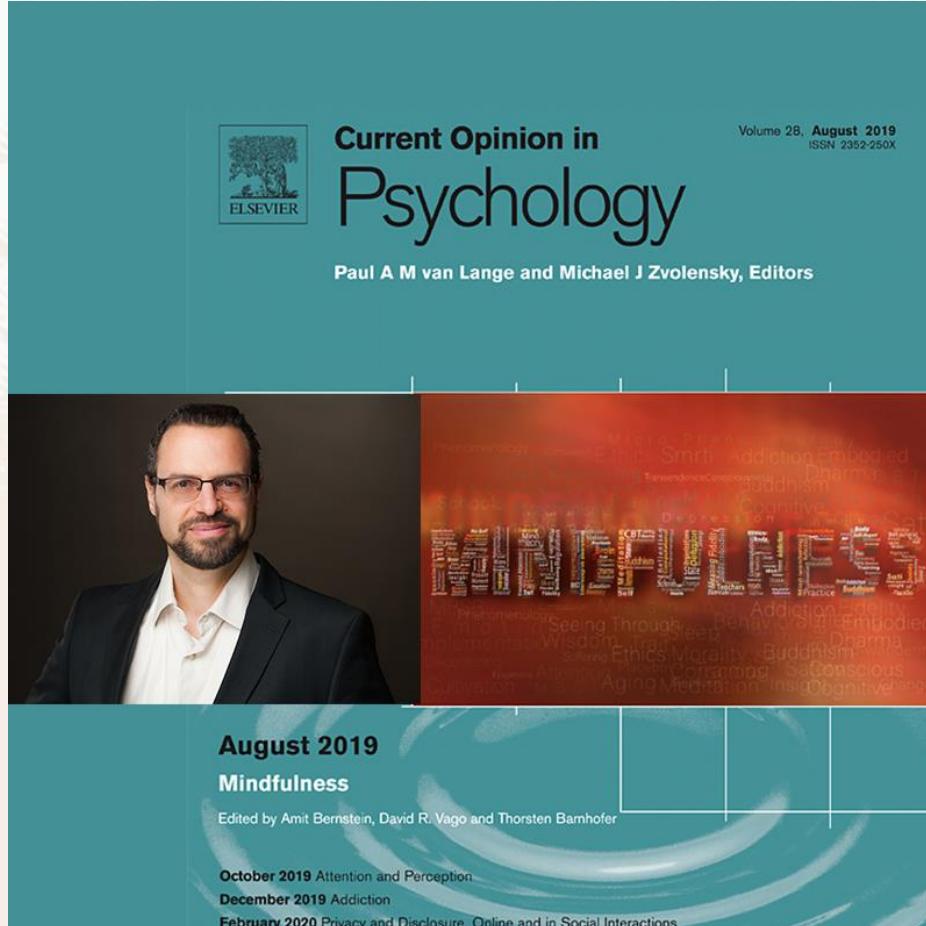
## Better sleep

Black DS, O'Reilly GA, Olmstead R, Breen EC, Irwin MR. Mindfulness Meditation and Improvement in Sleep Quality and Daytime Impairment Among Older Adults With Sleep Disturbances: A Randomized Clinical Trial. *JAMA Intern Med.* 2015;175(4):494–501.

## Better Psychological health

Keng SL, Smoski MJ, Robins CJ. Effects of mindfulness on psychological health: a review of empirical studies. *Clin Psychol Rev.* 2011;31(6):1041–1056.

# Recent Scientific Reviews



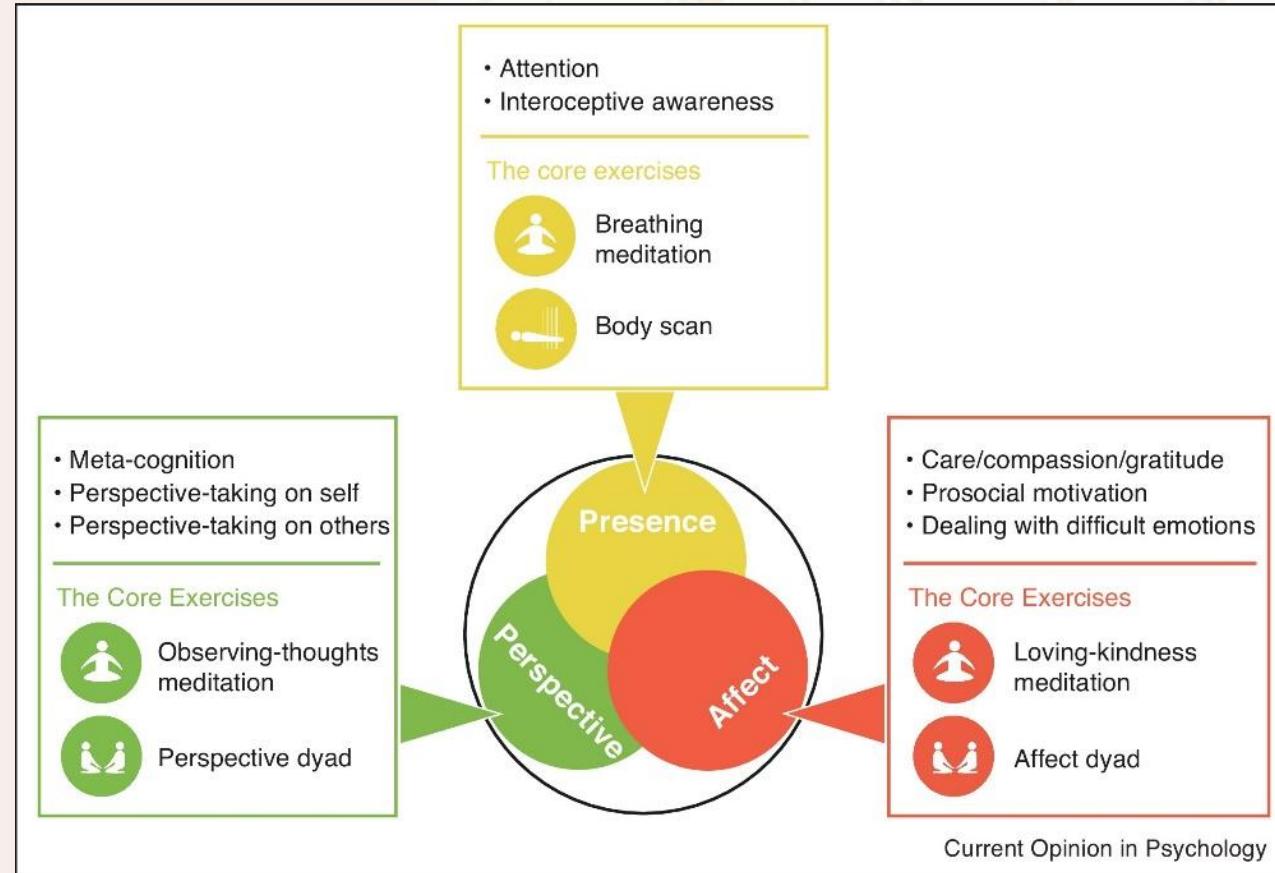
# Not all meditations are the same

## Attention-based Training (ABT) Mantra meditation

(Develop present-moment awareness, focus and integrated awareness between mind and body)

## Mindfulness meditation

(Metacognition; develop perspective of self and other)

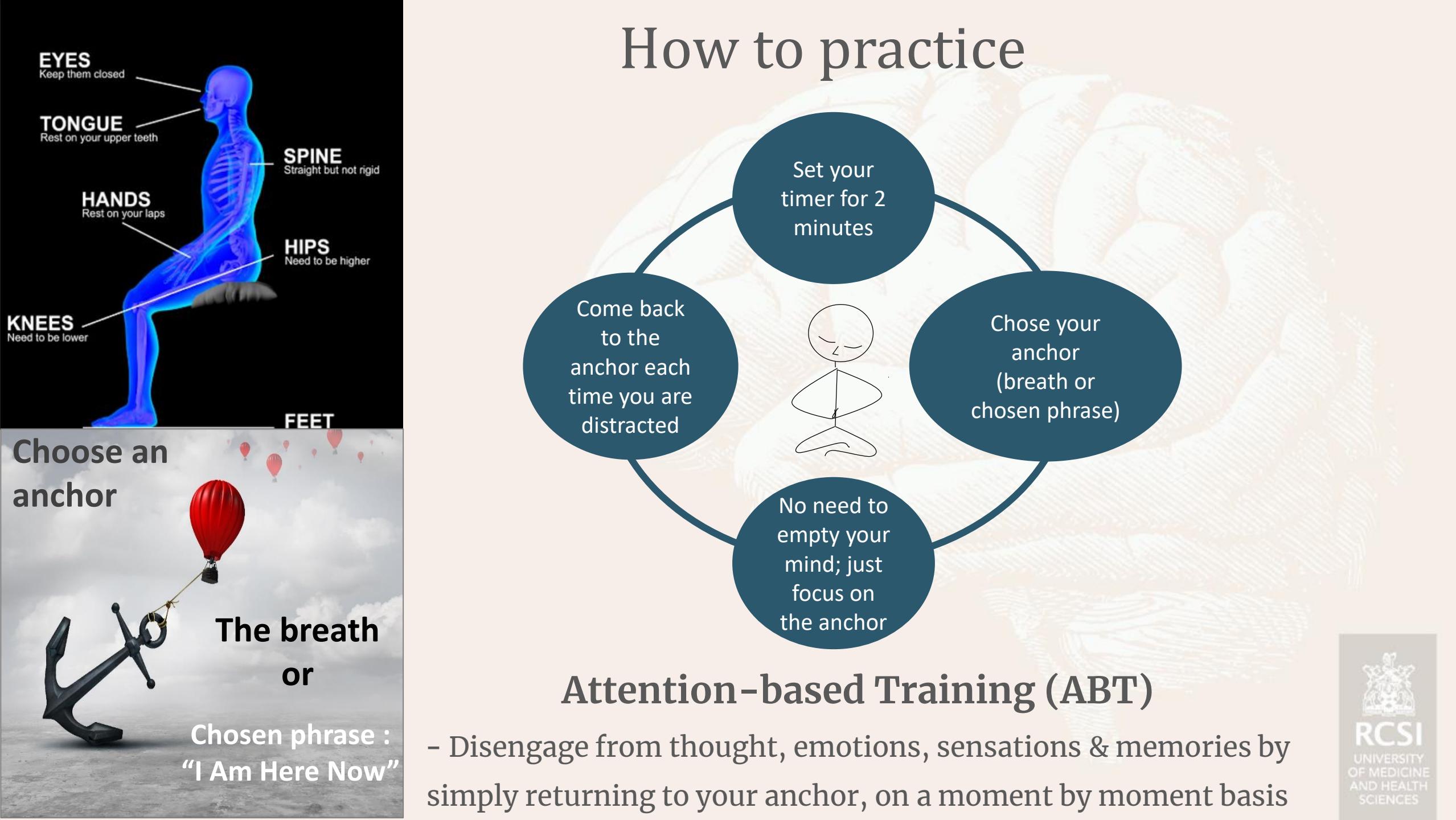


From: Singer & Engert. Current Opinion in Psychology. Volume 28 (August 2019)  
<https://www.resource-project.org/en/>

## Loving-kindness meditation; Gratitude-based meditation

(Develop compassion for self and other)

# How to practice



# The body scan meditation

*A member of the concentration, presence, attention, focus style of meditation that places emphasis on areas of the body while breathing normally.*

## Benefits

- Helps calm the body during anxiety, stress, pain, frustration and discomfort
- Prepares the mind and body for meditation
- Useful for insomnia

**Click here to practice the body scan for free:**  
[www.youtube.com/watch?v=XSw-WLmooWg&t=4s](https://www.youtube.com/watch?v=XSw-WLmooWg&t=4s)



# Homework for the week

Practice the basic practice daily

- 2 minutes in the morning and evening
  - Same place
  - Same position
  - Same time

Remember –

- It takes an average of 66 days to generate a new habit\*
- There is no such thing as a good or bad practice – just practice
- It doesn't matter how distracted you are – in the gym, you won't build muscle by lifting feathers
- Meditation practice of any kind isn't easy; it takes time, commitment and practice

Suggested 8-week practice plan

## 8-week ABT practice plan

Week	Morning minutes	Evening minutes
1	2	2
2	3	3
3	4	4
4	5	5
5	6	6
6	8	8
7	9	9
8	10	10



# Links to our free meditations

Here is the link for a free 8-week Attention-based Training (ABT) we generated for staff and RCSI hospital group at the start of the pandemic:

<https://www.youtube.com/playlist?list=PLmcXs1oNVn8mZOWQi6RQXPYDBnP6D13lF>

Links to our short meditations:

[Centre for Positive Psychology & Health - short meditations](#)

# Summary (I)



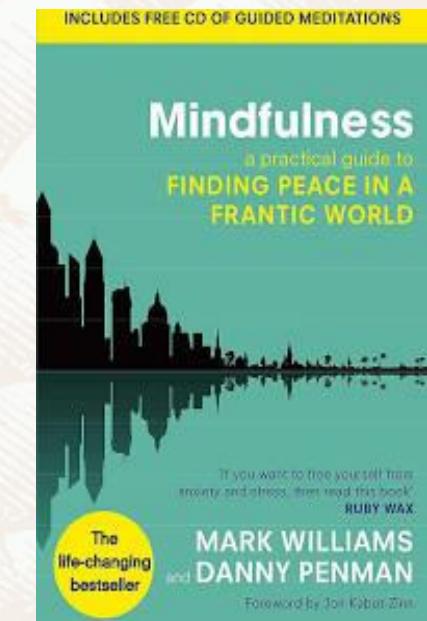
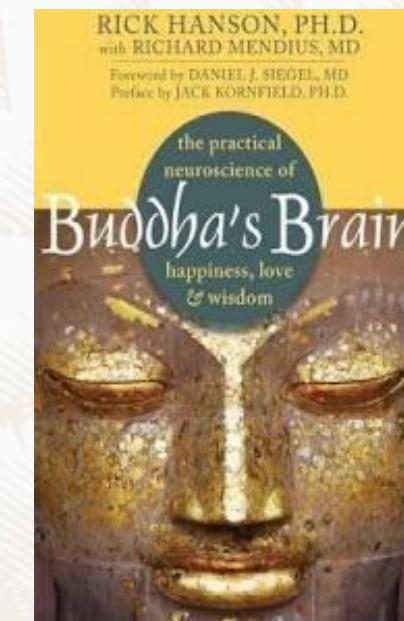
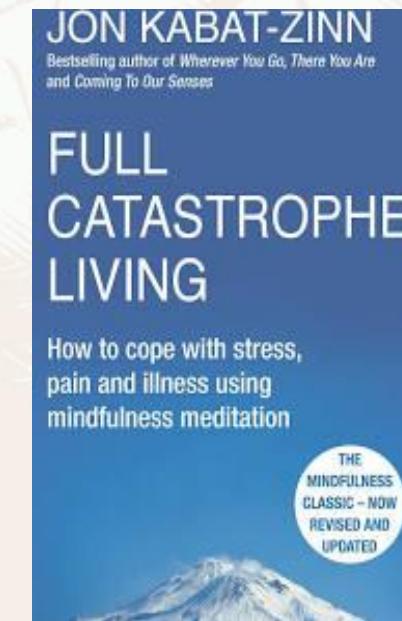
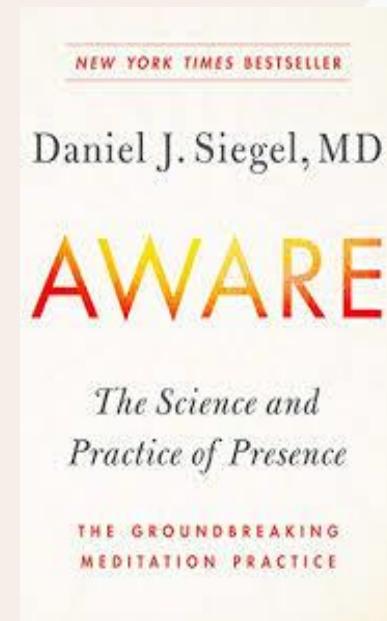
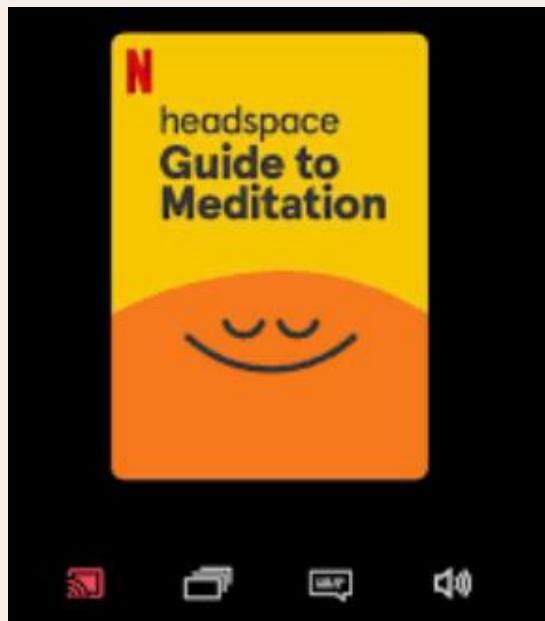
- There are many misconceptions about meditation practice, not least the fact that meditation is not about stopping your thinking processes
- There has been an exponential growth in the number of meditation-based research articles published since 2000; not all of these studies are well designed or powered – more research is needed
- Not all meditation practices are the same; broadly, three types of meditations have bee described: (1) **meta-cognitive approaches** like Mindfulness, which develop awareness of internal and external environments; (2) **focused, concentration-based meditation** practices like ABT, mantra meditation and Zazen sitting meditation, which transcend the cognitive processes and develop greater focus and thought control; (3) **compassion-based meditations** like loving-kindness meditation and gratitude-based practices that develop emotional regulation and compassion for self an others

# Summary (II)



- Attention-based Training (ABT; second type of meditation practice based on mantra meditation) involves using an anchor (the breath or a chosen phrase/mantra) to help you disengage from thoughts, memories, emotions and sensations on a moment by moment basis
- The central ABT practice can help to restore cognitive control by balancing heart rate variability, the autonomic nervous system and regulating heart rhythm
- Practice the Body Scan meditation *prior to* the central ABT practice when feeling agitated or in discomfort
- Regular practice is required for lasting benefits – start with 2 minutes, morning and evening

# Recommended viewing & reading



# Scientific papers

## Enhanced immune function and balanced inflammatory responses

Black, D. S., & Slavich, G. M. (2016). Mindfulness meditation and the immune system: a systematic review of randomized controlled trials. *Annals of the New York Academy of Sciences*, 1373(1), 13–24. <https://doi.org/10.1111/nyas.12998>

## Epigenetic changes of disease modifying genes

Kaliman P. Epigenetics and meditation. *Curr Opin Psychol.* 2019;28:76–80.

## Improved heart health

Levine GN, Lange RA, Bairey-Merz CN, et al. Meditation and Cardiovascular Risk Reduction: A Scientific Statement From the American Heart Association. *J Am Heart Assoc.* 2017;6(10):e002218. Published 2017 Sep 28.

## Better sleep

Black DS, O'Reilly GA, Olmstead R, Breen EC, Irwin MR. Mindfulness Meditation and Improvement in Sleep Quality and Daytime Impairment Among Older Adults With Sleep Disturbances: A Randomized Clinical Trial. *JAMA Intern Med.* 2015;175(4):494–501.

## Better Psychological health

Keng SL, Smoski MJ, Robins CJ. Effects of mindfulness on psychological health: a review of empirical studies. *Clin Psychol Rev.* 2011;31(6):1041–1056.

# Scientific papers

*Be a better you.* Scientific American Mind (special edition) March 2018; volume 27, issue 1s

*Mindfulness.* Edited by Amit Bernstein, David R. Vago, Thorsten Barnhofer. Current Opinion in Psychology. Volume 28, Pages 1–326 (August 2019)

Singer & Engert. It matters what you practice: differential training effects on subjective experience, behaviour, brain and body on the *Resource Project*. Current Opinion in Psychology. Volume 28 (August 2019); Pages 151–158.

Sofie L. Valk et al. Structural plasticity of the social brain: Differential change after socio-affective and cognitive mental training. Science Advances – 2017;3:e1700489

Dunne et al. *Burnout in the Emergency Department: Randomised Controlled Trial of an Attention-based Training Programme.* Journal of Integrative Medicine. 17 (2019) 173–180.

Lynch, et al. *Mantra Meditation in the Emergency Department: A Qualitative Evaluation.* British Medical Journal Open. 2018; 8: e020685

Lynch, et al. Impact of mantra meditation on health and wellbeing: A systematic review protocol. European Journal of Integrative Medicine 18 (2018) 30–33

Farver-Vestergaard et al. Mindfulness-based cognitive therapy in COPD: a cluster randomised controlled trial. Eur Respir J 2018; 51: 1702082

# Websites

<https://www.resource-project.org/en/>

<https://www.ucl.ac.uk/news/2009/aug/how-long-does-it-take-form-habit>

~  
*centre for  
positive psychology  
and health*

# The Science of Health AND Happiness

## LECTURE 7: YOUR EMOTIONS AND YOU

Dr Trudy Meehan,  
Lecturer and Senior Clinical Psychologist

resource manual

# Positive Emotions

## Hedonic Positive Emotions

- Joy
- Amusement

## Eudaimonic Positive Emotions

- Gratitude
- Serenity
- Interest
- Hope
- Pride
- Awe
- Love
- Inspiration

# Broaden and Build

## Broaden

- **Mind opens up** (think outside the box)
- **More creative and innovative**
- **Generate solutions**
- **More receptive to alternatives**
- **Expand mindset**
- **Enhance verbal creativity tasks**

## Build

**When we broaden our thinking we develop real and lasting skills that add to our repertoire of behaviours:**

- **Intellectual** (problem solving; openness to learning; visualising)
- **Physical** (increased cardiovascular health; improved coordination)
- **Social** (maintaining and creating relationships)
- **Psychological** (resilience; optimism; sense of identity; goal orientation)



## STUDY: A wandering mind is an unhappy mind

- People's minds wandered frequently, regardless of what they were doing - **mind wandering occurred in 46.9% of the samples (2,250 adults)**
- People were less happy when their minds were wandering than when they were not - **people were no happier when thinking about pleasant topics**
- Mind wandering was generally **the cause**, and not merely the consequence, of unhappiness
- What people were thinking was a better predictor of their happiness than was what they were doing

Killingsworth MA, Gilbert DT. A wandering mind is an unhappy mind. Science. 2010 Nov 12;330(6006):932.



# A note on negative emotion

- Negativity Bias
- Humans and animals have a bias towards attending to negative versus positive stimuli
- Baumeister et al. (2001) - Bad is stronger than good
- Magic ratio 3:1 positive emotions (Fredrickson & Losada, 2005).

# Emotional Intelligence

The capacity to:

- Acknowledge emotions
- Discern between emotions
- Engage effectively with our (and others) emotions

“The ability to monitor one’s own and other’s feelings and emotions, to discriminate among them, and to use this information to guide one’s thinking and action” (Salovey & Mayer, 1990, p. 189)



# Homework

- [www.positivityratio.com](http://www.positivityratio.com)
- 3:1 ratio of positive emotions to negative emotions
- Track your emotion ratio over two weeks
- Do you need to cultivate more positive emotions in your daily life?



# Homework

- Take one of Fredrickson's positive emotions (joy, gratitude, serenity, interest, hope, pride, amusement, inspiration, awe and love).
  - When was the last time I felt this feeling?
  - Where was I?
  - What was I doing?
  - What else gives me that feeling?
  - Can I think of more triggers for that feeling?
  - What can I do to cultivate this feeling?

Fredrickson, 2009, p. 40



# Homework

- Loving kindness meditation  
[https://www.youtube.com/watch?v=LkC0K1F8nPk&list=PL6DbJmB3fDQp\\_vwTqepv7LDjx3UqB2Ht5&index=5](https://www.youtube.com/watch?v=LkC0K1F8nPk&list=PL6DbJmB3fDQp_vwTqepv7LDjx3UqB2Ht5&index=5)
- Compassionate gestures - every time you touch a hot drink/glass of water, do a compassionate gesture
- Prof. Ian Robertson TedTalk - Stress can make you Sharper  
<https://www.youtube.com/watch?v=RnJAtztON84>
- Stress as enhancing mindset  
<http://sparqtools.org/rethinkingstress/>

# References

- Ashby, F. G., Isen, A. M., & Turken, A. U. (1999). A neuropsychological theory of positive affect and its influence on cognition. *Psychological Review*, 106(3), 529-550.
- Baumeister R. F., Bratslavsky, E., Finkenauer, C, & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, 5(4), 323-370.
- Brooks, A. W. (2014). Get excited: Reappraising pre-performance anxiety as excitement. *Journal of Experimental Psychology: General*, 143(3), 1144.
- Crum, A. J., Salovey, P., & Achor, S. (2013). Rethinking stress: The role of mindsets in determining the stress response. *Journal of personality and social psychology*, 104(4), 716.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York, NY: Harper Collins.
- Dweck, C. S. (2017). *Mindset: Changing the way you think to fulfill your potential*. London. Robinson.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218-226.

# References

- Fredrickson, B.L., & Losada, M.F. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist*, 60(7), 678-86.
- Fredrickson, B. L. (2009). *Positivity: Groundbreaking Research to Release your Inner Optimism and Thrive*. New York, NY: Crown.
- Fredrickson, B. L. (2013). Positive emotions broaden and build. *Advances in Experimental Social Psychology*, 47(1), 1-53.
- Salovey, P. & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185-211.
- Sheldon, K. M., & Lyubomirsky, S. (2006). How to increase and sustain positive emotion: the effects of expressing gratitude and visualizing best possible selves. *Journal of Positive Psychology*, 1, 73-82

# References

- Gardner, T., Refshauge, K., McAuley, J., Goodall, S., Hübscher, M., & Smith, L. (2016). Patient-led Goal Setting. *SPINE*, 4(18), 1405-1413.
- Isen, A. M. (1990) The influence of positive and negative affect on cognitive organization: Some implications for development pp. 75-94. In: Stein N, Leventhal B, Trabasso T, (Eds.) *Psychological and biological approaches to emotion*. Hillsdale, NJ: Erlbaum.

~  
*centre for  
positive psychology  
and health*

# The Science of Health AND Happiness

**LECTURE 8: YOUR STRONGEST SELF**

Professor Ciaran O'Boyle

resource manual

# RCSI Science of Health and Happiness: Notes Lecture 8

1. The context for looking at our strengths is the PERMA model of happiness and the research that shows that the way we think about things is crucial
2. The VIA Institute on Character is a major resource for understanding and using your strengths.  
<https://www.viacharacter.org>
3. Early key research by a large team of scientists led to the publication in 2004 of Chris Peterson's and Martin Seligman's key text *Character Strengths and Virtues A Handbook and Classification*.
4. The 6 ubiquitous virtues are: Wisdom, Courage, Humanity, Justice, Temperance and Transcendence
5. Our character strengths are our means of achieving the virtues
6. Character strengths are: positive traits and capacities that are personally fulfilling and reflect our personal identity; influence how we think act and feel; do not diminish others but produce positive outcomes; are ubiquitous and valued across all cultures; are expressed in combination, in degrees and in context; are stable, but capable of changing
7. Research shows that focusing on our character strengths makes us 9 times more likely to be flourishing, helps achieve PERMA, attenuates our negative bias, engenders positive outcomes in business, education, healthcare, coaching, psychotherapy and counselling, decreases stress at work, leads to less friction in the classroom, increased academic achievement, less depression, better physical health and increased well-being
8. Your Signature strengths are your 4-7 strongest or most prominent strengths. They are **essential, effortless and energising.**

*"The good life consists in deriving happiness by using your signature strengths every day in the main realms of living. The meaningful life adds one more component: using these same strengths to forward knowledge, power and goodness. A life that does this is pregnant with meaning, and if God comes at the end, such a life is scared"* Professor Martin Seligman

# The Via Strengths and Virtues

<b>WISDOM</b>	Creativity	Curiosity	Judgement	Love of Learning	Perspective
<b>COURAGE</b>	Bravery	Perseverance	Honesty	Zest	
<b>HUMANITY</b>	Love	Kindness	Social intelligence		
<b>JUSTICE</b>	Teamwork	Fairness	Leadership		
<b>TEMPERANCE</b>	Forgiveness	Humility	Prudence	Self regulation	
<b>TRANSCENDENCE</b>	Appreciation of beauty	Gratitude	Hope	Humour	Spirituality

1. The most common strengths are kindness, gratitude, fairness and honesty
2. The least common strengths are self-regulation, prudence and modesty
3. The strengths most associated with happiness and well-being are love, hope, gratitude and zest

# Resources

## Videos:

Neal Mayerson founder of the VIA Institute on Character speaks about the character strengths revolution. <https://www.youtube.com/watch?v=fSmbB0Ko2hM>

Ryan Niemiec Director of Education at VIA speaks about character strengths at a 2017 Ted talk  
<https://www.youtube.com/watch?v=DMWck0mKGWc&t=351s>

## Books:

### *Popular*

Niemiec R, McGrath RE (2019). *The Power of Character Strengths*. Cincinnati, The VIA Institute on Character

### *Technical*

Petersen C, Seligman MEP (2004). *Character Strengths and Virtues A Handbook and Classification*. New York, Oxford University Press

*~*  
centre for  
positive psychology  
and health

# The Science of Health AND Happiness

## LECTURE 9: HAPPINESS ACROSS THE LIFESPAN

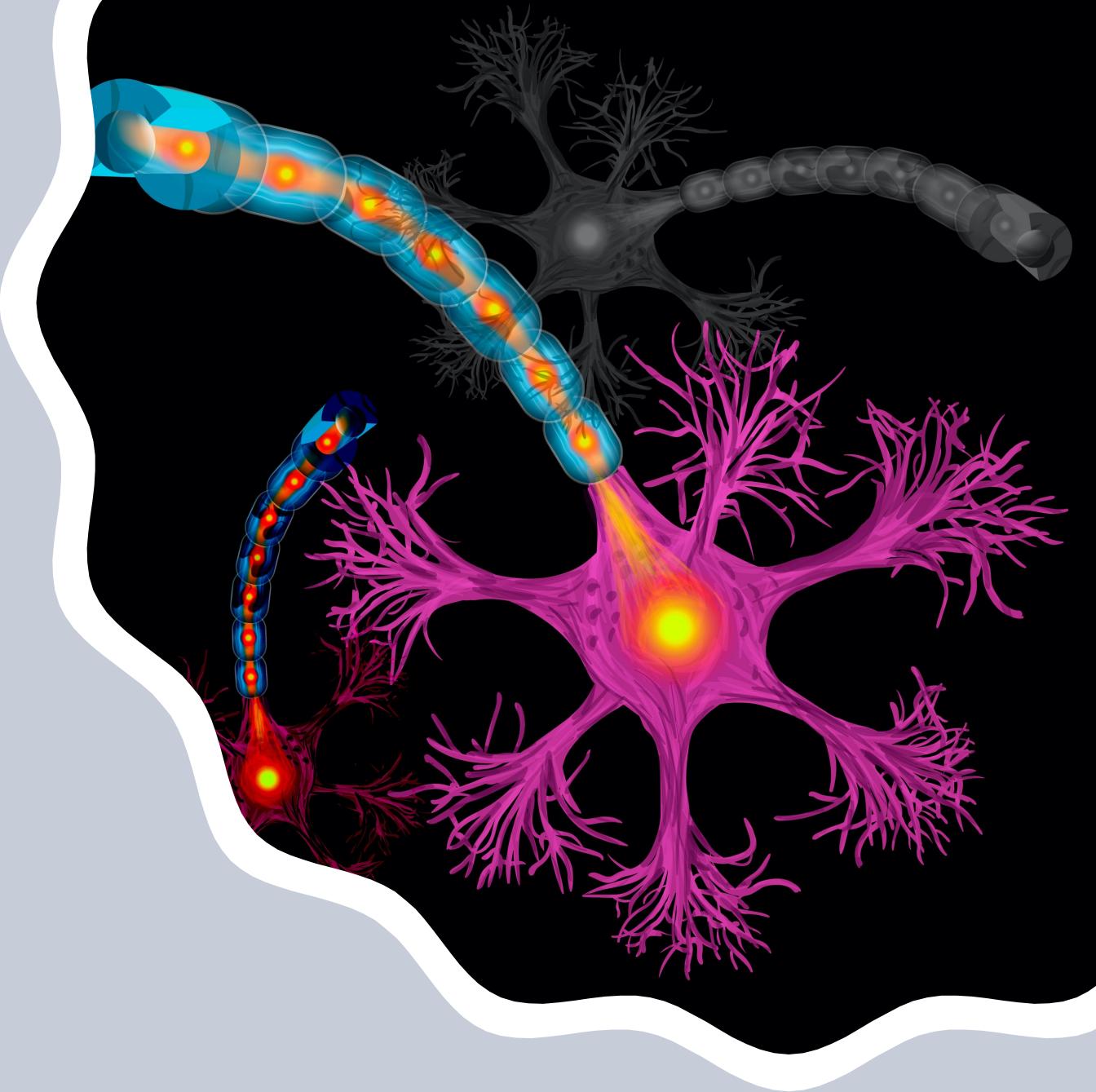
Dr Trudy Meehan,  
Lecturer and Senior Clinical Psychologist

resource manual



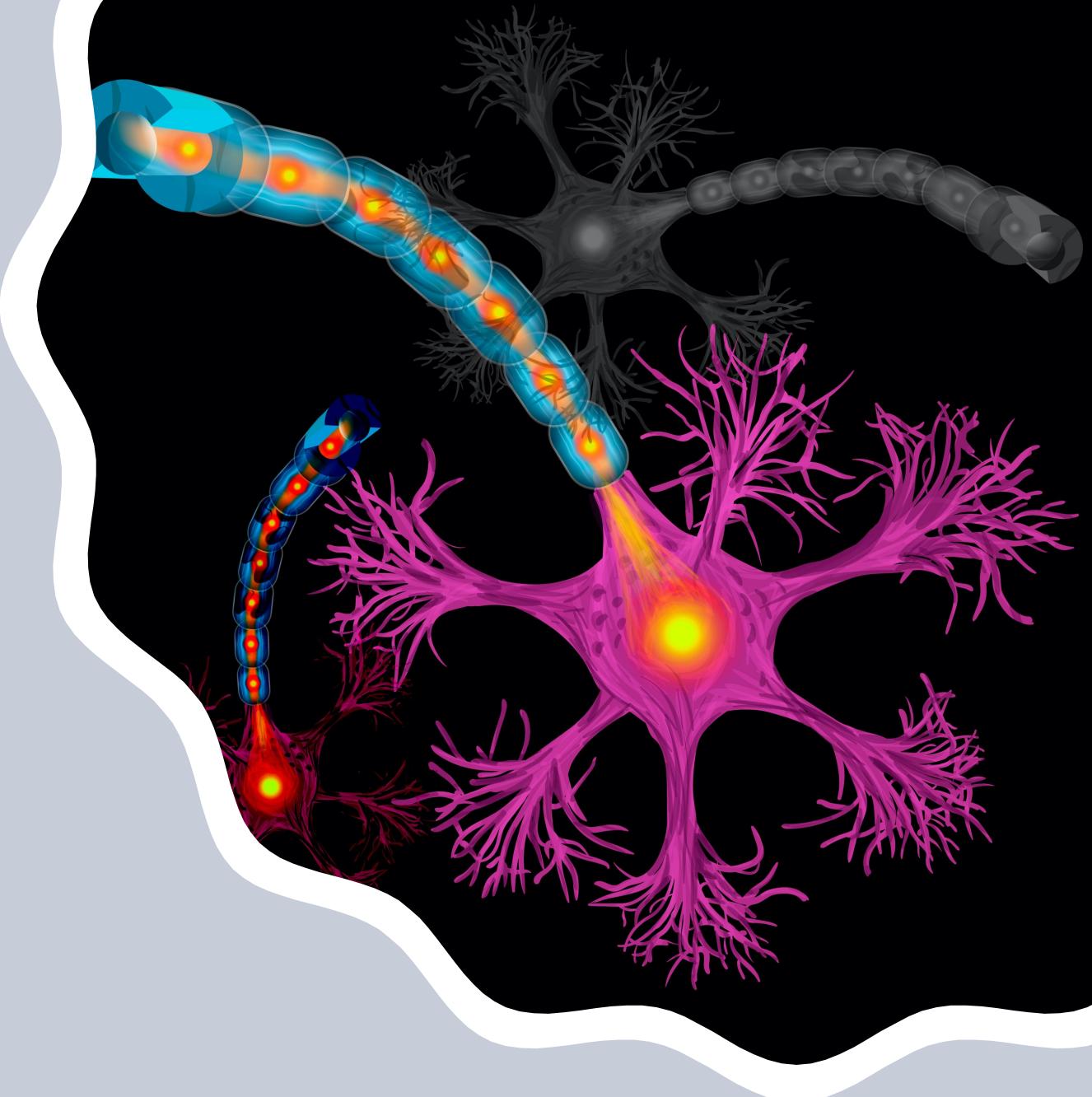
# Neurons

- Our brain has billions of nerve cells called “neurons”
- Neurons communicate through making connections with each other in a network
- The neurons connect with one another and with other cells in the body
- The pattern and strength of these neurons are the base of our knowledge and skills
- Research shows we have “neuroplasticity” – the ability of the neurons in the brain to change and grow through learning.



# Purpose and Meaning

- Purpose in life is linked to sustained ventral striatum activation. High levels of activity in the ventral striatum also predict lower levels of cortisol output.
- Studies suggest that purpose may have a neuroprotective effect on what is known as cognitive reserve. Researchers believe that people with more cognitive resilience (“cognitive reserve”) at baseline are able to withstand more brain injury before developing neurologic symptoms (Boyle, Buchman, Barnes, & Bennett, 2010; Boyle et al., 2012; Hartanto et al., 2020)



# Healing versus Cure as we age

- We want to feel a sense of continuity of self and our life (Atchley, 1999)
- We need to use compensatory strategies or be flexible to achieve this continuity as we age
- The use of compensatory strategies depends on one's willingness to accept alternative methods for accomplishing tasks.
- Also involves changing our definitions of success
  - Strawbridge et al. (2002) found that older adults who were experiencing chronic disease and declining functionality continued to view themselves as successfully aging and to enjoy well-being

# Homework

- Reflect on things you love to do now
- Imagine things new things you might do (even badly...if something is worth doing it's worth doing badly to begin with)
- Remember things you loved to do when you were younger
- Be bold...design your life adventure
- Invite your children to join you and make mistakes together

# Resources

Daniel Levitin – Successful Aging

- <https://www.youtube.com/watch?v=jcx83Nc4dt4>

Dan Gilbert – Synthesizing Happiness

- [https://www.ted.com/talks/dan\\_gilbert\\_the\\_surprising\\_science\\_of\\_happiness?language=en#t-71113](https://www.ted.com/talks/dan_gilbert_the_surprising_science_of_happiness?language=en#t-71113)

Lisa Mosconi – How menopause affects the brain

- [https://www.ted.com/talks/lisa\\_mosconi\\_how\\_menopause\\_affects\\_the\\_brain](https://www.ted.com/talks/lisa_mosconi_how_menopause_affects_the_brain)

Carl Honore – Why we should embrace aging as an adventure

- <https://www.youtube.com/watch?v=jcx83Nc4dt4>

# References

- Atchley, R. C. (1999). Continuity and adaptation in aging: Creating positive experiences. Baltimore, MD: Johns Hopkins University Press.
- Boyle P, Buchman A, Barnes L, Bennett D. (2010). Effect of a Purpose in Life on Risk of Incident Alzheimer Disease and Mild Cognitive Impairment in Community-Dwelling Older Persons. *Arch Gen Psychiatry*, 304–310.
- Boyle P, Buchman A, Wilson R, Yu L, Schneider J, Bennett D. (2012). Effect of Purpose in Life on the Relation Between Alzheimer Disease Pathologic Changes on Cognitive Function in Advanced Age. *Arch Gen Psychiatry*. 499–506.
- Brickman, P., Coates, D., & Janoff-Bulman, R. (1978). Lottery winners and accident victims: Is happiness relative? *Journal of Personality and Social Psychology*, 36, 917- 927.
- Bruining, H., Bartels, M., Polderman, T. J., & Popma, A. (2020). COVID-19 and child and adolescent psychiatry: an unexpected blessing for part of our population?. *European child & adolescent psychiatry*, 1-2.
- Buehler, R., & McFarland, C. (2001). Intensity Bias in Affective forecasting: The role of temporal focus. *Personality and Social Psychology Bulletin*, 27, 1480-1493.

# References

- Buehler, R., MacFarland, C., Spyropoulos, V., & Lam, K. C. H. (2007). Motivated Prediction of Future Feelings: Effects of Negative Mood and Mood Orientation on Affective Forecasts. *Personality and Social Psychology Bulletin*, 33, 1265-1278.
- Dvorsky, M. R., Breaux, R., & Becker, S. P. (2020). Finding ordinary magic in extraordinary times: child and adolescent resilience during the COVID-19 pandemic. *European child & adolescent psychiatry*, 1-3.
- Gilbert, D. T., Wilson, T. D., Pinel, E. C., Blumberg, S. J., & Wheatley, T. P. (1998). Immune Neglect: A Source of Durability Bias in Affective Forecasting. *Journal of Personality and Social Psychology*, 75(3), 617-638.
- Gutberlet, M. H. (2012). On walking. In *Shoe shop*, pp. 13-23. Edited by M. H. Gutberlet, & C. Snyman. Johannesburg. Jacana Media.
- Haight, B., Barba, B., Tesh, A., & Courts, N. (2002). Thriving A Life Span Theory. *Journal of gerontological nursing*, 28, 14-22. 10.3928/0098-9134-20020301-05.
- Hartanto, A., Yong, J. C., Lee, S. T. H., Qin Ng, W. & Tong, E. M. W. (2020). Putting adversity in perspective: purpose in life moderates the link between childhood emotional abuse and neglect and adulthood depressive symptoms, *Journal of Mental Health*, 29(4), 473-482, DOI: [10.1080/09638237.2020.1714005](https://doi.org/10.1080/09638237.2020.1714005)

# References

- Hill, R. D., & Smith, D. J. (2015). *Positive aging: At the crossroads of positive psychology and geriatric medicine*. In P. A. Lichtenberg, B. T. Mast, B. D. Carpenter, & J. Loebach Wetherell (Eds.), *APA handbooks in psychology®. APA handbook of clinical geropsychology, Vol. 1. History and status of the field and perspectives on aging* (p. 301–329). American Psychological Association. <https://doi.org/10.1037/14458-013>
- Hill, R. D. (2005). *Positive aging: A guide for mental health care professionals and consumers*. New York, NY: Norton.
- Hill, R. D. (2011). Positive aging interventions for guiding behaviorally-based interventions with older adults. *Behavior Therapy*, 42, 66–77. doi:10.1016/j.beth.2010.04.006
- Lam, K. C. H., Buehler, R., McFarland, C., Ross, M., & Cheung, I. (2005). Cultural Difference in Affective Forecasting: The Role of Focalism. *Personality and Social Psychology Bulletin*, 31, 1296-1309.

# References

- Levitin, D. J. (2020). *Successful Aging: A neuroscientist explores the power and potential of our lives*. London, UK. Penguin
- Mellers, B. A., & McGraw, A. P. (2001). Anticipated Emotions as Guides to Choice. *Current Directions in Psychological Science*, 10(6), 210-14.
- Mitchell, T. L, Thompson, L., Peterson, E., & Cronk, R. (1997). Temporal Adjustments in the Evaluation of Events. *Journal of Experimental Social Psychology*, 33(4), 421-448.
- Power, K. (2020) The COVID-19 pandemic has increased the care burden of women and families, *Sustainability: Science, Practice and Policy*, 16(1), 67-73, DOI: [10.1080/15487733.2020.1776561](https://doi.org/10.1080/15487733.2020.1776561)
- Rachman, S., & Arntz, A. (1991). The overprediction and underprediction of pain. *Clinical Psychology Review*, 11(4), 339-355.
- Ryan, R. M., Martin, A., & Brooks-Gunn, J. (2006). Is one good parent good enough? Patterns of mother and father parenting and child cognitive outcomes at 24 and 36 months. *Parenting*, 6(2-3), 211-228.
- Schkade, D. A., & Kahneman, D. (1997). Does Living in California Make People Happy? A Focusing Illusion in Judgments of Life Satisfaction. *Psychological Science*, 9(5), 340-346.

# References

- Shira Ruskay (1996) Saying Hello Again: A New Approach to Bereavement Counseling, *The Hospice Journal*, 11(4), 5-14, DOI: [10.1080/0742-969X.1996.11882832](https://doi.org/10.1080/0742-969X.1996.11882832)
- Sneed, R. S., & Cohen, S. (2013). A prospective study of volunteerism and hypertension risk in older adults. *Psychology and Aging*, 28(2), 578-586. <https://doi.org/10.1037/a0032718>
- Strawbridge, W. J., Wallhagen, M. I., & Cohen, R. D. (2002). Successful aging and wellbeing: Self-rated compared with Rowe and Kahn. *Gerontologist*, 42, 727-733. doi:10.1093/geront/42.6.727
- Ubel, P. A., Loewenstein, G., & Jepson, C. (2005). Disability and Sunshine: Can Hedonic Predictions Be Improved by Drawing Attention to Focusing Illusions or Emotional Adaptation? *Journal of Experimental Psychology*, 11(2), 111-123
- Wilson, T. D, Meyers, J., & Gilbert, D. T. (2003). „How happy was I anyway?“ A retrospective impact bias. *Social Cognition*, 21(6), 421-446.

# References

- Wilson, T. D., Wheatley, T., Meyers, J. M., Gilbert, D. T., & Axsom, D. (2000). Focalism: A Source of Durability Bias in Affective Forecasting. *Journal of Personality and Social Psychology*, 78(5), 821-836
- Waldinger in interview with M. Solan [The Science of Health and Happiness  
APRIL 2021](https://www.health.harvard.edu/blog/the-secret-to-happiness-heres-some-advice-from-the-longest-running-study-on-happiness-2017100512543#:~:text=%E2%80%9CThey%20tend%20to%20realize%20how,Waldinger.&text=%E2%80%9CWhen%20you%20are%20older%20you,Waldinger.</a></li><li>• White, M. (1989). Saying ‘Hullo’ Again: The Incorporation of the Lost Relationship in the Resolution of Grief. in <i>Selected Papers</i>. Adelaide, South Australia: Dulwich Centre Publications.</li><li>• Winnicott DW (1957) <i>The Child and the Family</i>. Tavistock, London.</li><li>• Winnicott DW (1964) <i>The Child, the Family and the Outside World</i>. Penguin, Harmondsworth.</li></ul></div><div data-bbox=)

*~*  
centre for  
positive psychology  
and health

# The Science of Health AND Happiness

## LECTURE 10

Professor Ciaran O'Boyle  
Dr Pádraic Dunne  
Dr Trudy Meehan

resource manual

~  
*centre for  
positive psychology  
and health*

25,000 participants

Thank you for participating

The Science of Health and Happiness

May 2021



*~*  
*centre for*  
**positive psychology**  
*and health*

# Making habits stick

MARCH 2021

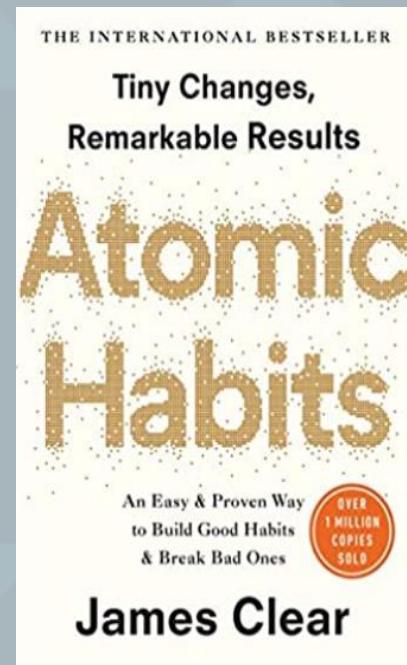
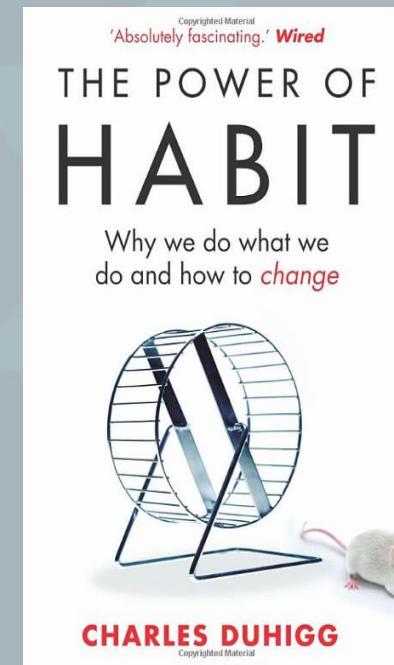
# How to make sticky habits



Neal & colleagues, Duke University: 6 essential strategies for habit - Adapted from [thebeararchitects.com](http://thebeararchitects.com)

It takes an average of 66 days to generate a new habit

[www.ucl.ac.uk/news/2009/aug/how-long-does-it-take-form-habit](http://www.ucl.ac.uk/news/2009/aug/how-long-does-it-take-form-habit)



# The habit loop - develop triggers & rewards

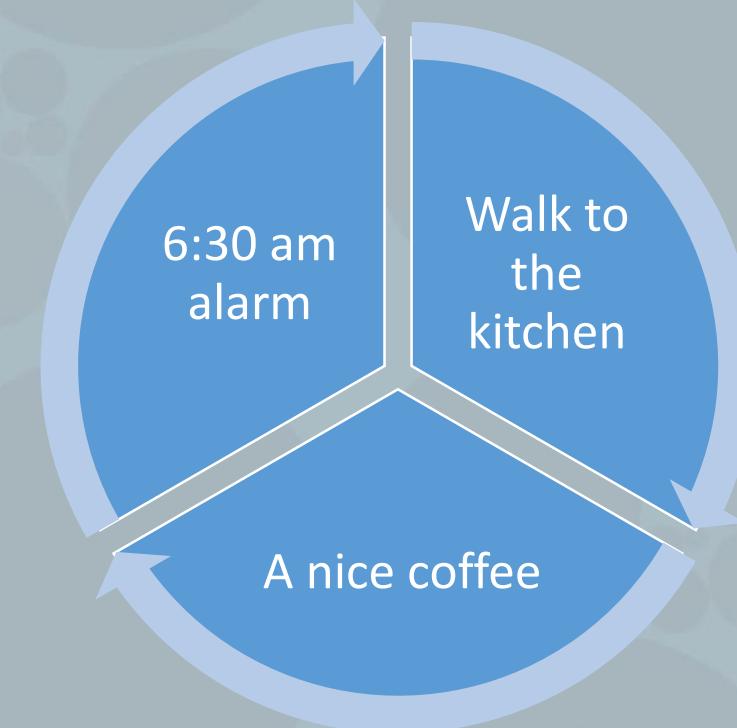
The habit loop



Negative habit loop  
- smoking



Positive habit loop  
- new meditation practice



Write down different habit loops for different times of the day,  
including the weekend and for different practices

# The Behaviour Change Check-list

- Have you ensured or created a stable, supportive environment or context for your new habit?
- Are there any opportunities to leverage life changes or teachable moments? E.g. a global pandemic!
- Are there any opportunities to piggyback the new habit after existing habits and routines?
- Have you made the new behaviour as easy as possible to do?
- Have you created multiple habit loops to account for different eventualities?
- Have you ensured a mix of short-term and longer term rewards?
- Have you created opportunities to try out or practice the new behaviour?
- Have you attached new meaning(s) to attach to your desired habit?



**Be self-compassionate**  
**We all fall off the horse**  
**Vow to start again the next day**

# So, where to next?

- The **Science of Health and Happiness** course will be available online at the RCSI until the 31<sup>st</sup> of August. In the next few weeks, we will provide the lecture notes in a single document.
- We need your help to improve the course so we will send you a **very** brief anonymous survey in a few weeks time – we would be most grateful for your feedback.
- Our next **Science of Health and Happiness** course will launch in early September, and will focus on young people in school and college.
- Professor Martin Seligman, the founder of positive psychology, will be giving an RCSI MyHealth lecture on his life's work on the 1<sup>st</sup> of June – all welcome <https://www.rcsi.com/dublin/news-and-events>





[rcsi.com](http://rcsi.com)

**RCSI**

UNIVERSITY  
OF MEDICINE  
AND HEALTH  
SCIENCES

~  
*centre for  
positive psychology  
and health*

We wish *you* Health  
AND Happiness