

# 压力和韧性

在灾难中生存, 学习, 和成长



# Stress in the reopening stage of COVID-19

## 新冠复工过程中的压力

- Uncertainty of reopening: time, phase, recurrent wave of COVID-19
- Financial challenges: job, salary, retirement
- Discrimination and social unrest
- Prolonged stay-in-home isolation
- Marital or parent-children stress
- Home schooling
- Changes of sleep and diet
- Feeling of helpless
- 复工的不确定性: 时间, 阶段, 疫情反复
- 财务压力: 工作, 收入, 退休金
- 歧视及社会的不稳定性
- 在家隔离带来的孤独感
- 夫妻或亲子关系的压力
- 在家学习
- 睡眠及饮食的改变
- 觉得无助

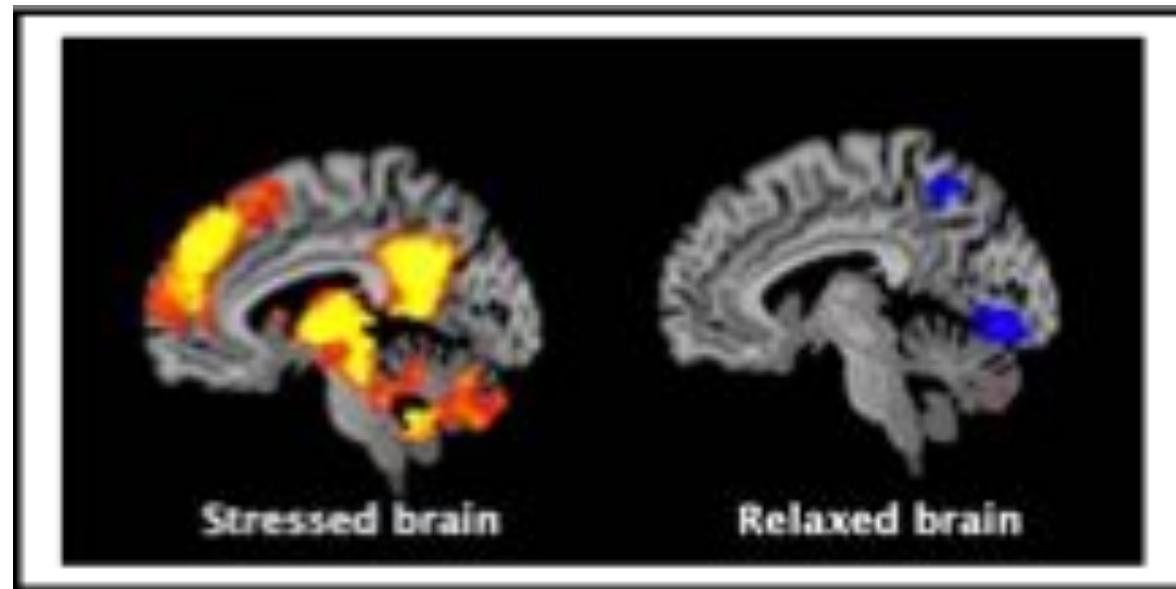
# Common signs of distress 忧虑的信号

- Feelings of numbness, disbelief, anxiety or fear.
- Changes in appetite, energy, and activity levels.
- Difficulty concentrating.
- Difficulty sleeping or nightmares and upsetting thoughts and images.
- Physical reactions, such as headaches, body pains, stomach problems, and skin rashes.
- Worsening of chronic health problems.
- Anger or short-temper.
- Increased use of alcohol, tobacco, or other drugs.

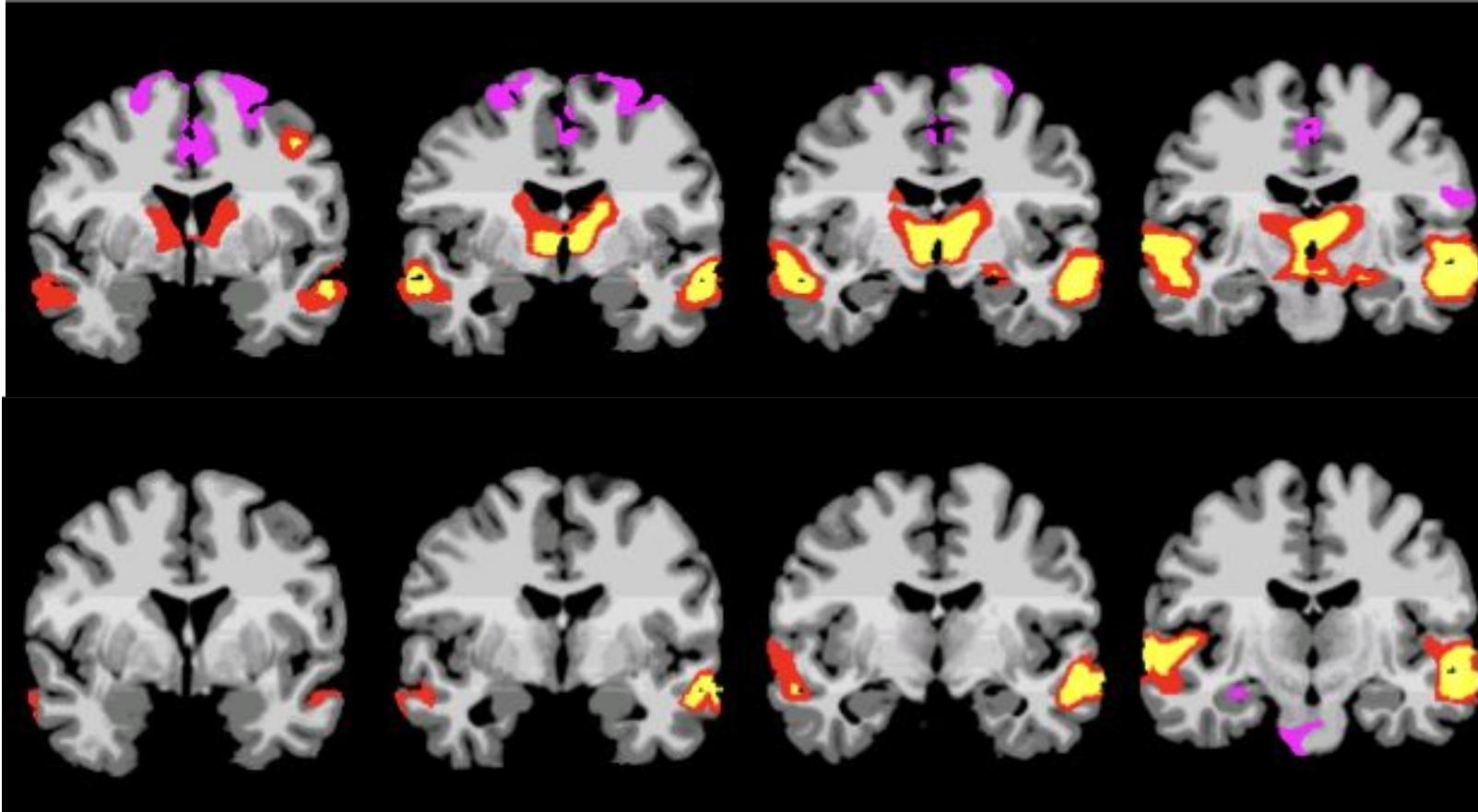
- 感到麻木、怀疑、焦虑或者恐惧
- 胃口、活力、活动能力有所改变
- 难以专注
- 出现睡眠问题, 如难以入睡、噩梦、脑海中出现沮丧的想法或场景
- 生理反应, 如头疼、身体痛、肠胃问题、皮疹
- 慢性疾病加重
- 易怒
- 增加酒精、烟草或成瘾药物的使用

# Stress impacts on brain - Adult

## 压力对大脑的影响 - 成人



# Stress impacts on brain - Adolescence 压力对大脑的影响 - 青少年



Stressed on Adolescence brain

Non-Stressed on Adolescence brain

# Self-care strategies 自我关爱的方式

In *The Anti-Depressant Book* (2016), Towery defines the “three pillars of self-care” (自我关爱的三要素)

- Getting adequate sleep (7-8 hours for most adults)  
• 保证充足的睡眠(成人7-8小时每天)
- Engaging in vigorous physical activity multiple times per week  
• 每周多次、大量运动
- Developing a daily meditation practice  
• 每日保持冥想(沉思)的习惯

# Physical health 生理健康

- Eating a healthy, well-balanced diet.
- 7-8 hours of sleep each night.
- Exercise every day.
- Take deep breaths and stretch often.
- Avoid risky or destructive behaviors, alcohol or drugs, excessive gambling or ignoring public health recommendations.
- Spend time outside

- 保持健康、平衡的饮食
- 每晚睡7-8小时
- 每日锻炼
- 深呼吸、经常拉伸
- 避免危险的、有伤害性的行为, 如喝酒、使用毒品、赌博、忽视公共健康建议
- 在室外待一些时间

# Environmental Epigenetics in Humans

环境与表观遗传对人的影响

## Genome-wide studies

- Tobacco smoking 吸烟
- Snuff 鼻烟
- Diet 饮食
- Stress 压力
- 酒精 Alcohol consumption
- Exercise 锻炼
- Pathogen infection 传染病
- UV radiation 紫外线
- Sunlight 日晒



## Candidate-gene studies

- Air pollution 空气污染
- Lead & arsenic 铅砷中毒
- Pesticides 杀虫剂
- Benzene 苯
- PAHs 多环性芳香化合物
- Organic chemicals 有机化学物质
- Season of conception 受孕季节
- ...

<sup>1</sup> Nat Rev Genet 13:97 2011; Nat Rev Genet 8: 253 (2007); Many recent references (2014)

# Mental health 精神健康

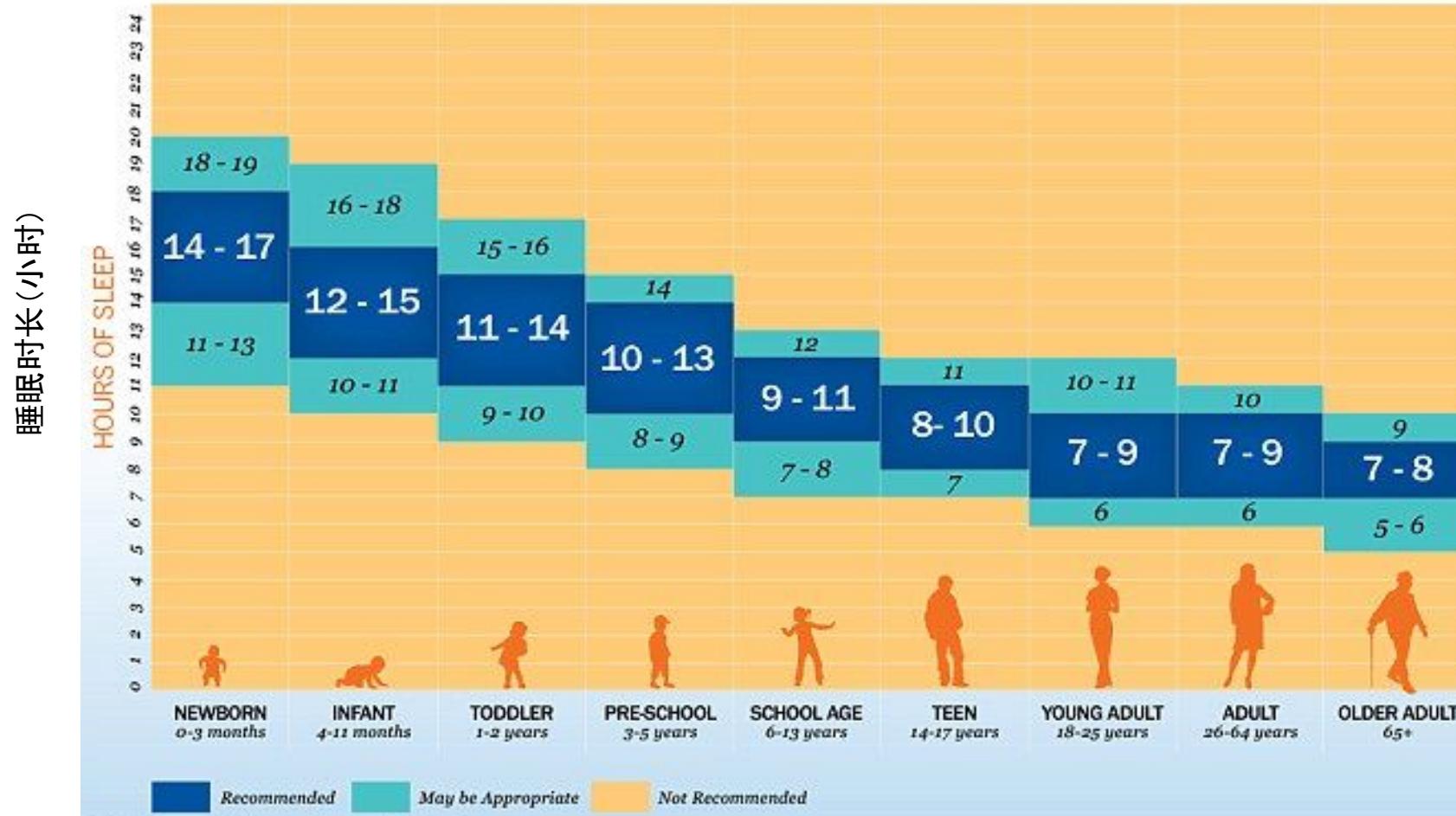
- Set and maintain a routine at home.
- Focus on things you can control.
- Social connections with physical distance. Consider a regular check-in schedule.
- Focus your thoughts on the present.
- Listen to music or read books.
- Avoid media that sensationalizes emotions.
- Help your community.
- Be grateful.

- 在家保持日常规律
- 关注你可以掌控的事情
- 保持距离地进行社交, 可以考虑日常定时交流的计划
- 关注当下
- 听音乐或者看书
- 避免过度感情化的媒体报道
- 帮助你的社区
- 感恩的心

# Sleep in COVID-19 疫情期间的睡眠

- Sleep less:
  - Low energy
  - Poor concentration and focus
  - impacts cognitive function
  - Decrease appetite
  - low libido
- Sleep more: increase the risk of obesity, headache, back pain, and heart disease.
  - Change of metabolism.
- 睡眠减少则容易:
  - 活力减少
  - 注意力不集中
  - 影响大脑认知功能
  - 降低食欲
  - 降低性冲动
- 睡得过多则容易:
  - 增加肥胖、头疼、背痛及心脏病的风险
  - 改变新陈代谢

# National Sleep Foundation 国家睡眠基金会



# Tips 小贴士

- Stick to a sleep schedule, even on weekends.
- Practice a relaxing bedtime ritual.
- Exercise daily.
- Evaluate your bedroom to ensure ideal temperature, sound and light.
- Sleep on a comfortable mattress and pillows.
- Beware of hidden sleep stealers, like alcohol and caffeine.
- Turn off electronics before bed.

- 保持睡眠规律, 周末亦是
- 设定一个睡眠的仪式
- 每日锻炼
- 评估你的卧室环境, 找到最佳温度、声音、光的位置
- 在一个舒适的枕头和床垫上睡觉
- 注意摄入的影响睡眠的物质, 如酒精和咖啡
- 睡前关掉电子设备

<https://www.sleepfoundation.org/articles/nsf-tool-get-right-amount-sleep>

# Sleep schedule 睡眠计划

- Be Consistent. 坚持、持久
- Make Gradual Adjustments. 逐渐适应
- See the Morning Light. 早上起来让自己看见晨光
- Dim the Nightlights. 睡前调暗灯光
- Food 饮食安排

# Relax ritual 放松仪式

- Take Five Breaths. 呼吸五次
- Tune in to Your Senses. 将注意力转向自己
- Tense Your Toes. 脚趾绷紧

# Sleep Diary 睡眠日记

Sleep Diary: Morning								Sleep Diary: End of Day							
<b>NATIONAL SLEEP FOUNDATION</b>								<b>Complete in Morning</b>							
Start date: ___/___/___	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day of week:	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
I went to bed last night at:	PM / AM	PM / AM	PM / AM	PM / AM	PM / AM	PM / AM	PM / AM	I consumed caffeinated drinks in the:	(M)orning, (A)fternoon, (E)vening, (N)A						
I got out of bed this morning at:	AM / PM	AM / PM	AM / PM	AM / PM	AM / PM	AM / PM	AM / PM	M / A / E / NA							
Last night I fell asleep:	Easily <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> After some time <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> With difficulty <input type="checkbox"/>							I exercised at least 20 minutes in the:	(M)orning, (A)fternoon, (E)vening, (N)A						
I woke up during the night:	# of times:							Medications I took today:							
# of minutes:								Took a nap?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Last night I slept a total of:	Hours	Hours	Hours	Hours	Hours	Hours	Hours	(circle one)	No	No	No	No	No	No	No
My sleep was disturbed by:	List mental or physical factors including noise, lights, pets, allergies, temperature, discomfort, stress, etc.							If Yes, for how long?							
When I woke up for the day, I felt:	Refreshed <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Somewhat refreshed <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Fatigued <input type="checkbox"/>							During the day, how likely was I to doze off while performing daily activities:	No chance, Slight chance, Moderate chance, High chance						
Notes:	Record any other factors that may affect your sleep (i.e. hours of work shift, or monthly cycle for women).							Throughout the day, my mood was...	Very pleasant, Pleasant, Unpleasant, Very unpleasant						
<b>Complete at the End of Day</b>								<b>Approximately 2-3 hours before going to bed, I consumed:</b>							
								Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
								A heavy meal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
								Caffeine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
								Not applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
								In the hour before going to sleep, my bedtime routine included:	List activities including reading a book, using electronics, taking a bath, doing relaxation exercises, etc.						



## 反思、问题、讨论 **Questions and Reflections**