I Eat, Therefore I Am (Not) Stressed: Understanding the Role of Food, the Body and Stress

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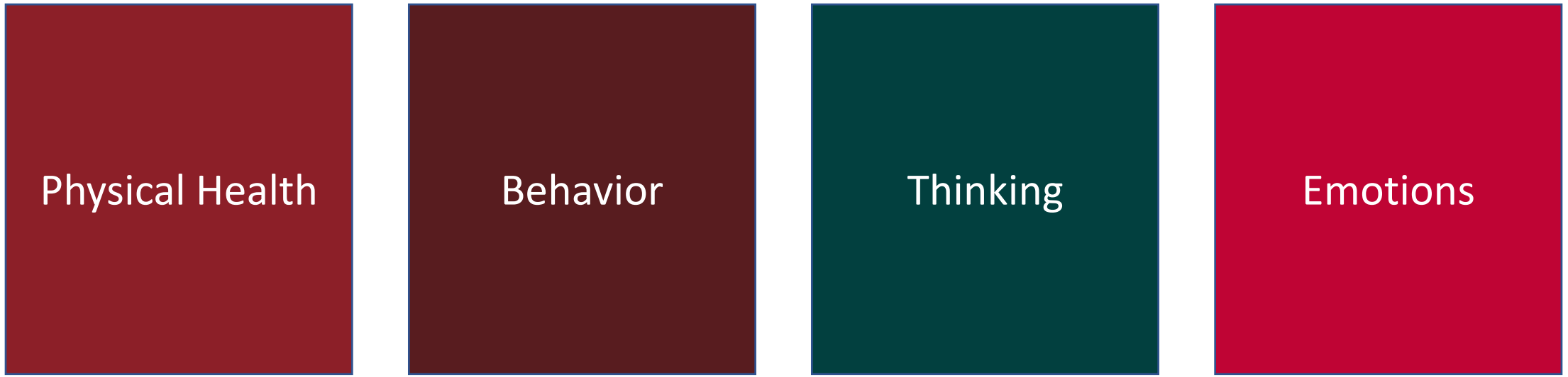
Outlines

- The definition of mental health
- Types of stress reaction
- Fast and slow response to stress
- Difference between acute and chronic stress
- Protective effect of diet on stress
- The adverse effect of diet on stress

Mental health



WHO Definition

Mental health

Increasing globally

1 in 5 years lived with disability

Adverse effects on life

Mental health

Anxiety

Most Prevalent

Triggered by Stress

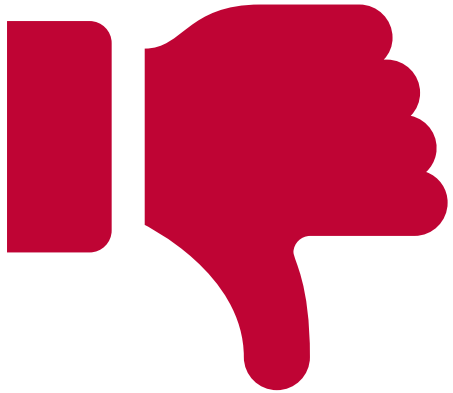
Stress

Evolutionary response

Related to quality of life

Stress stimuli

Positive stress (eustress)



Negative stress (distress)

Types of stressors

Everyday hassles

Significant life changes or turning

Catastrophes or traumatic events

Stress reaction - Physiological response

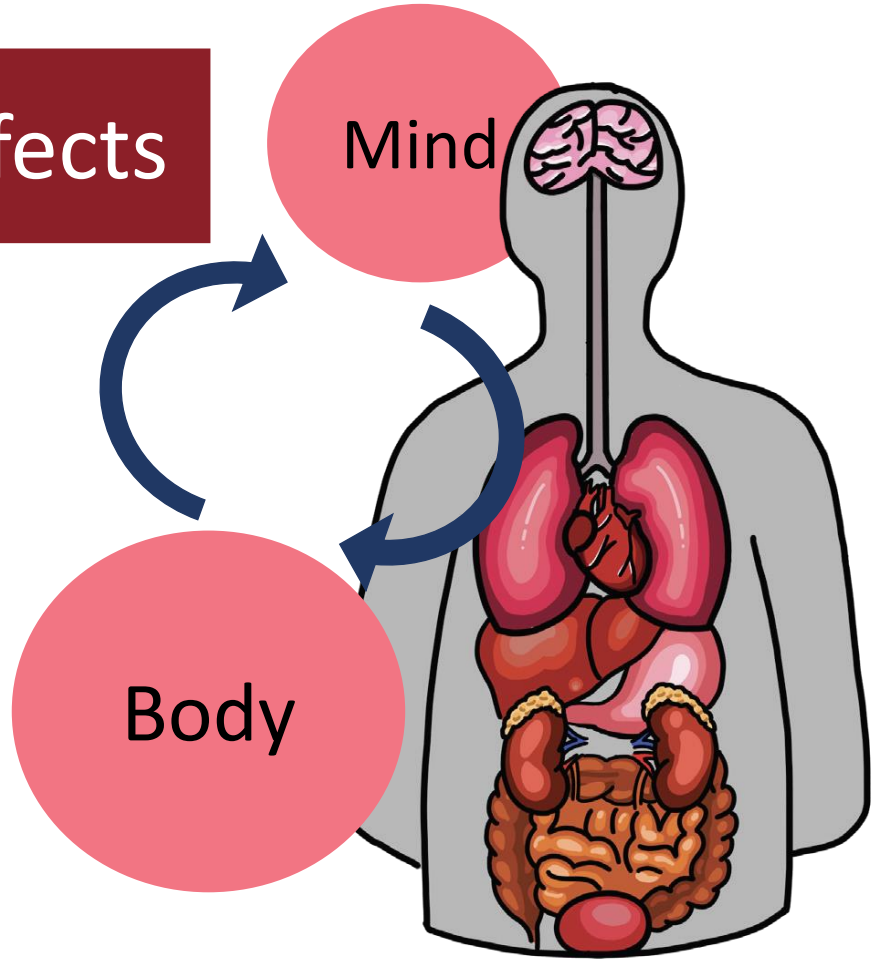
1. Psychological

Emotional

Cognitive

Behavioural

2. Physical Effects

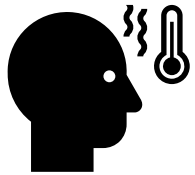


Stress reaction - Physiological response

Emotional
Fear Sadness Shame Anxiety Anger Helplessness Hopelessness

Cognitive
Focus Memory Concentration Negative change in thinking Mental rigidity

Behavioral
Absenteeism Appetite changes Taking risks Substance use Neglect daily routine



Physical
Fatigue Allergies Tight Chest Sweating Muscle pain Faint Hair loss

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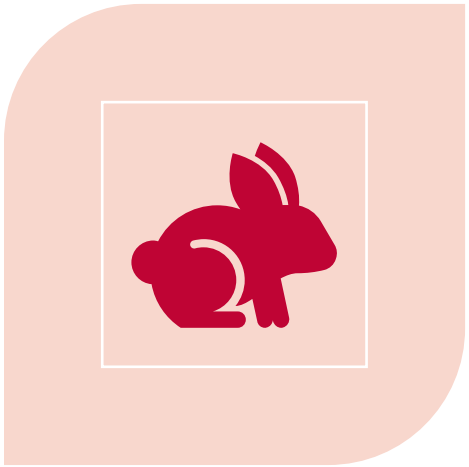
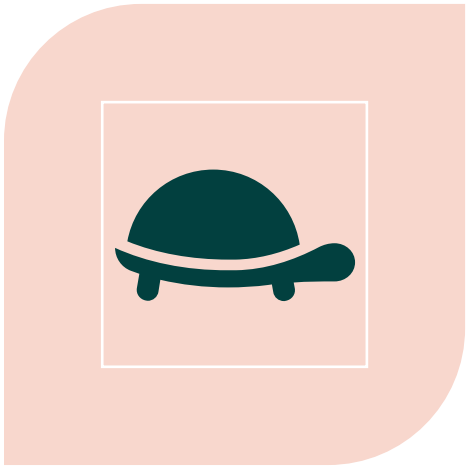
Physiological stress response



FAST



SLOW

Fast stress response

Autonomic Nervous System

Sympathetic (Adrenaline)

Fight or Flight

Parasympathetic

Calm and Digestion

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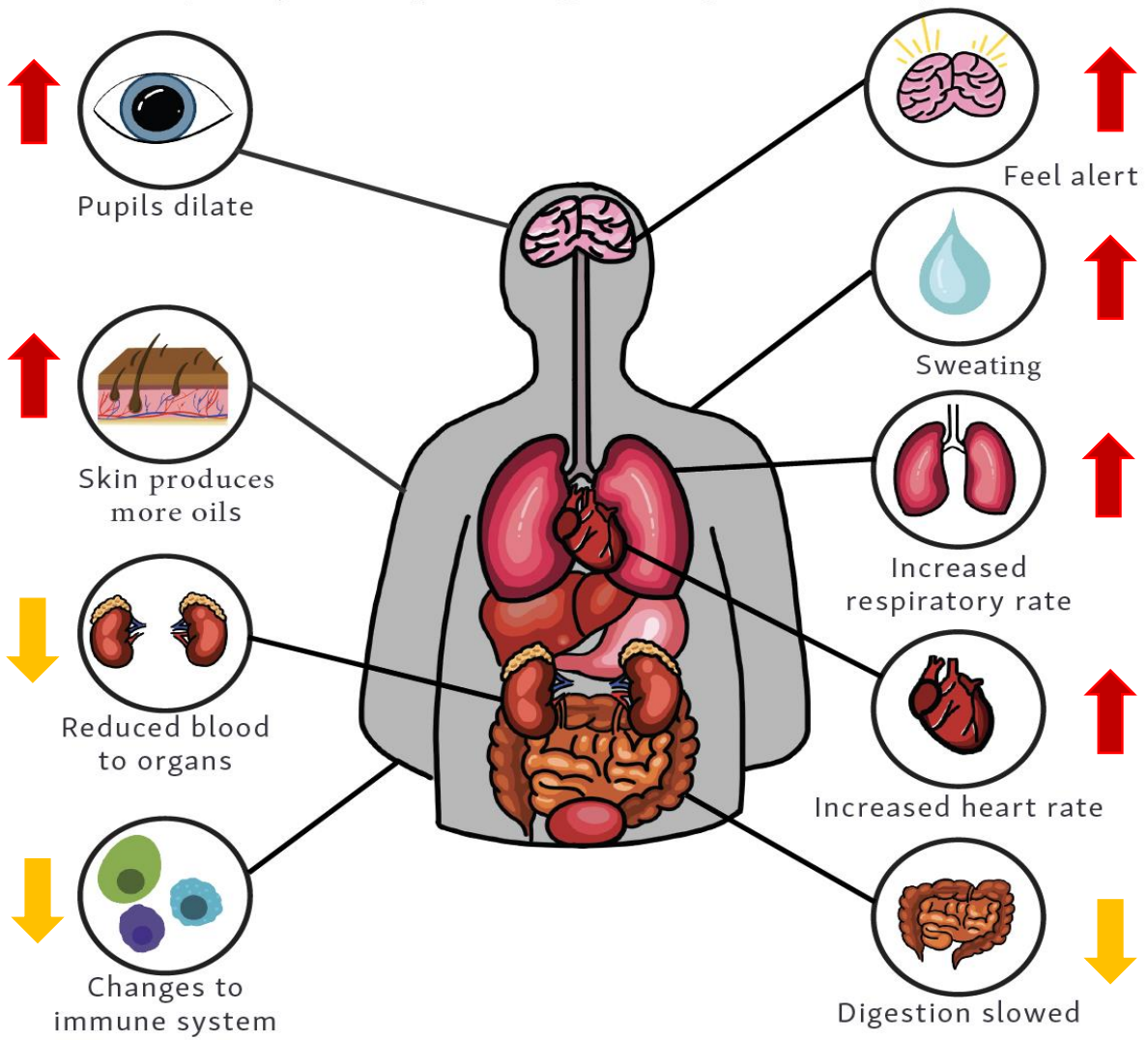
Fast stress response

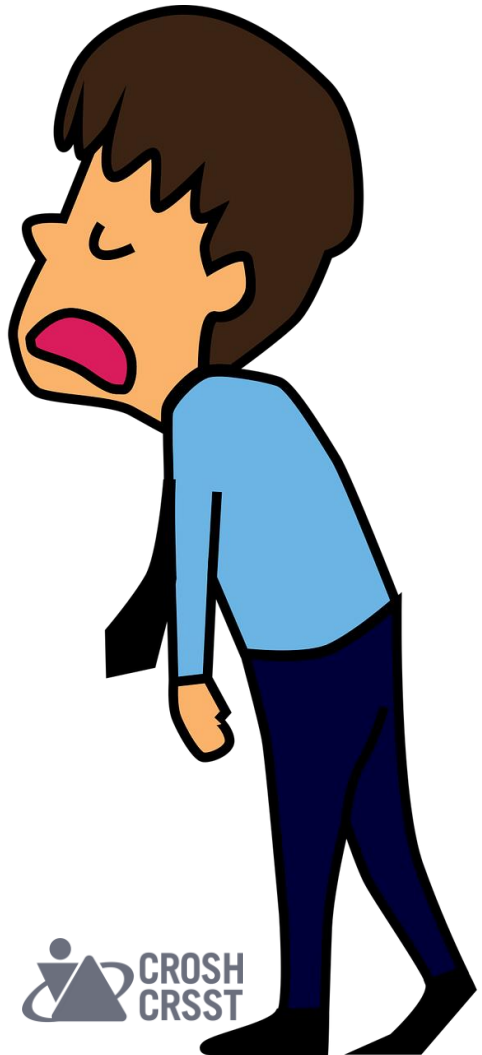


Slow response

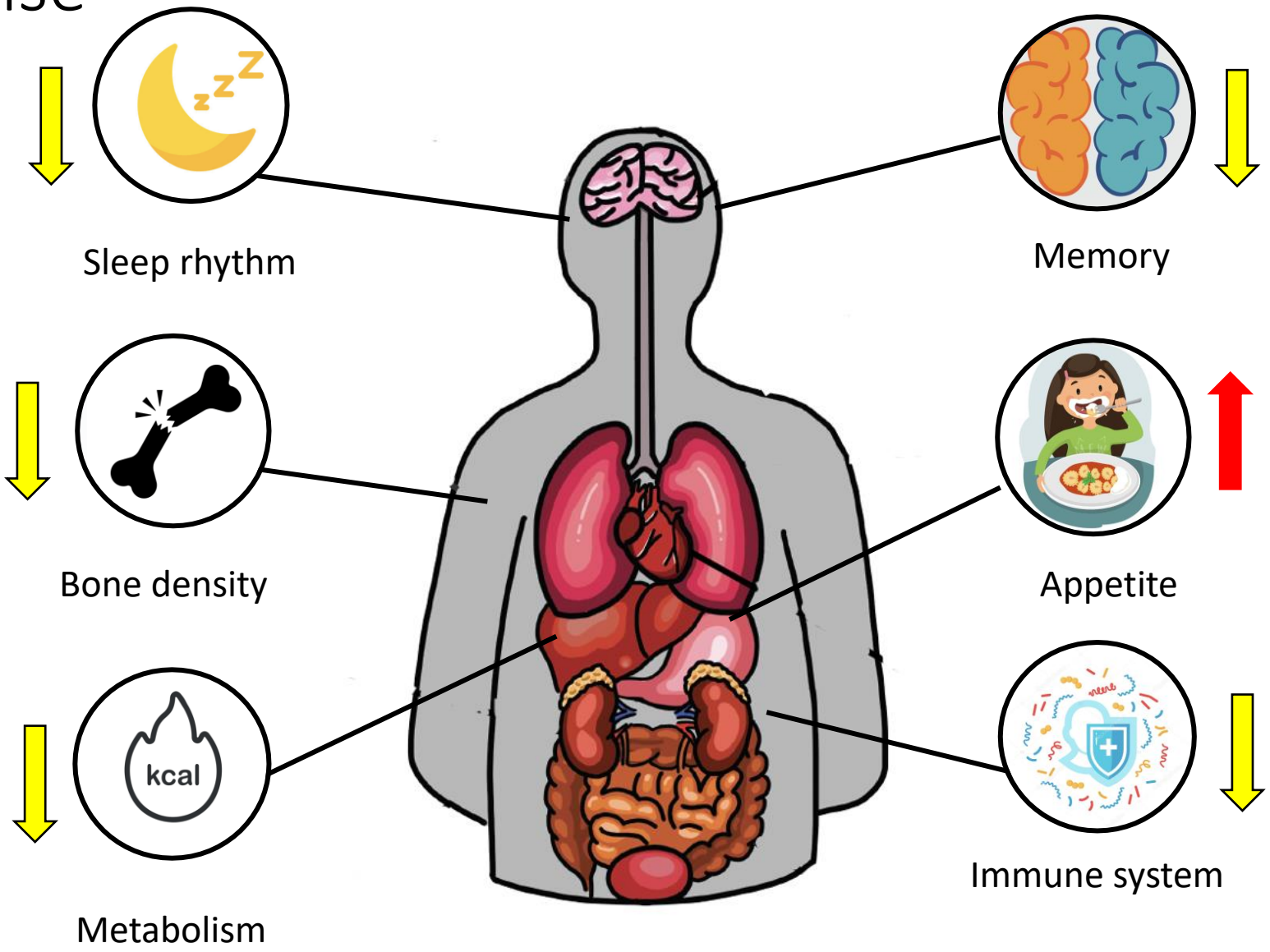
Hypothalamus

Endocrine System

Cortisol



Slow response

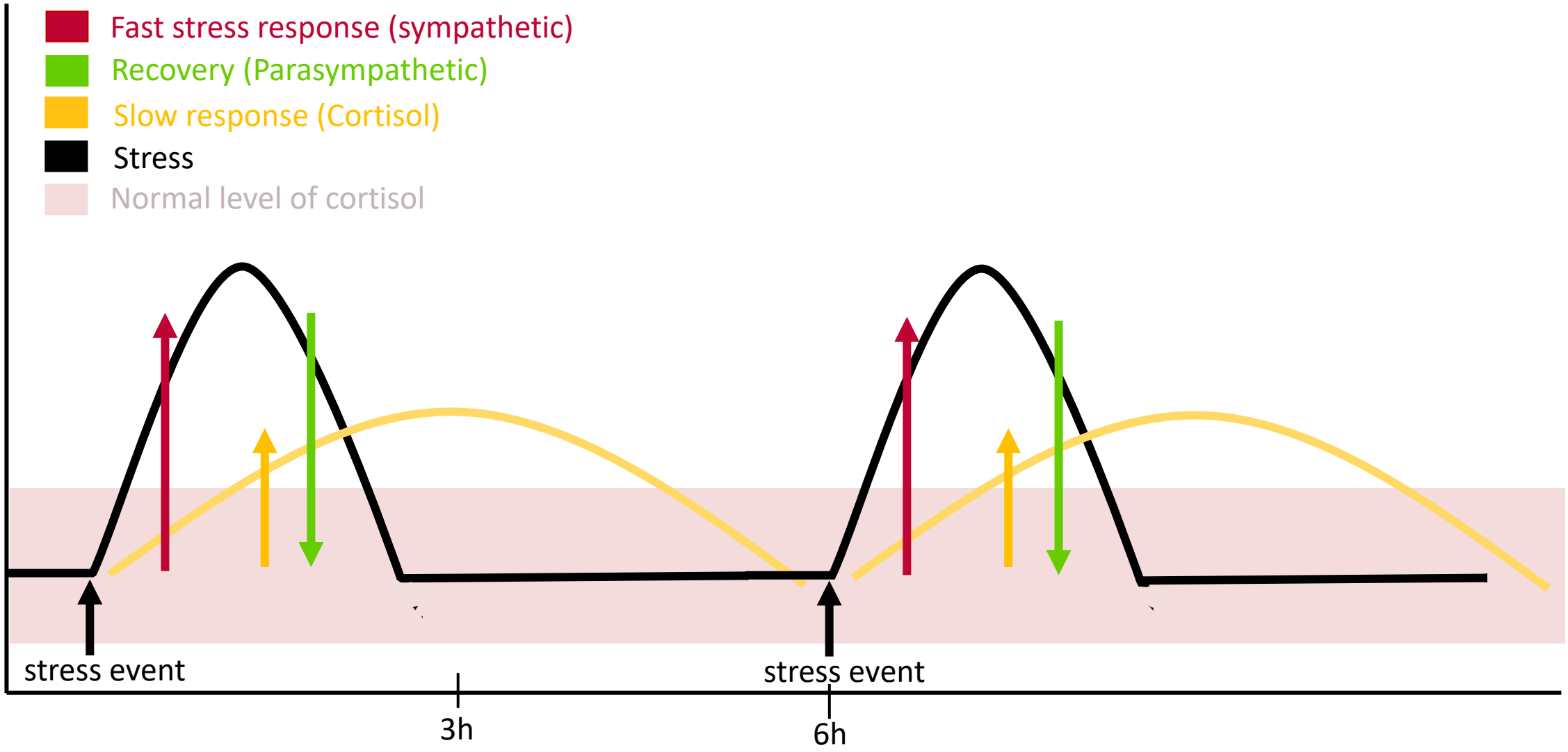


Length of stressors

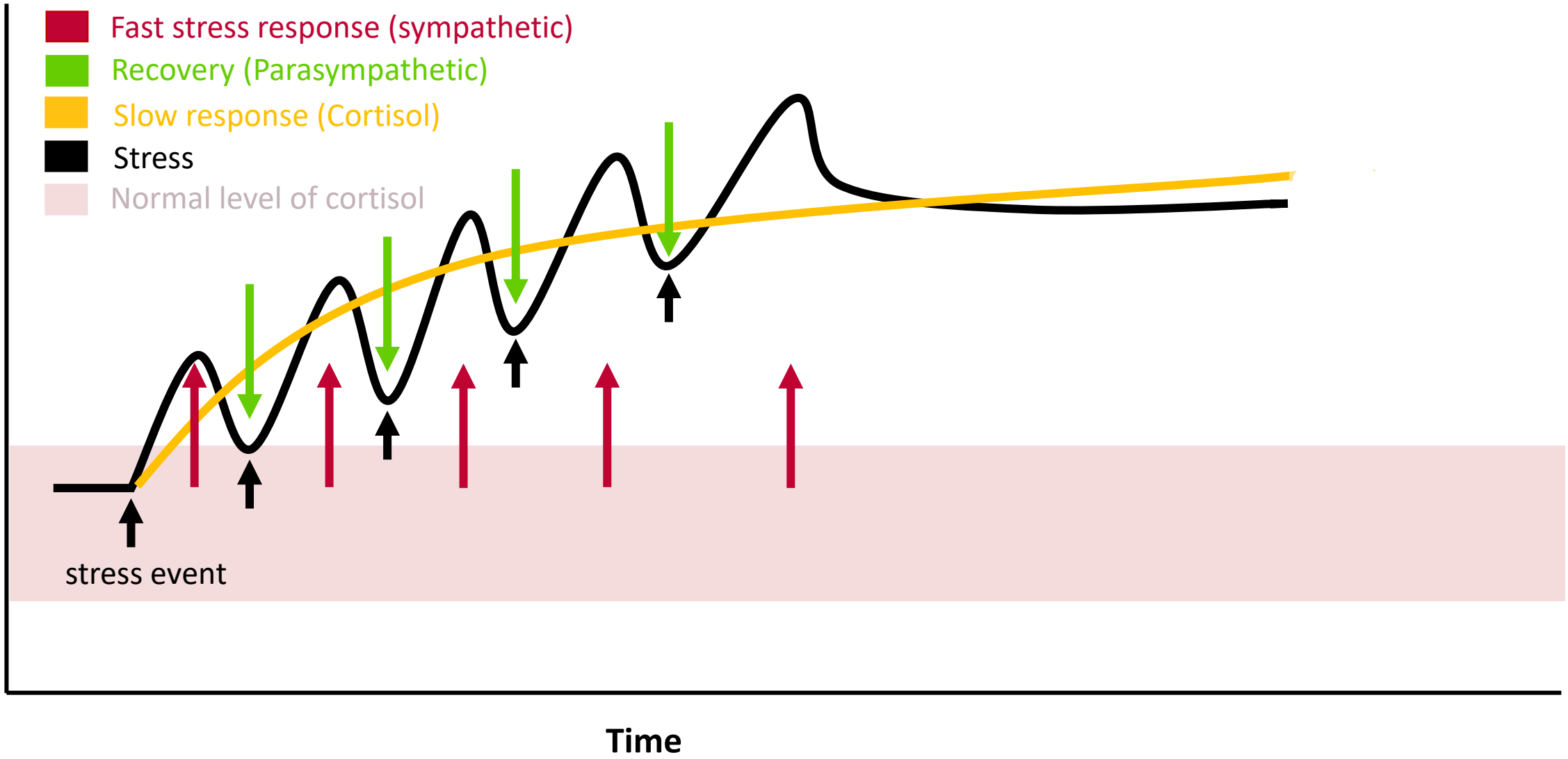
Acute

Chronic

Acute stress



Chronic stress



Treatment

Treatment offers tools that can be used to manage symptoms or cope with the symptoms, and deal with triggers more effectively.

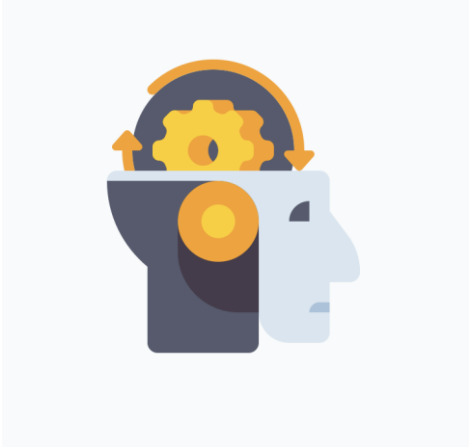
Treatment

Healthcare management

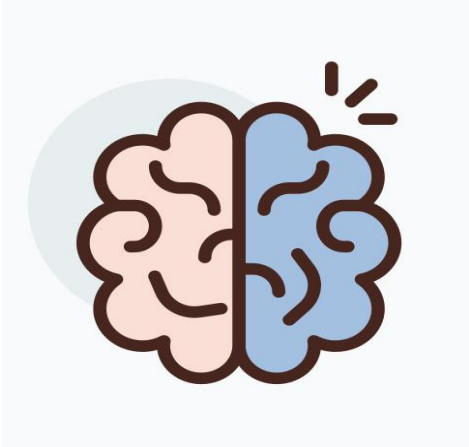
Nutrition

Physical activity

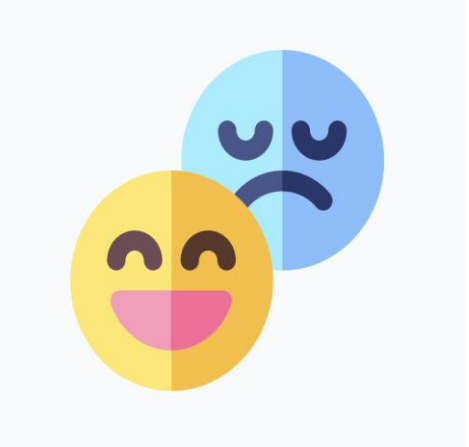
Effect of nutrition on stress and anxiety



LEARNING ABILITIES



MEMORY



MOOD

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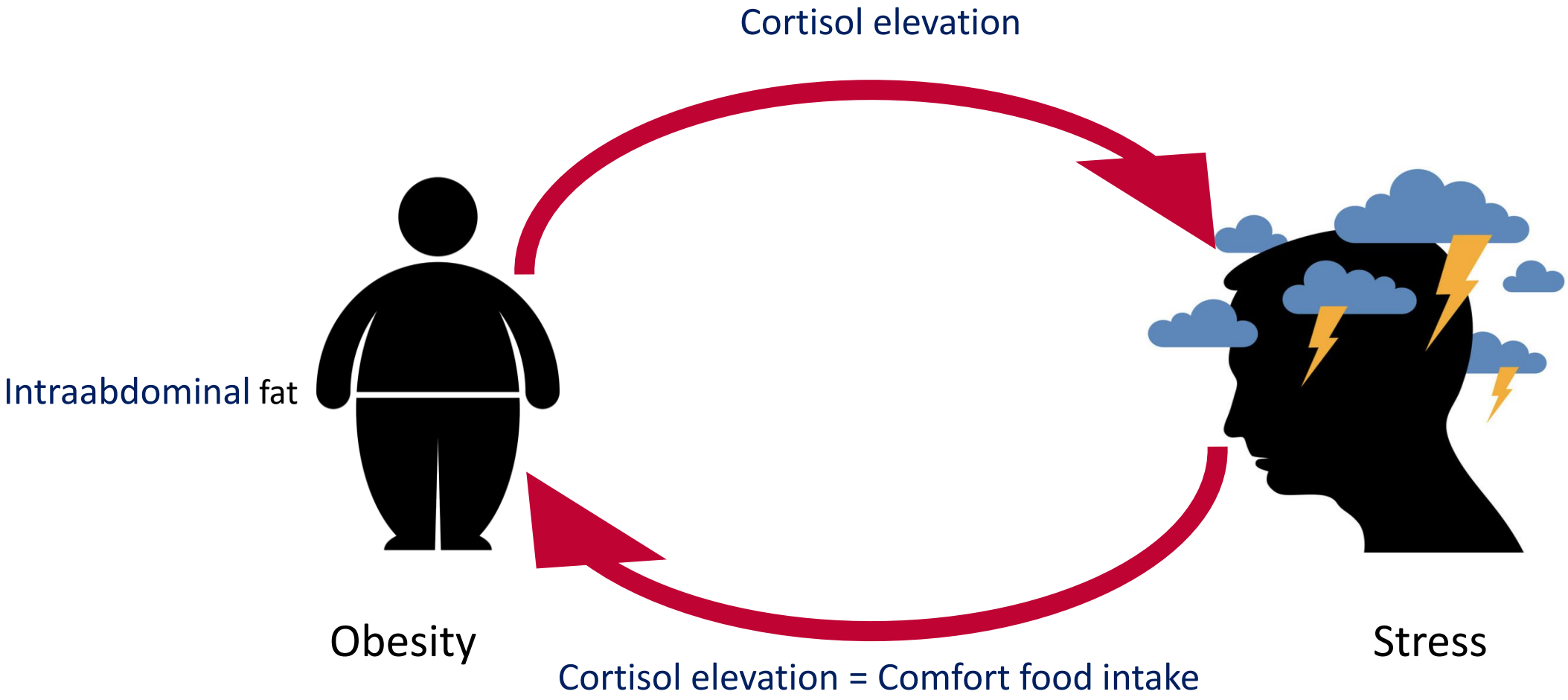
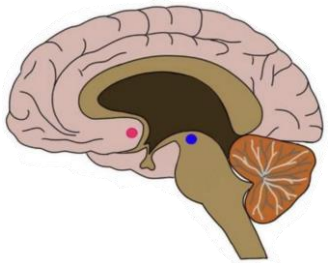
Stress and obesity



Stress and dietary pattern

Comfort food

Brain reward pathways



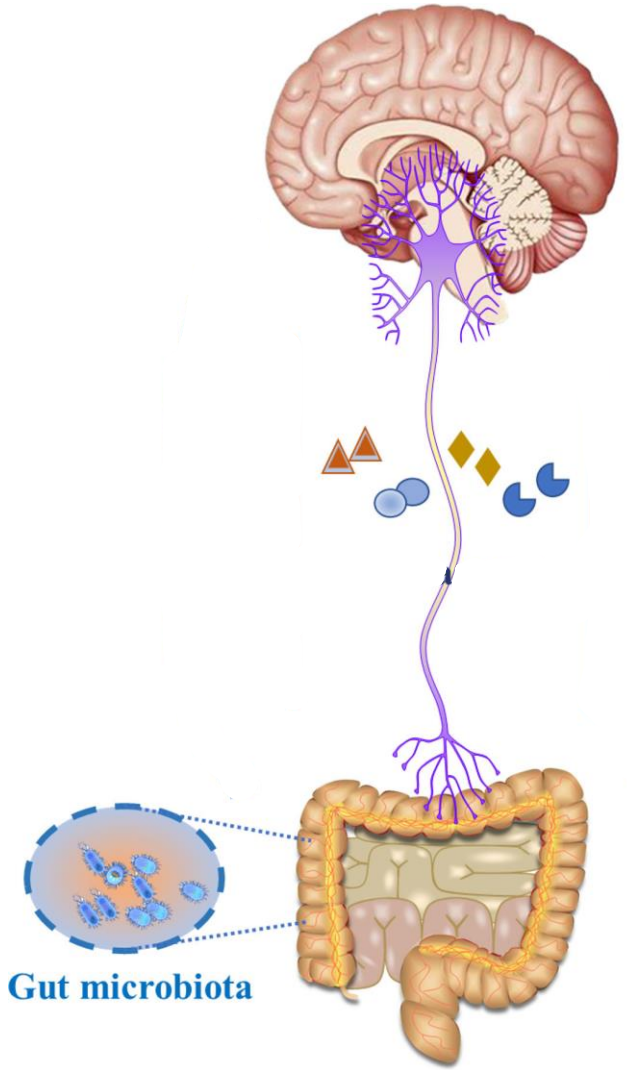
Reduce Stress response

Gut-brain axis

Same Origin of Gut and Brain

Common signalling pathways

Make a Relationship Between Food and Mental Health



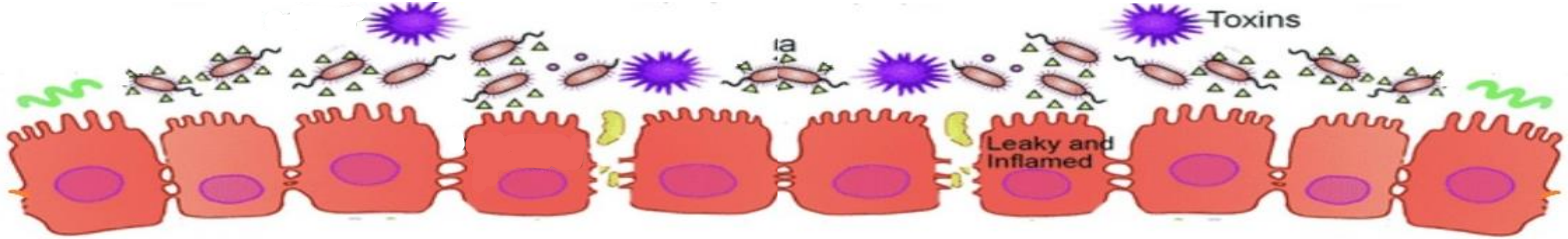
Microbiota in the gut

Immune pathway

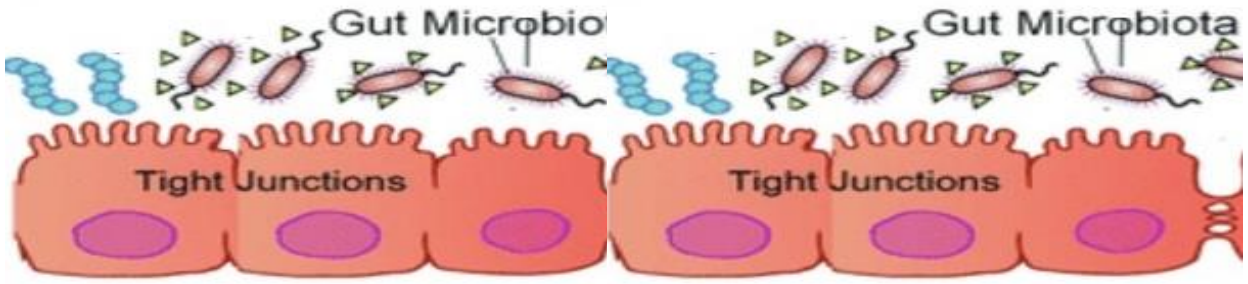
Nerve pathway

Endocrine pathway

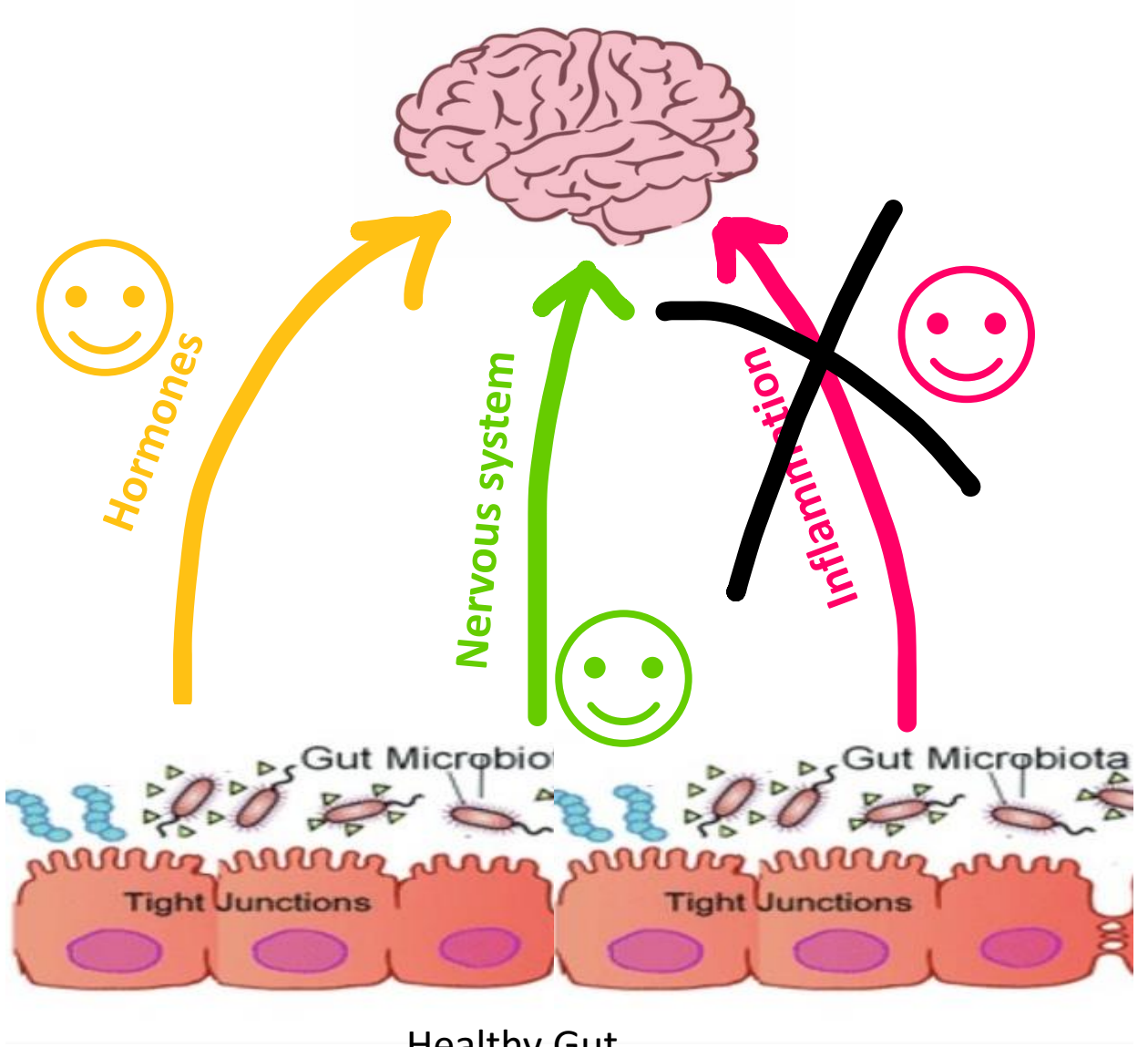
Microbiota in the gut



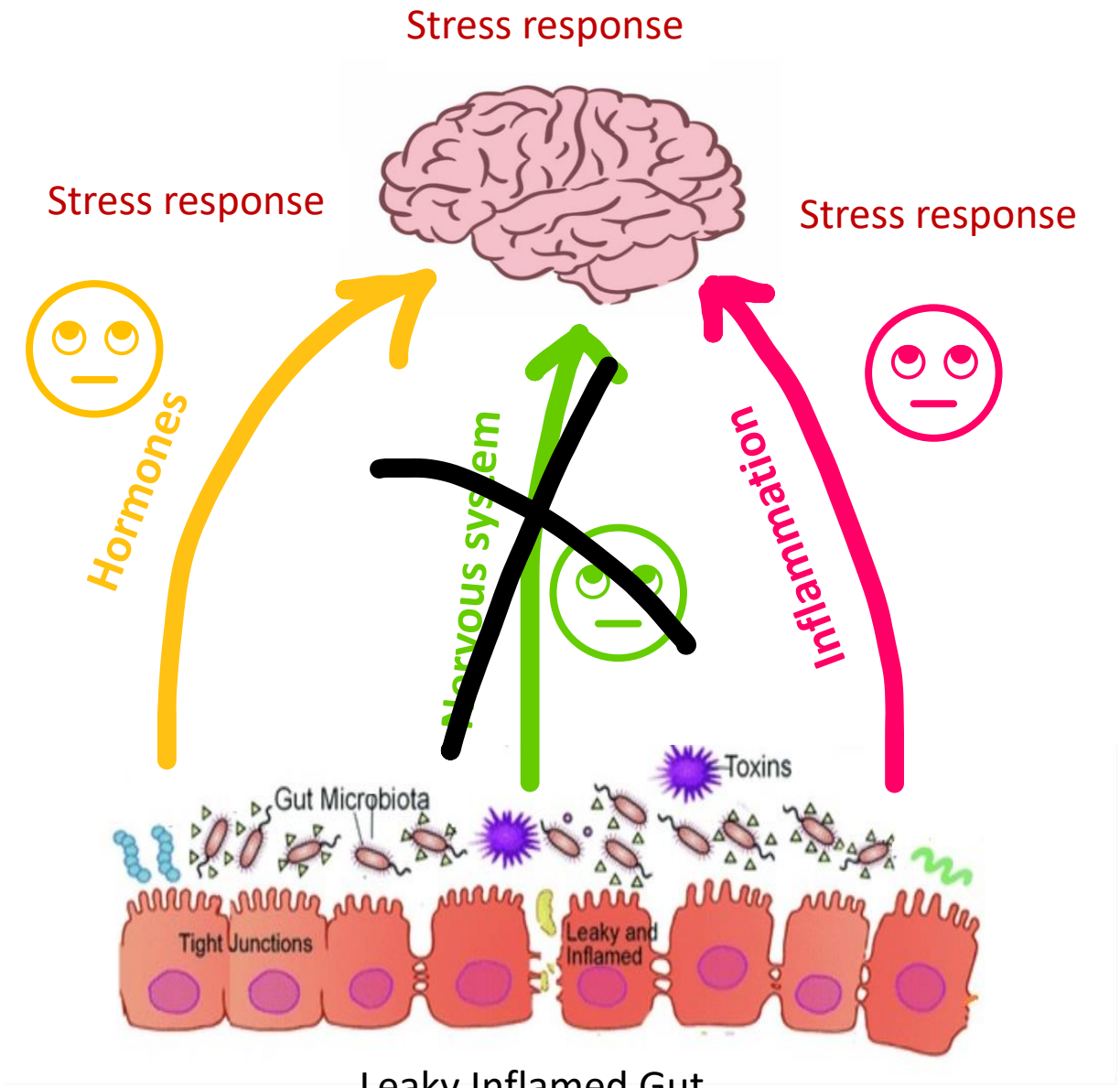
Leaky Inflamed Gut



Healthy Gut


Hormones
Nervous system
Inflammation
Gut Microbio
Gut Microbiota
Tight Junctions
Tight Junctions

Healthy Gut



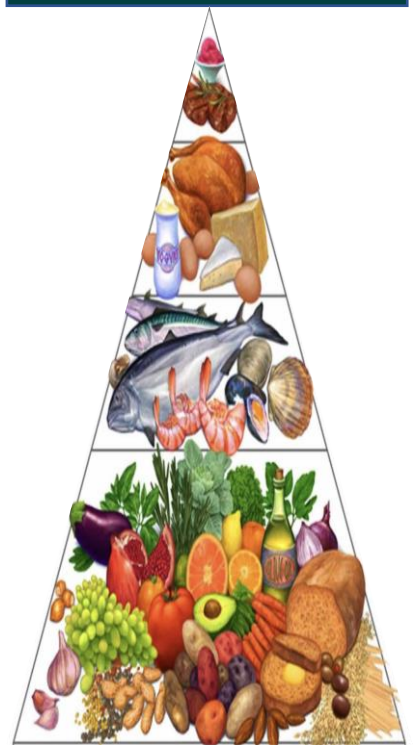
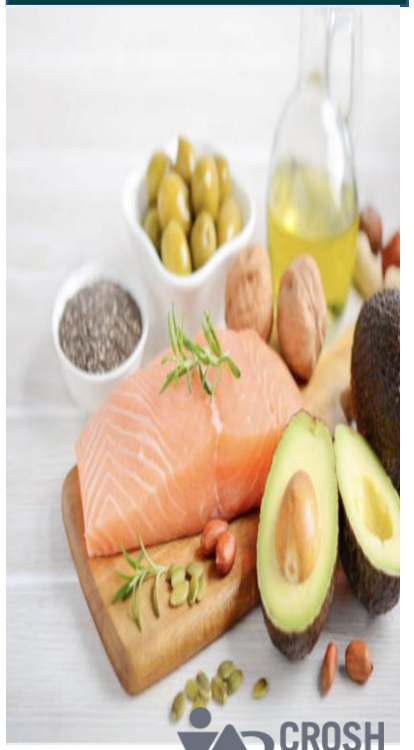
Leaky Inflamed Gut

Dietary pattern

Protective

Adverse

Protective effect

Mediterranean diet	Diet rich in fruit and vegetables	Probiotics	High fiber diet	Protein intake	Omega-3 fatty acids and MUFA
					

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Mediterranean diet

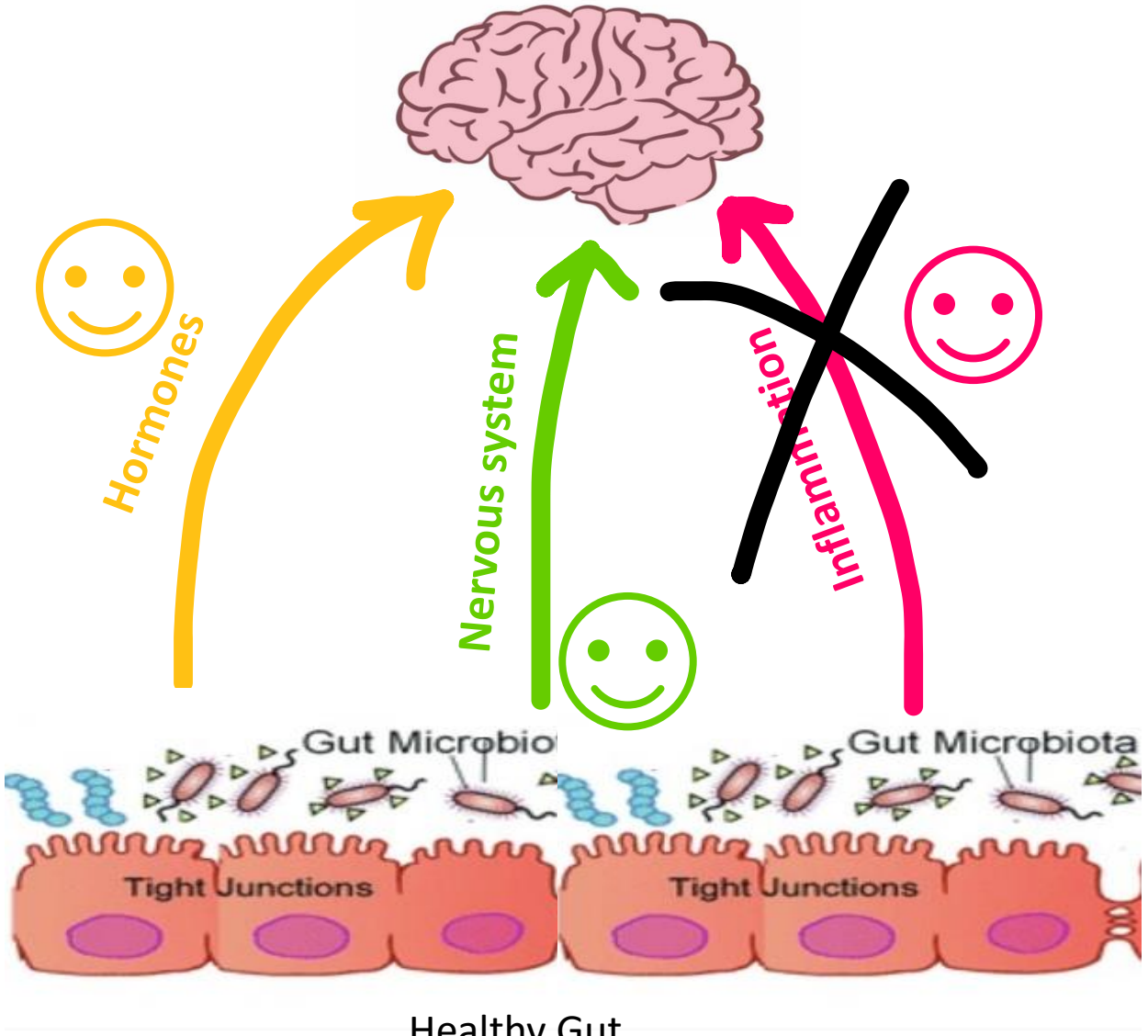
Diet rich in fruit and vegetables

Probiotics

High fiber diet

Omega-3 fatty acids and MUFA

Protein intake



Healthy Gut

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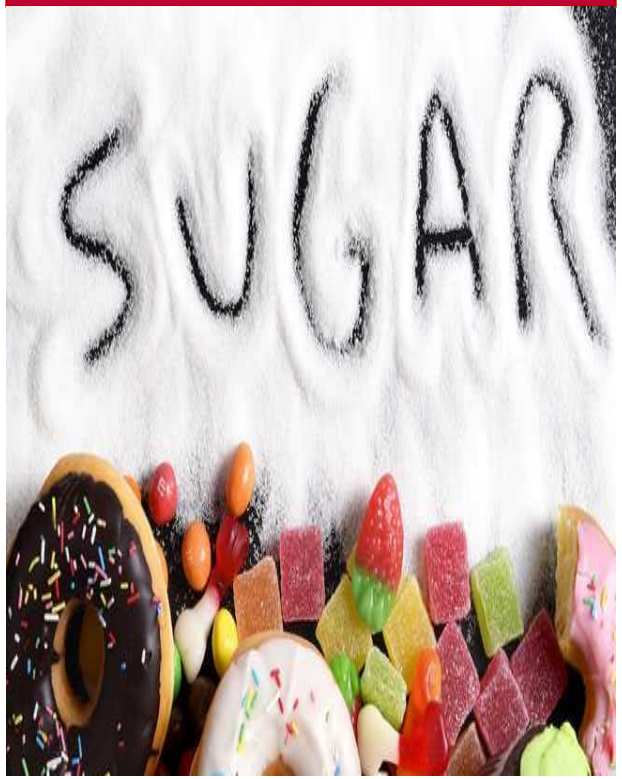
Adverse effect

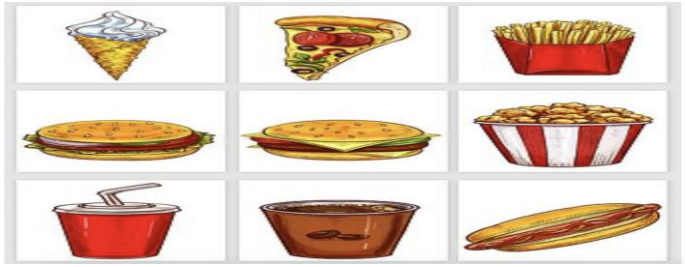
Western diet

Sugar



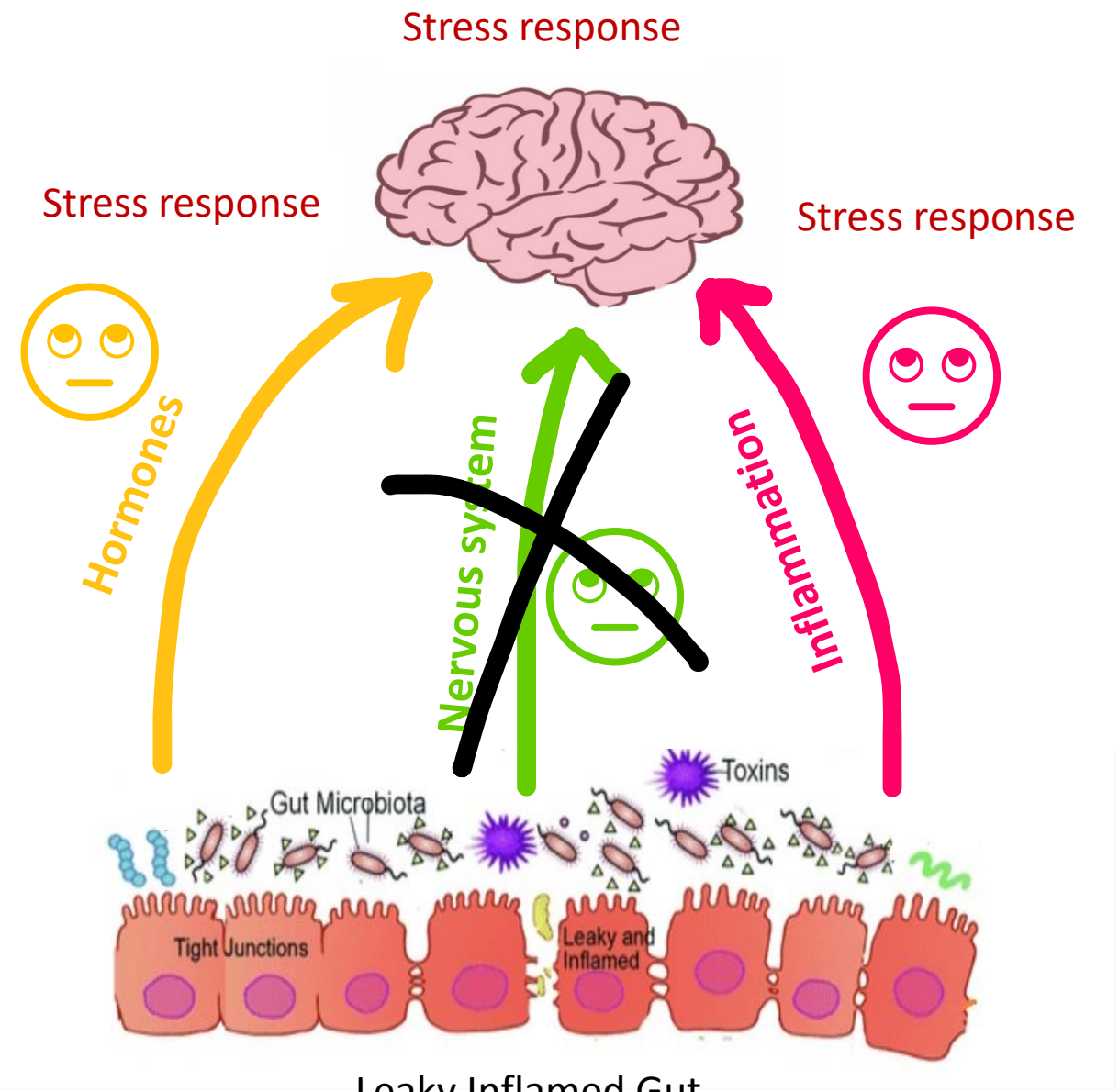
High fat Diet

Western diet



Sugar

High fat Diet



Leaky Inflamed Gut

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Vitamins and minerals

Vitamin C&E

Vitamin D

Vitamin B12 and B6

Folate

Magnesium

Zinc

Summary

Inflammation plays an important role in stress and anxiety mechanism

Following a healthy diet rich in plants, oils, fiber and protein have a protective effect on inflammation and reduce stress and anxiety

Diets rich in sugar and processed food increase inflammation and cortisol and consequently stress levels

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Acknowledgement

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CROSH

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SSHRC

SSHRC CRSH

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CROSH CRSST

Thank you

CROSH
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