



# Mental Health & Well-being: Sleep, Energy Regulation & Stress Control for Optimal Performance

David R. McDuff, M.D

Clinical Professor of Psychiatry

University of Maryland School of Medicine, USA

IOC Mental Health Working Group Member

[dmcduff52@gmail.com](mailto:dmcduff52@gmail.com)

#MENTALLYFIT



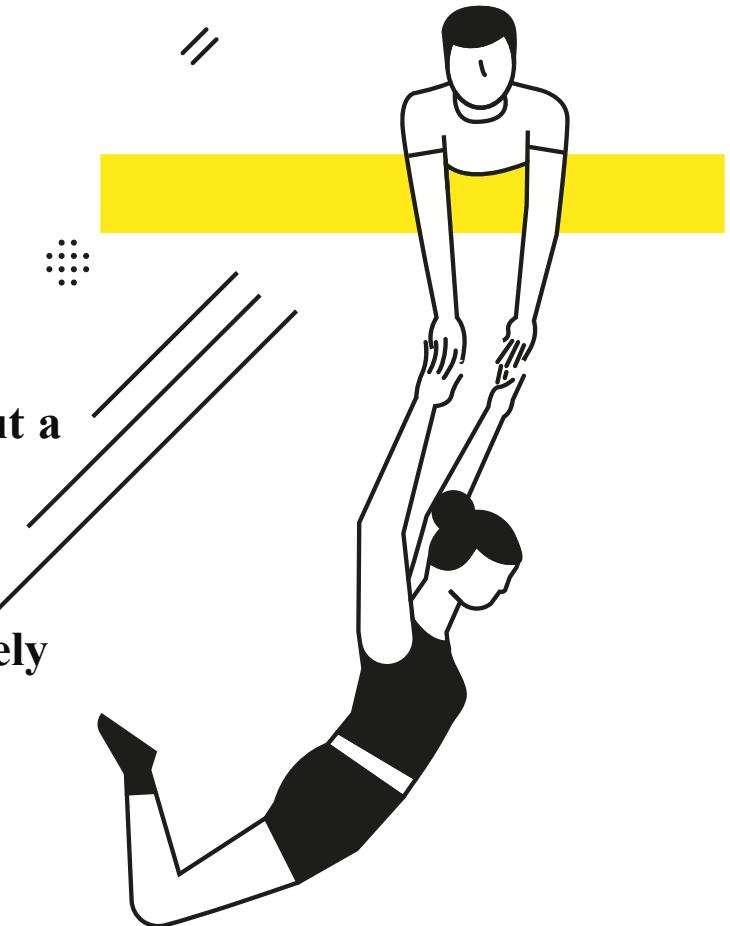


Athlete  
365

## Before we start

Think to yourself:

1. How comfortable do you feel talking about mental health and wellbeing?  
1 very uncomfortable; 2 uncomfortable; 3 comfortable; 4 very comfortable
2. How many times have you talked to a fellow athlete or sport staff member about a mental health related issue in the last year ?
3. If you had a mental health concern about a teammate, who would you most likely speak to ?
  - a. the teammate; b. family member; c. friend; d. another teammate;
  - e. coach; f. physiotherapist; g. physician; h. sport psychologist;
  - i. mental health counselor/therapist; j. other (list) \_\_\_\_\_



# What are we talking about?

Mental wellbeing?

Mental health?

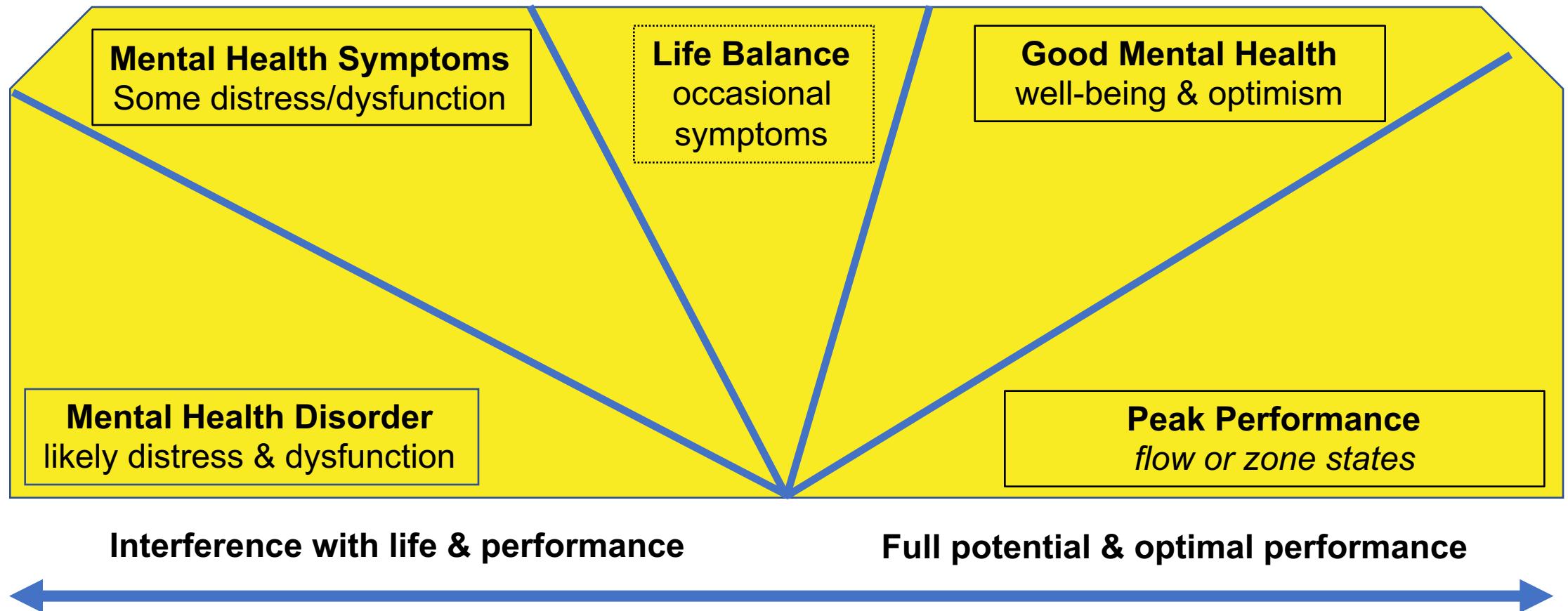
Mental health **symptoms**?

Mental health problems ?

Mental disorder/illness?



# Mental Health & Athletic Performance



Adapted from M Lardon, 2012

#MENTALLYFIT

# Mental Health in Athletes

**“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”

Mental Health is personal and subjective and includes:

1. A sense of internal well-being
2. Feeling in line with one's own values & beliefs
3. Feeling at peace with oneself
4. Feeling positive and optimistic about life

(World Health Organization, 2019)

# **Mental Health Symptoms & Disorders**

## **Mental Health Symptoms**

Negative patterns of thinking, emotions, and behaviors that can may cause distress and/or interfere with functioning including sport performance. These often develop in the presence of adverse life events.

(WHO, 2019; BJSM, 2019)

## **Mental Health Disorders**

Conditions which produce significant changes in a person's thinking, emotions and/or behaviors over several weeks or more and that are associated with significant distress and/or disability in social, occupational or other important activities like learning, training or competition.

(DSM-5, 2013; WHO, 2018)

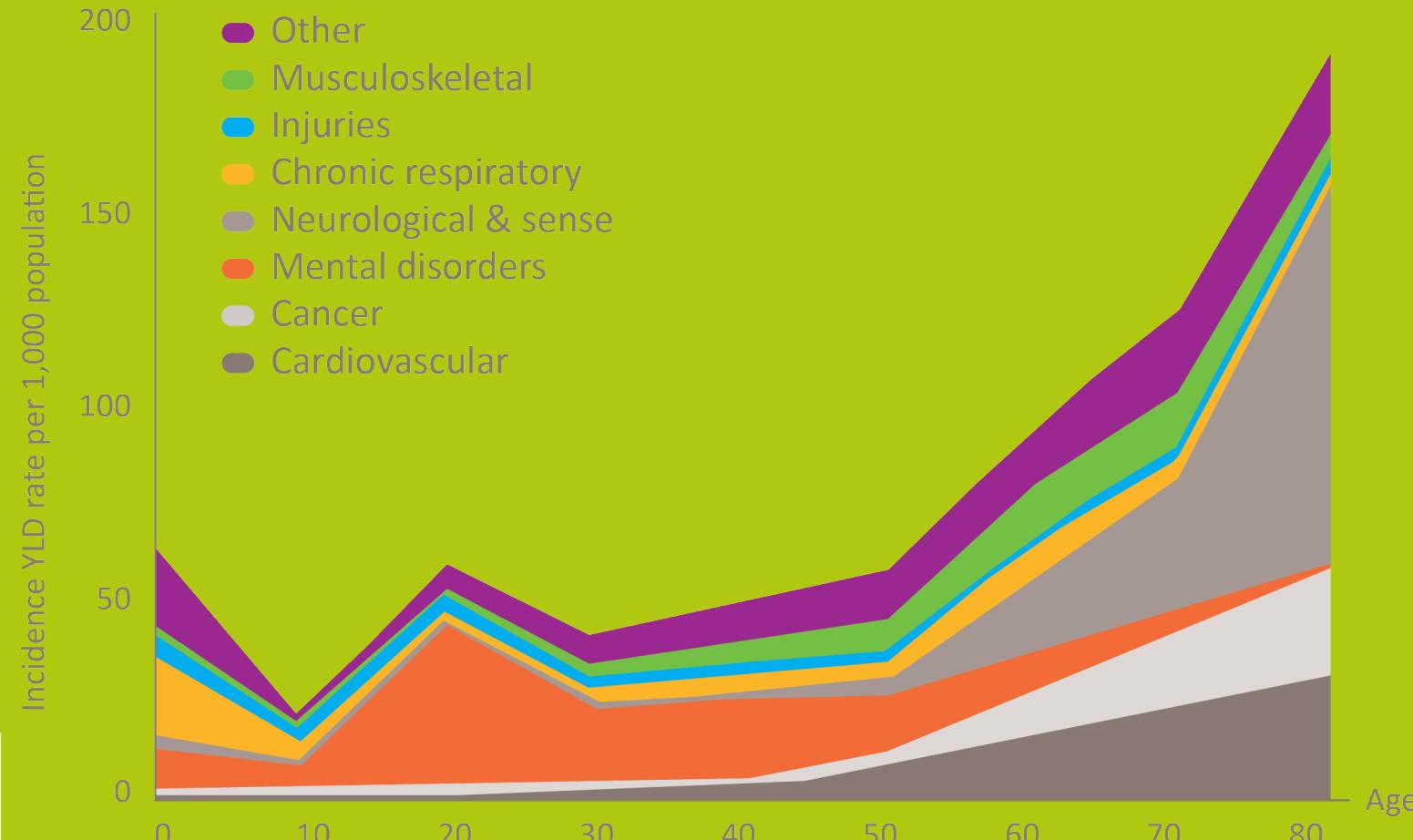


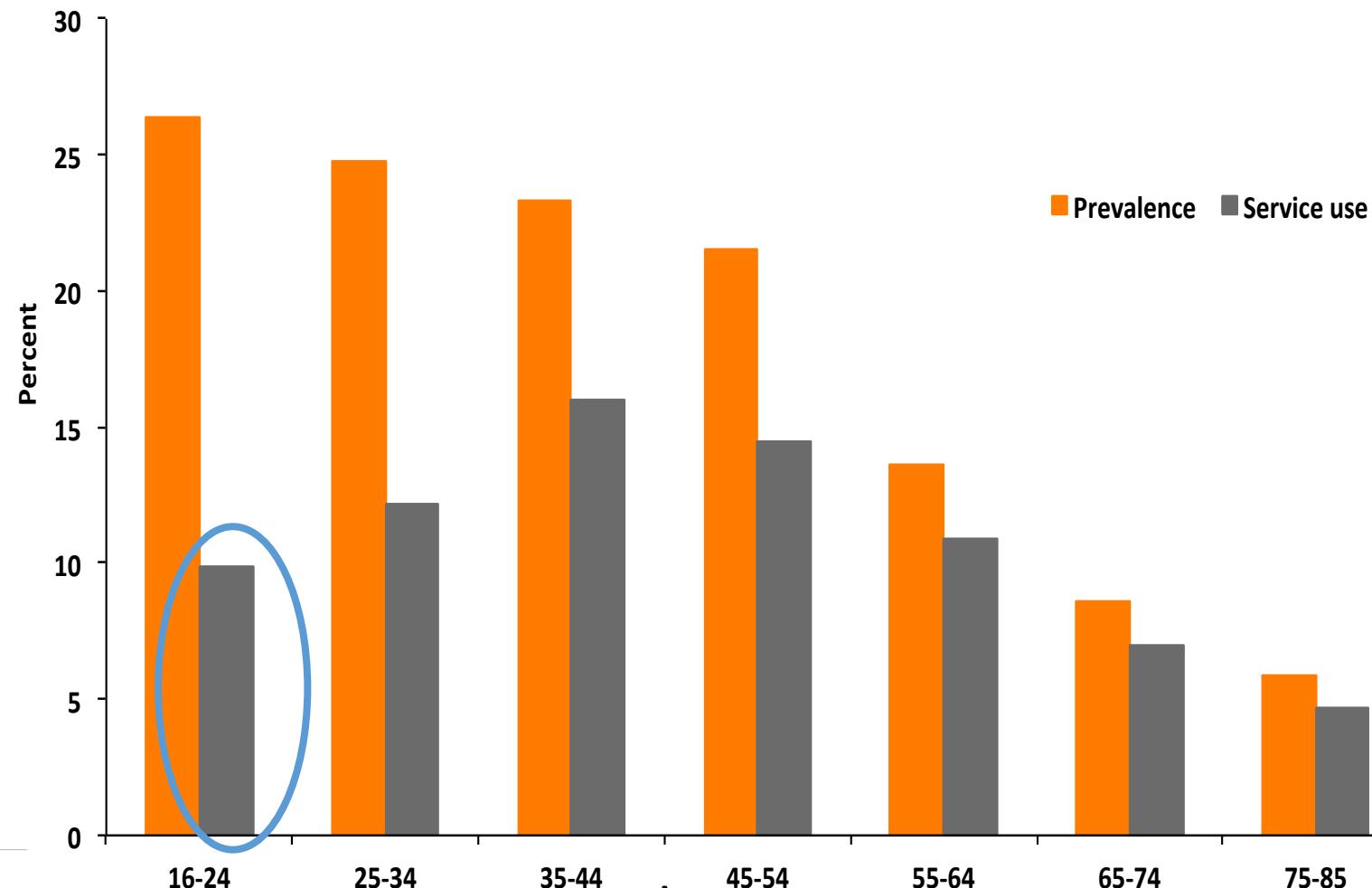
**Wembley Stadium in London holds 90,000. If we filled it with elite level athletes, on average how many will be experiencing mental health concerns?  
(e.g. anxiety, depression, insomnia)**

- a. 5,000
- b. 10,000
- c. 30,000
- d. 50,000



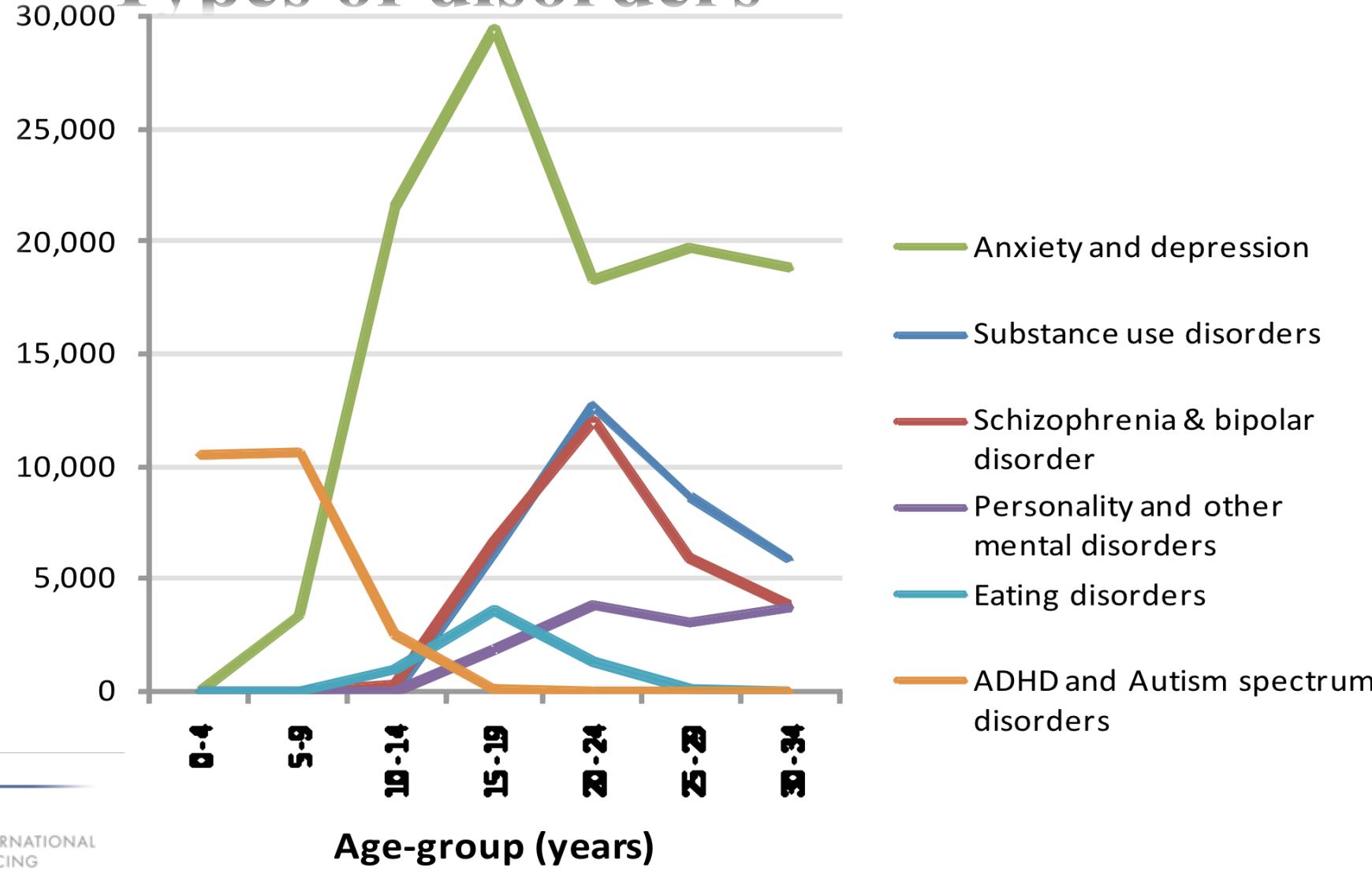
# Why think about youth & adult mental health? The burden of disease by age



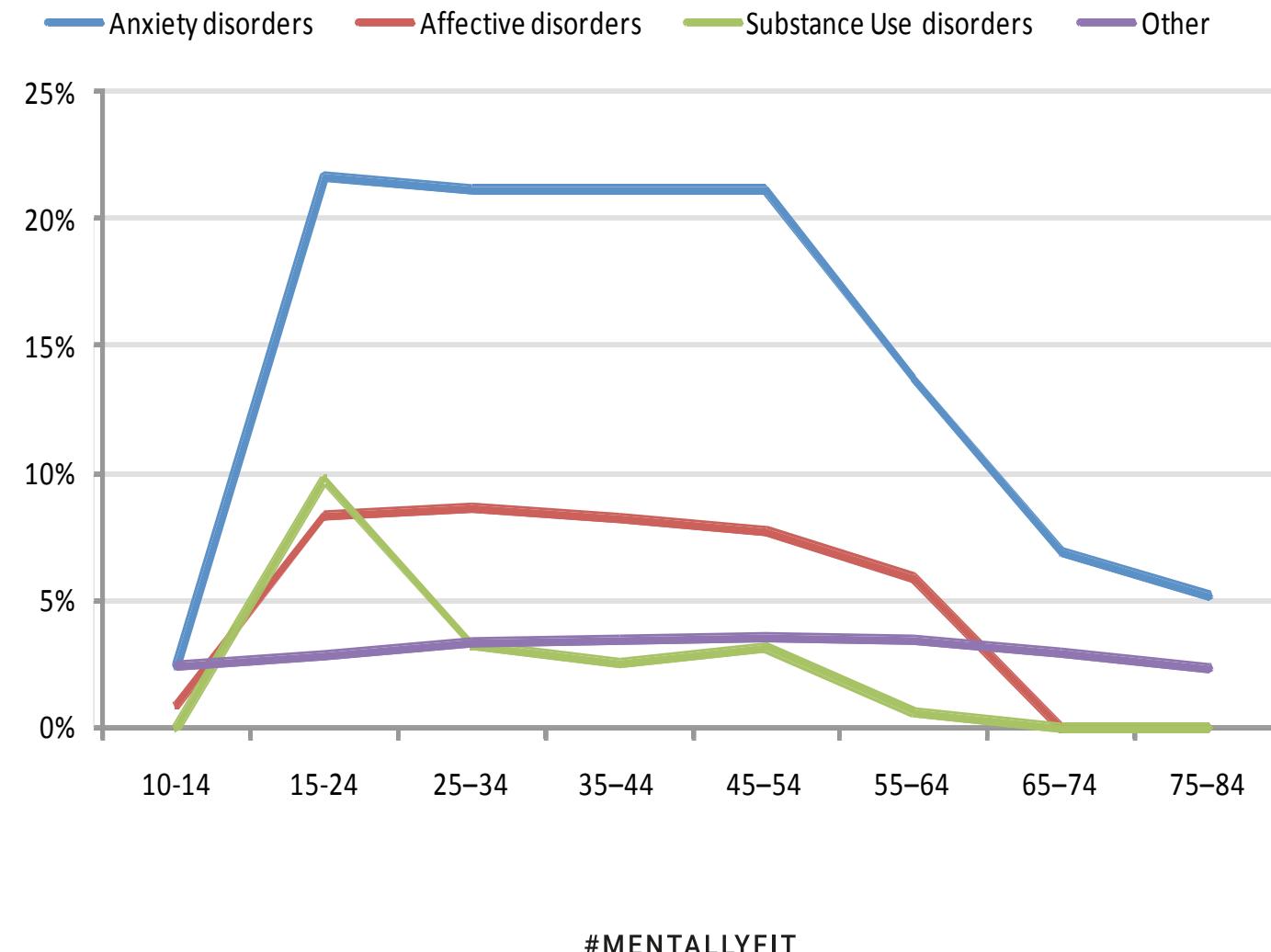


#MENTALLYFIT

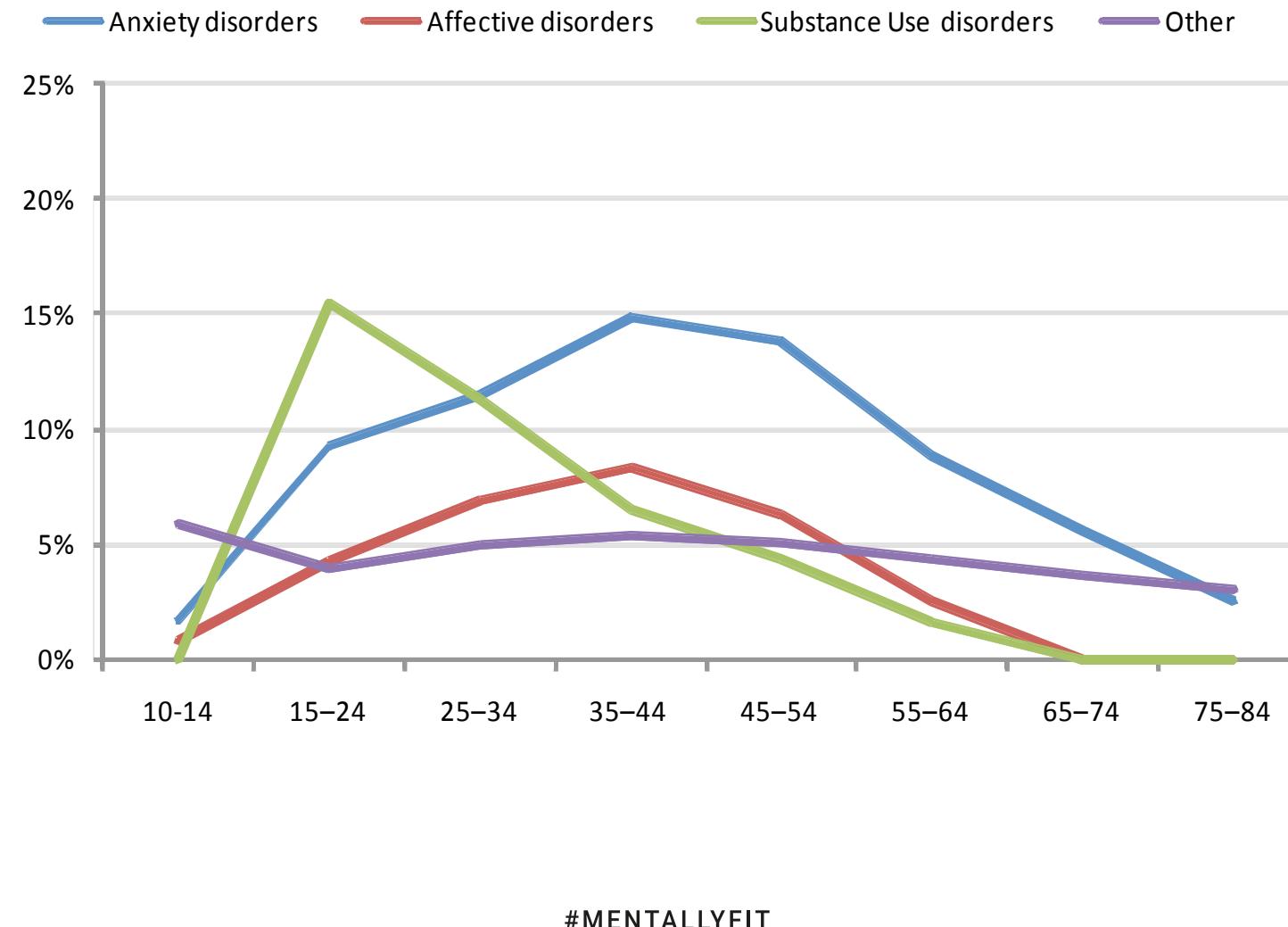
# Types of disorders



# Prevalence by age in females



# Prevalence by age in males



## Threats to your Mental Health

- Adverse Life Events (trauma, loss, illness)
- **Harassment & Abuse**
- Prolonged and/or repeated concussion(s)
- Injury with long rehab and/or surgery
- Transition from sport
- Poor Performance
- Career Dissatisfaction
- Social Media Immersion
- **Sleep Debt**

- Life balance,
- Well-being,
- Optimism
- Peak performance

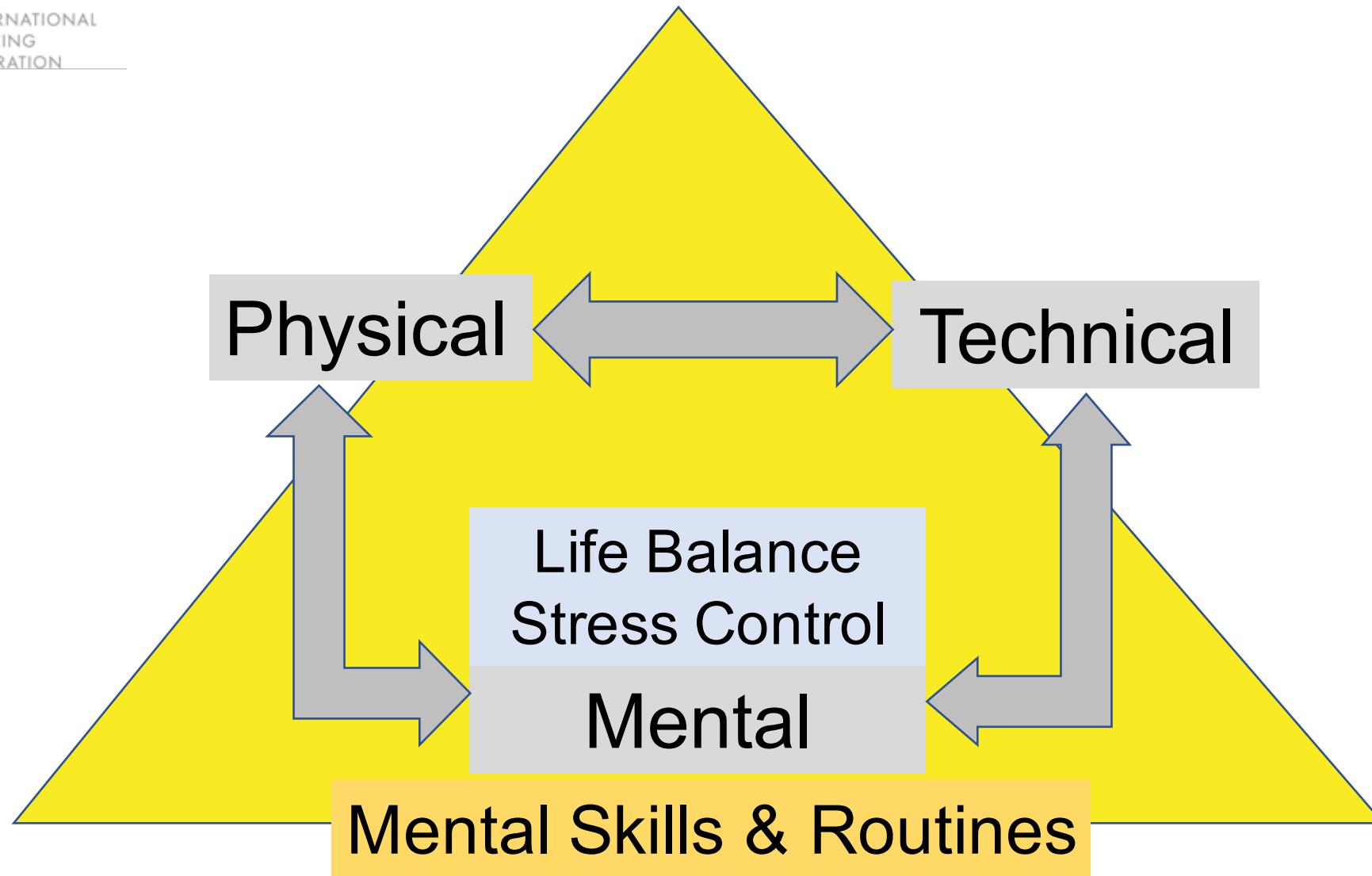
OR

- **Alcohol Misuse**
- **Anxiety**
- **Anger**
- **Depression**
- **Disordered Eating**
- **Substance Misuse**
- **Problem Gambling**
- **Insomnia**
- **PTSD**

## Support for your Mental Health

- Exercise & Nature
- Enjoyable Activities
- Nutrition & Diet
- Supplements
- Restorative Sleep
- Positive Energy Balance
- **Stress Control**
- Relationships (family, friends, teammates, etc)
- Religious/Spiritual Involvement

# Performance Triangle



# Sleep & *Energy* for Optimal Sports Performance

Time Management  
versus  
Energy  
Management

Quality Sleep-**Resets**  
8-9 continuous hours

Unwinding  
Routine  
**Releases**



Awakening  
Routine  
**Builds**

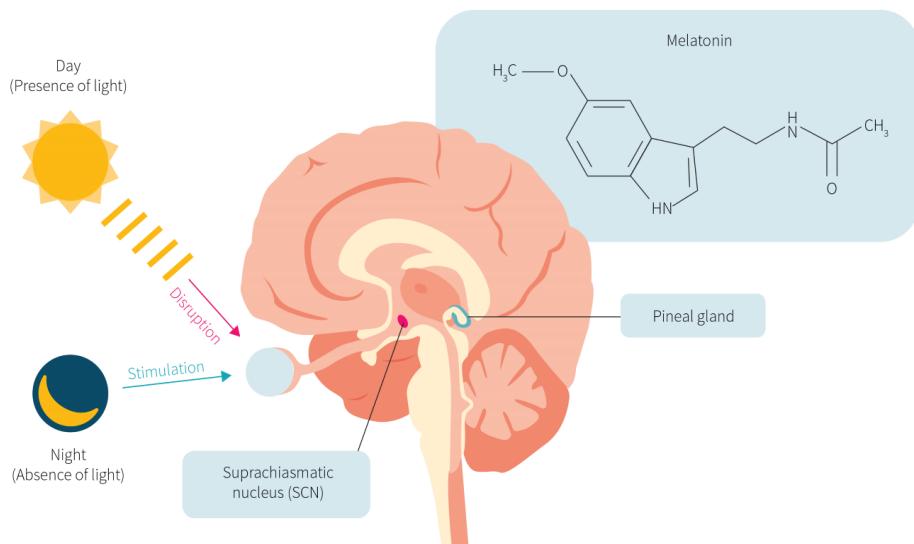
Nutrition & Hydration  
Mini Breaks & Power Naps  
**Recovers & Maintains**



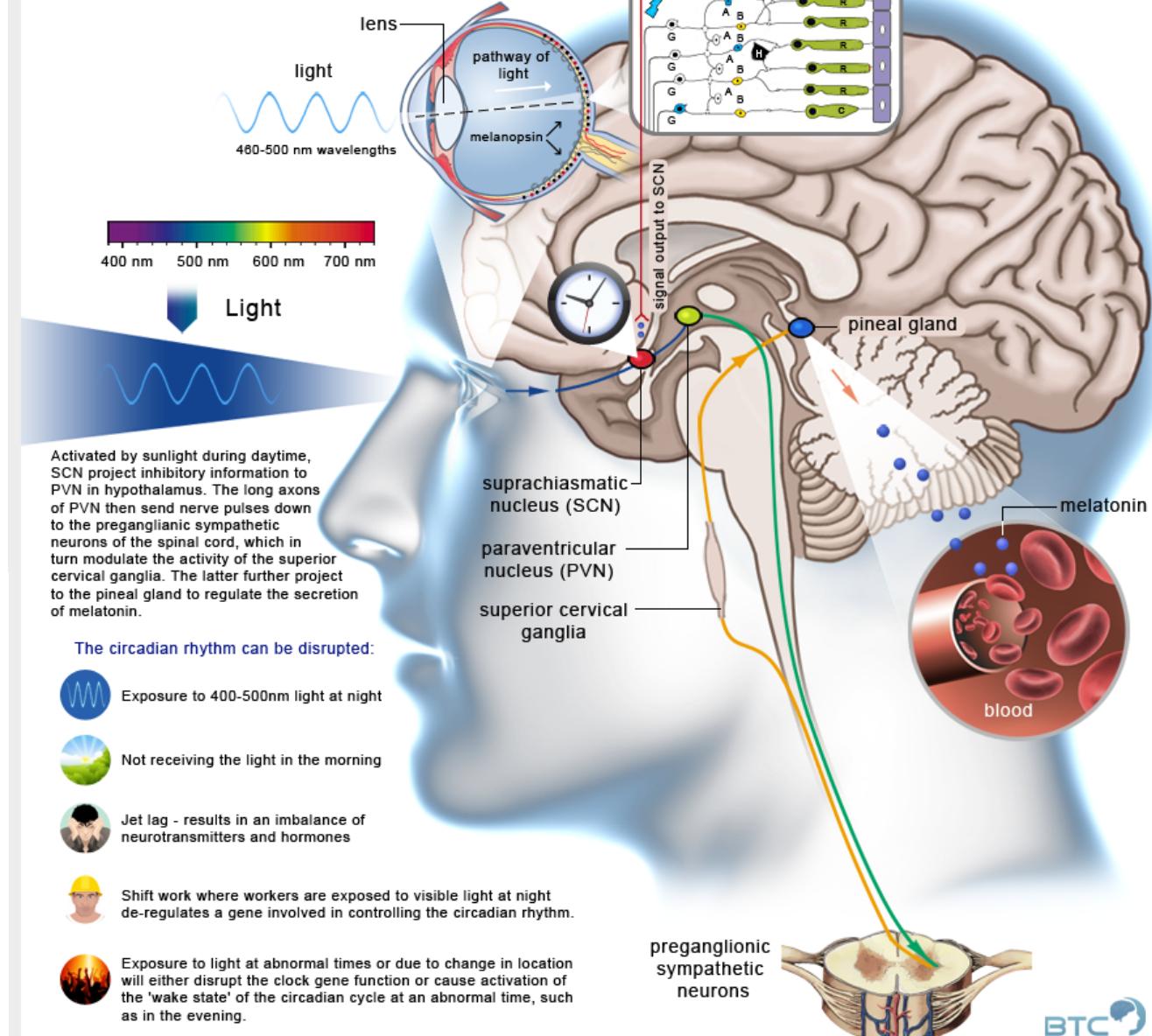
The Brain is the body's most metabolically active tissue using 20% of the body's energy

Sleep Video  
<https://www.youtube.com/watch?v=xrlqDgThA3c>

Figure 1: The effect of light on melatonin production



## circadian rhythm



# Main Energy Influencers

**Spiritual:** purpose, beliefs, values, gifts, gratitude, desires, goals

**Physical:** routines, fluids, nutrition, injury recovery & prevention, sleep & breaks

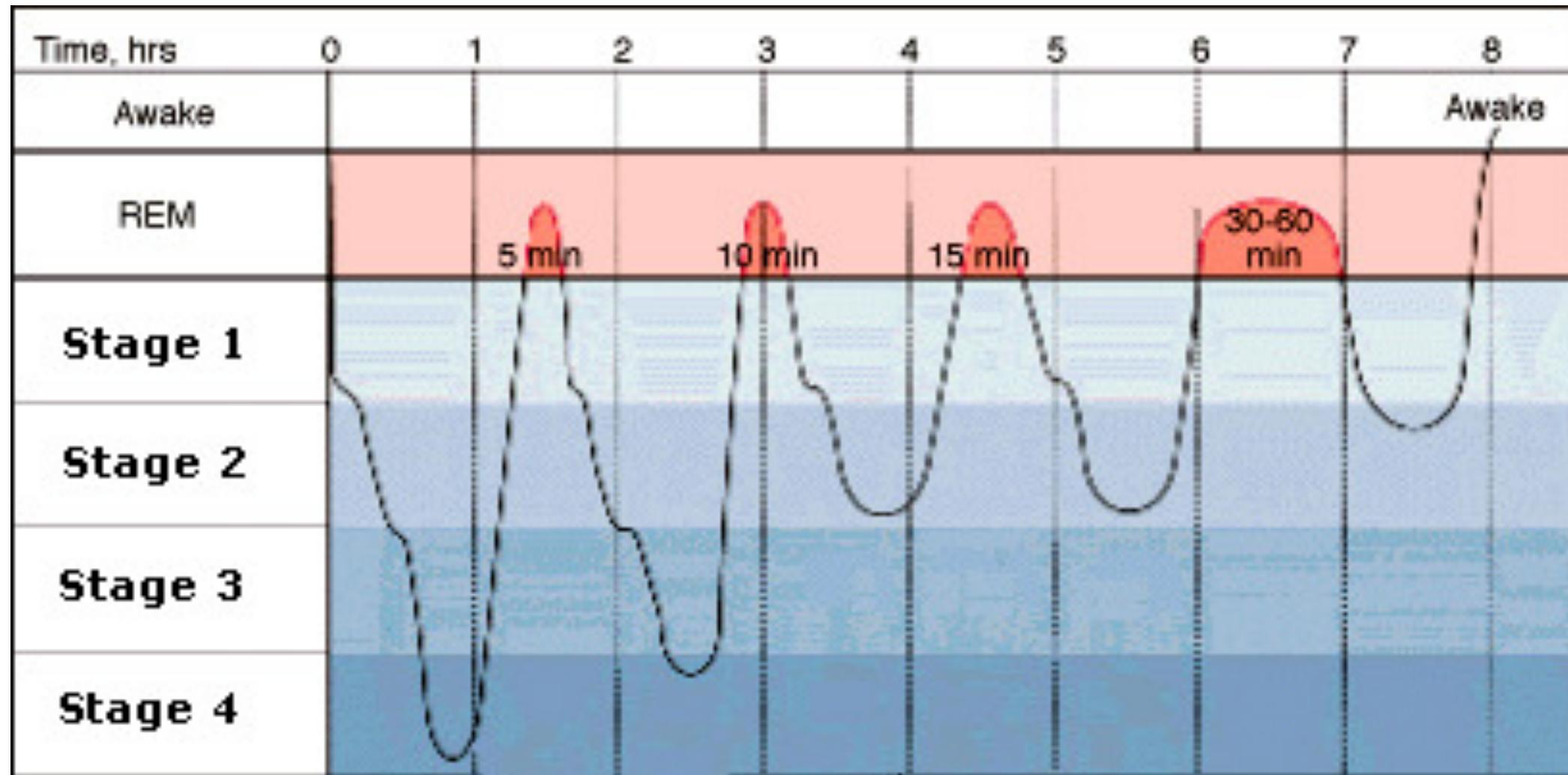
**Mental:** finding interests & talents, creating challenges, focused without distractions

**Emotional:** meeting needs & desires, emotional control

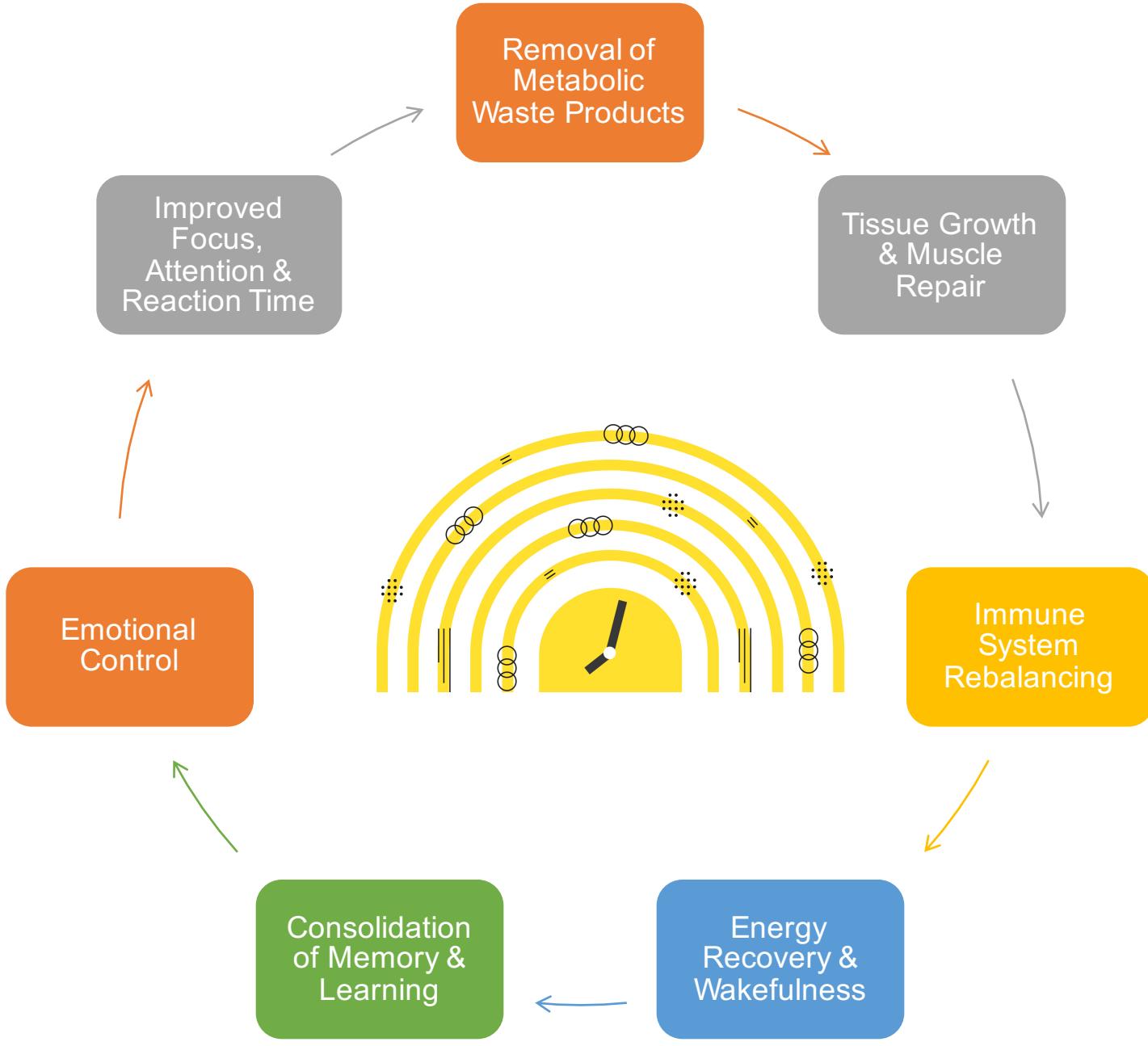
**Social:** support group, relationships

**Environmental:** work satisfaction, teammates, leaders who care

# Stages of Sleep



# Benefits of Restorative Sleep



#MENTALLYFIT

# Ten Things Poor Sleep Can Cause

Increased Injuries & Accidents

Poor Judgement & Impulsivity

Change in Appetite & Weight Gain/Loss

Reduced Energy & Fatigue

Slowed Reaction Time & Reduced Agility

Poor Attitude & Emotional Control (anger, disappointment, worry, doubt, pessimism)

Forgetfulness & Reduced Focus/Concentration

Loss of Problem Solving & Creativity

Lower Sex Drive

Serious Health Problems (high blood pressure, diabetes, heart disease)

## SLEEP CYCLES CHANGE WITH AGE

	Age 20	Age 40	Age 60	Age 70	Age 80
Time to fall asleep	16 minutes	17 minutes	18 minutes	18.5 minutes	19 minutes
Total sleep time	7.5 hours	7 hours	6.2 hours	6 hours	5.8 hours
Time in regular sleep	47%	51%	53%	55%	57%
Time in slow wave sleep	20%	15%	10%	9%	7.5%
Time in REM sleep	22%	21%	20%	19%	17%
Time asleep while in bed	95%	88%	84%	82%	79%

# Sleep & Energy: Awakening

Drink Something Hot or Cold

Breakfast or Refueling Snack (fruit, energy bar, smoothie)

Caffeine (100-300 mg)

Find the Sun & Breathe Fresh Air

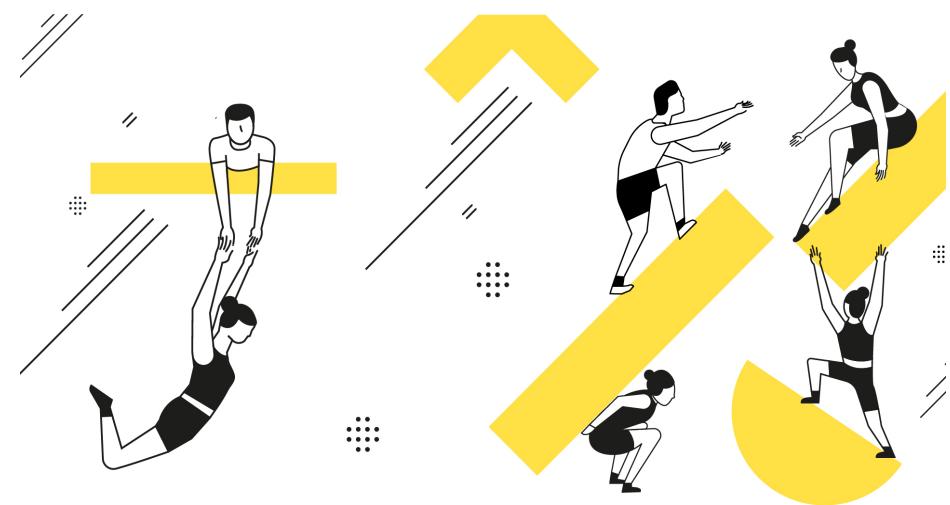
Get Your Heart Rate Up (try four 30 sec cardio sets with 10 second recovery breaks)

Rapid Breathing (nose-mouth or nose-nose hyperventilation)

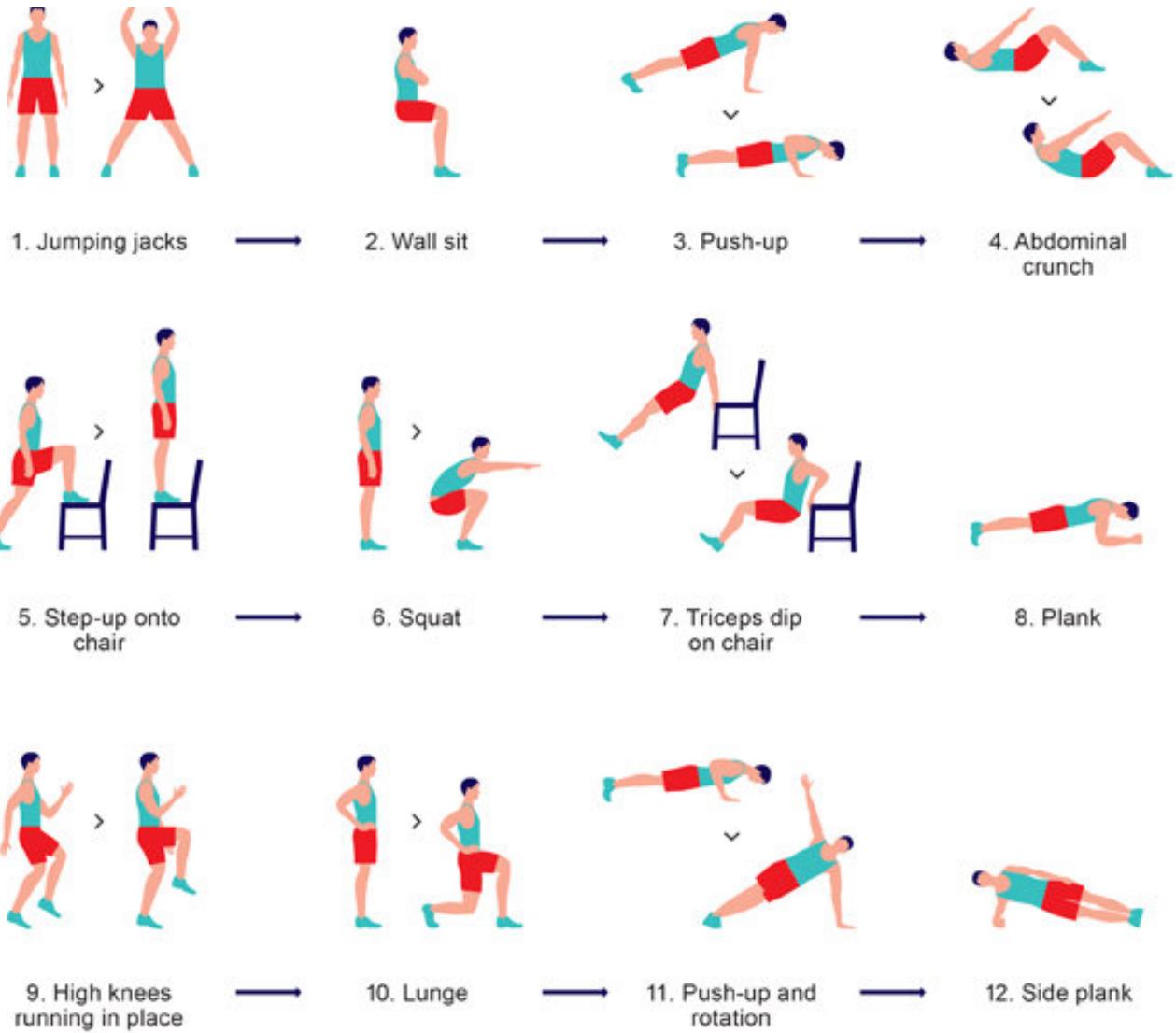
Activating Music

Hot or Cold Shower

Set Goals & Priorities

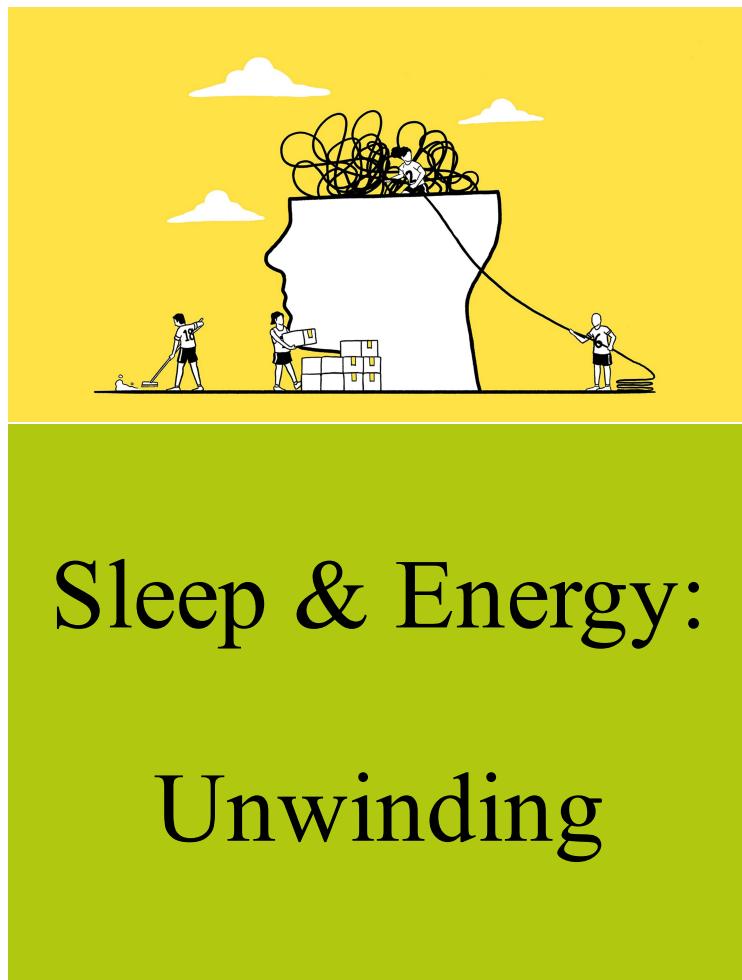


- 7 minute exercise
- 30 seconds each
- max intensity
- 10 seconds recovery
- Four exercises for awakening



# Sleep & Energy: Recovery Routines

- ▶ **Refueling** (lunch, dinner, snacks, fluids, electrolytes, **carbs**)
- ▶ **Breaks** power nap (15-20 minutes-light sleep),  
reverse & dynamic stretches,  
relaxation breathing- in thru the nose, out thru the mouth  
(e.g. triple clear = in 4 out 4; in 4 out 6, in 4 out 8 then pause)
- ▶ **Activation** rapid breathing = bellows breath = nasal hyperventilation;  
Four 30 second cardio exercises with 10 sec recovery
- ▶ **Stimulants** (coffee, tea, energy or citrus drink, caffeine)



# Sleep & Energy: Unwinding

After Dinner-Relaxation Time (1-2 hours)

Low Lighting & Stimulation

Rest or Short Nap (20 minutes)

Cool Room Down

Reading, Writing, Music, Movies, TV

Meditation/Mindfulness

White Noise or Fan

Comfortable Pillow & Mattress

Watch out for channel flipping, videogames, internet surfing

Avoid late night eating or fluid intake or alcohol

# Positive Sleep Habits

- **Go to Bed Before Midnight**
- **Monitor Your Sleep (fitbit, etc)**
- **Get Up at the Same Time Each Day**
- **Keep the Room Dark (watch out for LED lights)**
- **Keep the Room Cool (consider cooling blanket)**
- **Raise the Head of the Bed**
- **Use Earplugs/White Noise**
- **Turn the Clock Away**
- **Avoid Long Naps**
- **Avoid Evening Stimulants & Heavy Alcohol**
- **Be Careful with Herbal Products & Benedryl (i.e. antihistamines)**
- **Watch out for TV in Bedroom**
- **Careful About Pets, Infants & Infant Monitors in the Bedroom**

# Meditation & Mindfulness

**Mindfulness is a type of meditation in which you focus on being intensely aware of what you're sensing and feeling in the moment, without interpretation or judgment.** Practicing mindfulness involves breathing methods, guided imagery, and other practices to relax the body and mind and help reduce stress.

## Three key characteristics of mindfulness:

- Intention to cultivate awareness (and return to it again and again)
- Attention to what is occurring in the present moment (simply observing thoughts, feelings, sensations as they arise)
- Attitude that is non-judgmental, curious, and kind.

**Helpful Apps:** UCLA Mindful, Headspace, Calm, Breathwrk

## Seven principles of mindfulness

- Non-judging. Be an impartial witness to your own experience. ...
- Patience. A form of wisdom, patience demonstrates that we accept the fact that...
- Beginner's Mind. Remaining open and curious allows us to be receptive to new experiences.
- Trust. Develop a basic trust with yourself and your feelings. ...
- Non-Striving. ...
- Acceptance. ...
- Letting Go.



**Figure 2: Stress Recognition and Control**

Mental Disorder

Past Stress Reactions

Family Background & Culture



**Stress Reactions**

- Sleep & Energy
- Substance Use
- Change in Activity
- Depression/Isolation
- Anxiety/Fear
- Anger/Frustration
- Somatic (organ systems)

Loss

Education

Personality Style

Trauma

**Figure 1: Four Common Stress Reactions**

**Anxiety**

shaky/restless/unsteady  
worry/fear/panic  
shortness of breath/choking  
chills or hot flashes  
fear of losing control/going crazy

**Depression**

lonely/sad/disappointed  
lower interest/please/motivation  
poor concentration/indecisiveness  
worthlessness/hopelessness  
social isolation

**Insomnia/Hypersomnia**

Decreased Energy  
More Substance Use  
Altered Activity Level

**Somatic**

muscle tension/soreness/twitching  
headaches/neck & backaches  
nausea/vomiting/anorexia  
dizziness,numbness/tingling  
abdominal pain, diarrhea

**Anger**

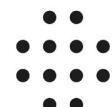
Frustration/irritability  
fights/blaming others  
muscle tension/tremulousness  
repetitive thinking/poor  
concentration

# 12 RECOMMENDATIONS

TO HELP YOU DEAL WITH THE

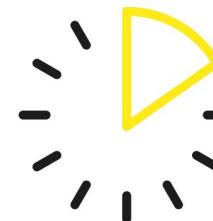
## UNEXPECTED

#MENTALLYFIT



### 1 LEARN ABOUT **STRESS AND TRAUMA**

IF MANAGED, THEY CAN LEAD TO ENHANCED  
MENTAL HEALTH AND WELL-BEING



### 2 RECOGNISE **SYMPTOMS EARLY**

BE AWARE OF STRESSORS AND THE IMPACT OF  
TRAUMATIC EVENTS IN YOUR LIFE



### 3 DEVELOP A **SUPPORT NETWORK**

TALK ABOUT YOUR STRESSORS WITH FAMILY,  
FRIENDS, TEAM-MATES, COACHES AND MENTAL  
HEALTH PROFESSIONALS



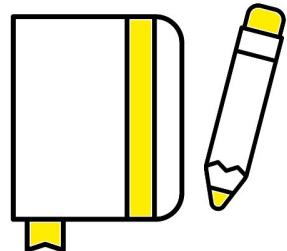
### 4 THINK AND ACT **POSITIVELY**

MAINTAIN A CALM AND CONFIDENT OUTWARD  
APPEARANCE TO REDUCE STRESS



## 5 TAKE REGULAR BREAKS

SHORT BREAKS EVERY SIX TO EIGHT HOURS ARE OFTEN ENOUGH TO ALLOW FOR ENERGY RESUPPLY



## 7 TRY JOURNALING AND TIME-BLOCKING

BREAK DOWN THE DAY INTO TIME BLOCKS AND  
WRITE DOWN YOUR THOUGHTS AND FEELINGS

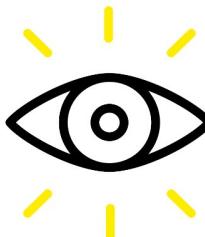
## 6 PRACTISE MEDITATION

CLAIM SIX MONTHS' FREE ACCESS TO HEADSPACE  
AND TRIGGER YOUR RELAXATION REFLEX



## 9 CONSIDER A SPIRITUAL SOLUTION

SPIRITUAL VIEWS HELP US SEE OUR PROBLEMS IN  
DIFFERENT WAYS AND MAY ENHANCE OUR CREATIVITY



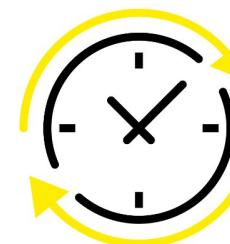
## 10 AVOID EXCESSIVE SEDATIVES AND STIMULANTS

THESE MAY BRING TEMPORARY RELIEF BUT COULD  
LEAD TO INSOMNIA AND REBOUND ANXIETY



## 11 REMEMBER TO HAVE FUN!

FIND A WAY TO ENJOY THE PROCESS  
AND SHARE IT WITH OTHERS



## 12 DEVELOP POSITIVE ROUTINES

START AND END EACH DAY WITH A SERIES  
OF ACTIONS THAT LAST 30–60 MINUTES