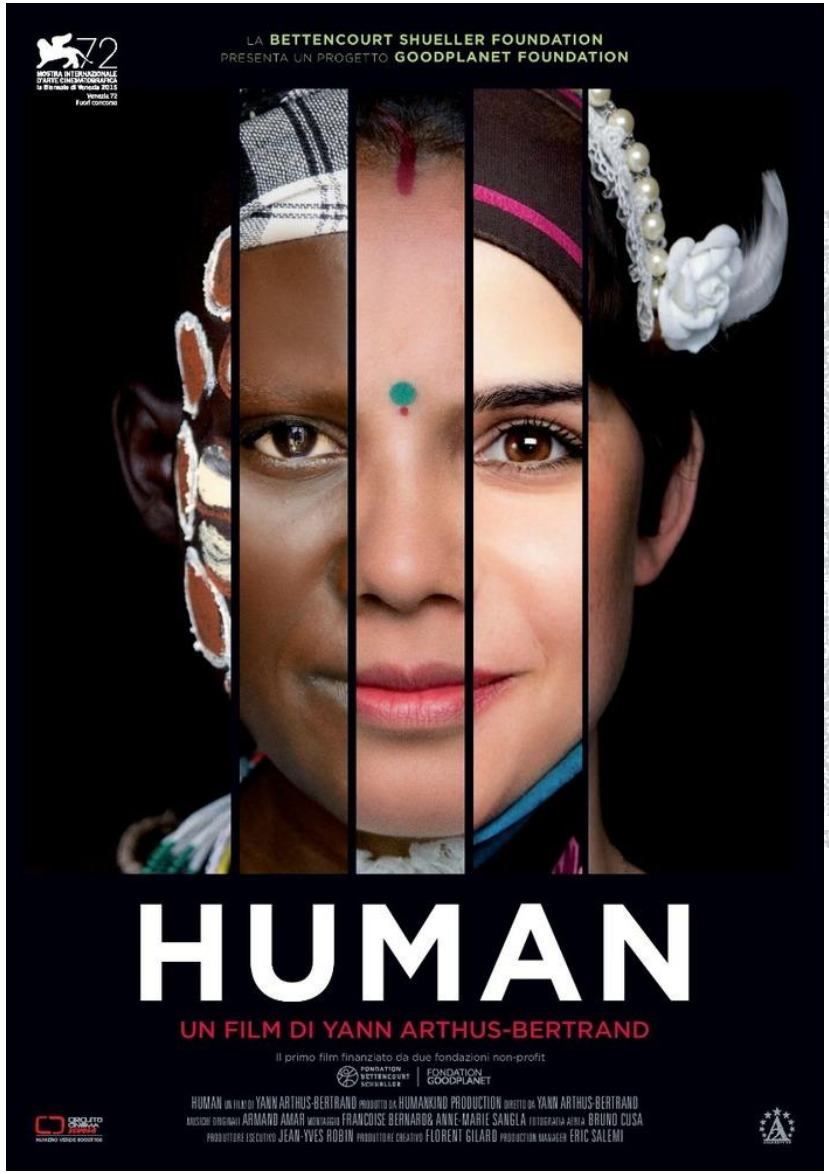

HUMAN DISEASE

1

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Department of Biotechnology
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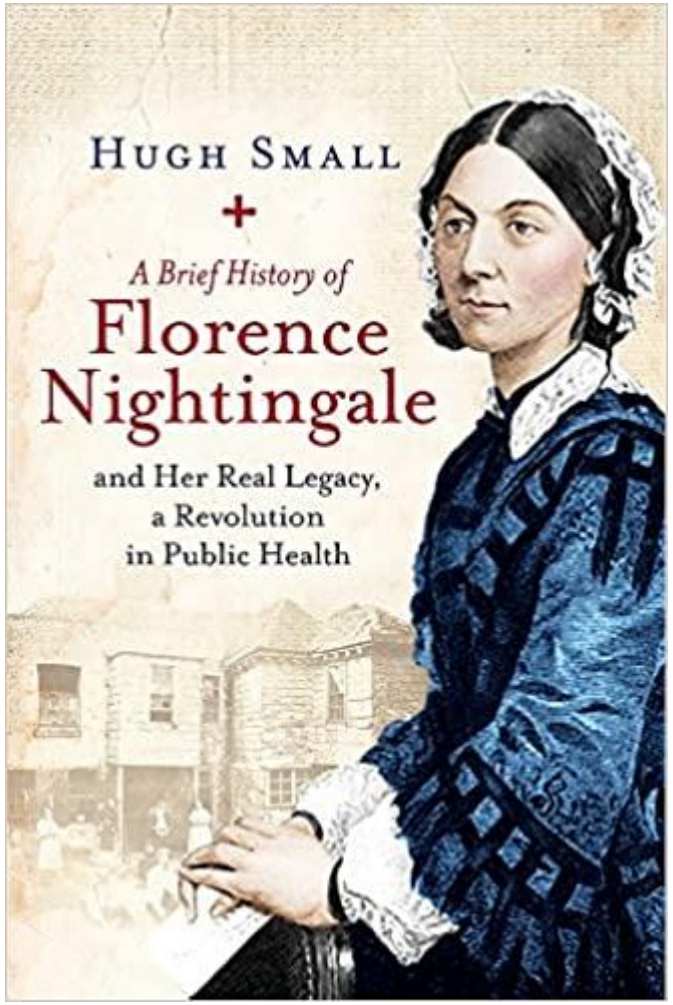
HISTORICAL SYNOPSIS

- In 1860, *Florence nightingale* →*made first* model of systemic collection of hospital data.
- In 1893, French physician, *Jacques Bertillon*→ introduced Bertillon classification of cause of death
- In 1898, American public health association→ recommended revision of ICD system every 10 years.
- The revision followed minor changes until 6th version of ICD→ morbidity and mortality condition and section on mental disorders
- WHO →responsibility for preparing and publishing the ICD revisions every 10 years.



*International Classification of Disease

WHAT IS DISEASE?

In humans, disease is often used more broadly to refer to any condition that causes pain, dysfunction, distress, social problems, or death to the person afflicted, or similar problems for those in contact with the person.

Broad categorization of disease:

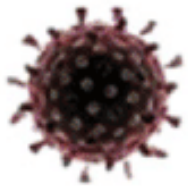
- Infectious diseases
- Deficiency diseases
- Hereditary diseases
- Physiological diseases
- Physical injury
- Mental stress

INFECTIOUS DISEASES

Human Infectious Diseases and their causative agents

Bacteria

- Tuberculosis
- Pneumonia
- Streptococcal Infections
- Gonorrhea
- Scarlet Fever
- Tetanus
- Diptheria
- Pertussis
- Bubonic Plague



Viruses

- AIDS/HIV
- Influenza
- Herpes Simplex/Zoster)
- Hepatitis (all types)
- Common Cold
- Poliomyelitis
- Measles, Mumps and Rubella
- Infectious mononucleosis

Fungi

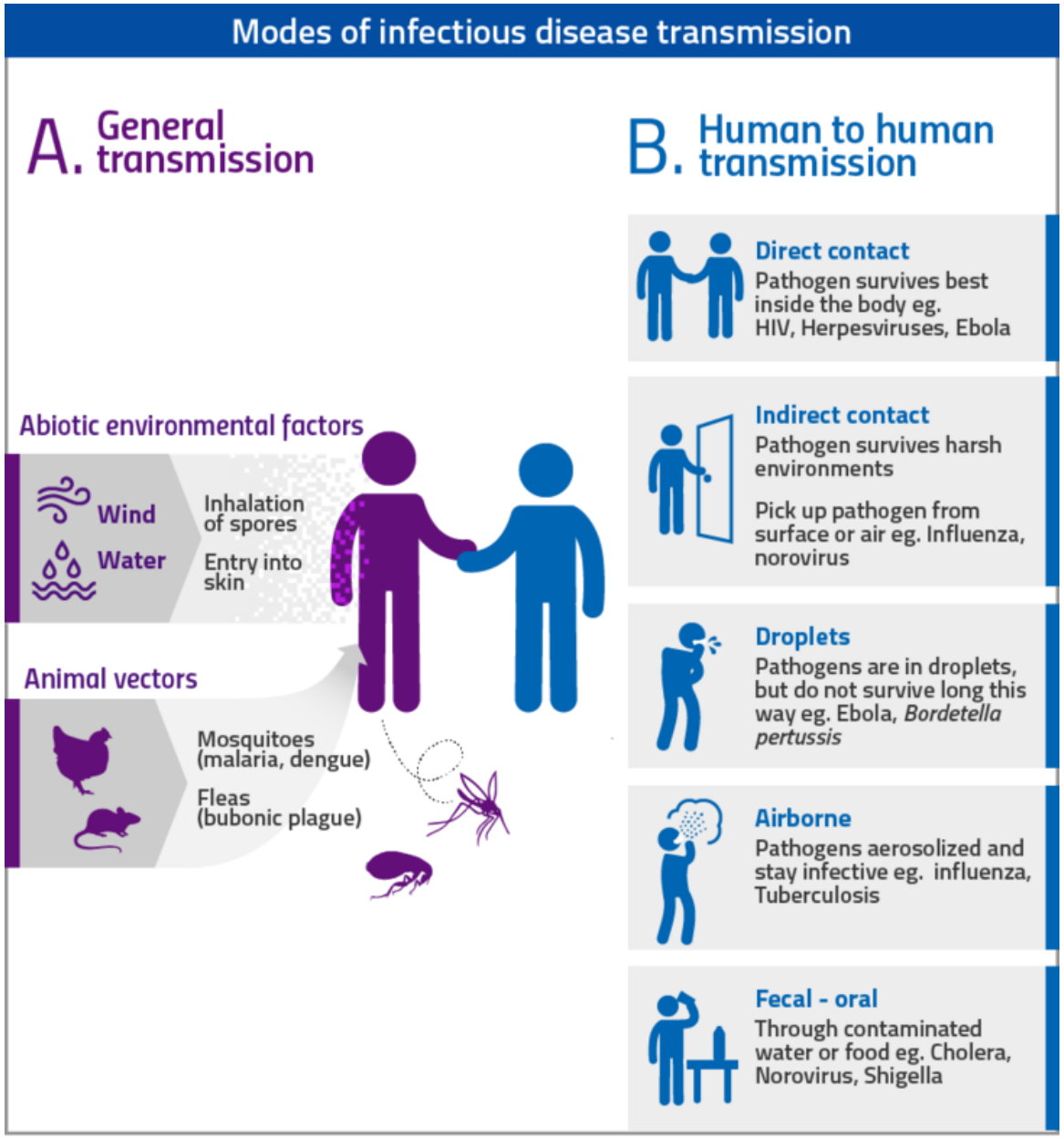
- Candidiasis
- Athlete's foot (Tinea pedis)
- Jock itch (Tinea cruris)
- Nail fungus (Tineu unguis)
- Ringworm
- Histoplasmosis

Protozoa

- Amebiasis
- Amebic meningoencephalitis
- Malaria
- Trichomoniasis
- Toxoplasmosis
- Giardiasis
- Balantidiasis
- Cryptosporidiosis
- Pneumocystosis

Helminthes/parasites

- Trichuriasis
- Hookworm
- Lymphatic filariasis (Elephantiasis)
- Schistosomiasis (Bilharzia)
- Ascariasis



WATER BORNE	AIR BORNE	VECTOR BORNE
1. Tyhoid Fever	1. Chickenpox	1. Dengue
2. Cholero	2. Measles	2. Malaria
3. Hepatitis-A	3. Mumps	3. Lymphatic Filariasis
4. Acute Diarrheal Disease	4. Influenza	4. Chikungunya
5. Poliomyelitis	5. Diptheria	
6. Food Poisoning	6. Whooping cough	
	7. Meningococcal Meningitis	
	8. Acute Respiratory Infection	
	9. Severe Acute Respiratory Syndrome	
	10. Tuberculosis	
	11. Swine Flu	

- Masks
- Personal Hygiene
- Wash/ cook food well
- Washing hands

NUTRITIONAL DEFICIENCY

Vitamin	*Diseases and their symptoms*	*Available from*
A (Retinol)	poor vision, night-blindness	spinach, carrots, butter, mangoes
B_1 (Thiamine)	extreme weakness, beri-beri	eggs, meat, yeast
B_2 (Riboflavin)	retarded growth, bad skin	green leafy vegetables, beans, peas, milk
B_{12} (Cyanocobalamin)	anaemia	non-vegetarian food like meat
C (Ascorbic acid)	scurvy, swollen gums, loose teeth	lime, lemon, oranges
D (Calciferol)	rickets, brittle bones in children which break or bend easily	milk, fish, liver oil
K (Phylloquinone)	excessive bleeding due to injury	green leafy vegetables

Diseases Caused due to Deficiency of Minerals

Name of minerals	*Diseases and their symptoms*	*Available from*
Calcium	brittle bones, excessive bleeding, bad muscular movement	milk, green leafy vegetables
Phosphorus	bad teeth and bones	pulses, cereals, milk
Iron	anaemia, lack of red blood cells	green vegetables, pulses, meat
Iodine	goitre, enlarged thyroid gland	fish, salt from sea water
Copper	low appetite, retarded growth	pulses and leafy vegetables

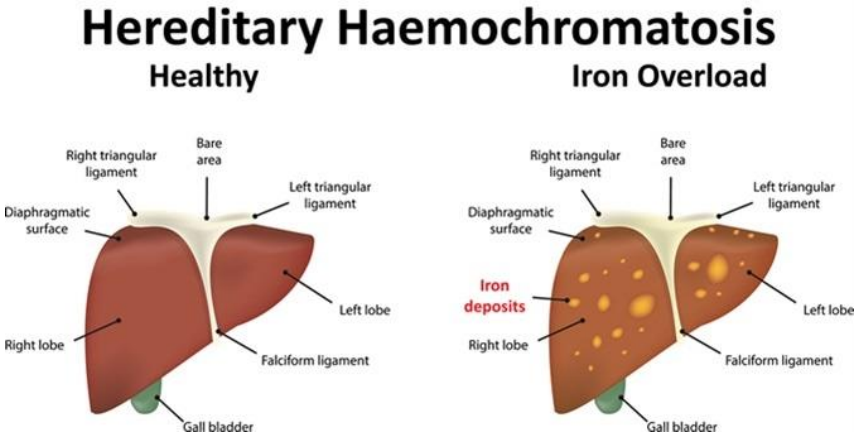
GENETIC DISORDERS- NON-HEREDITARY

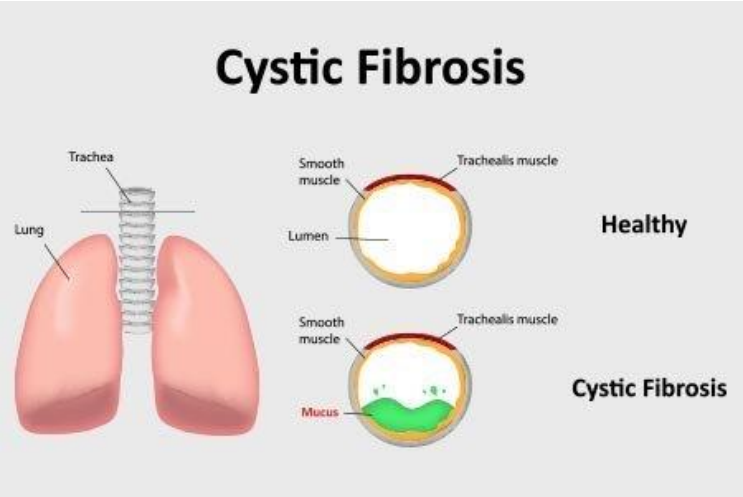
Single gene mutation (over 4000 disease!)

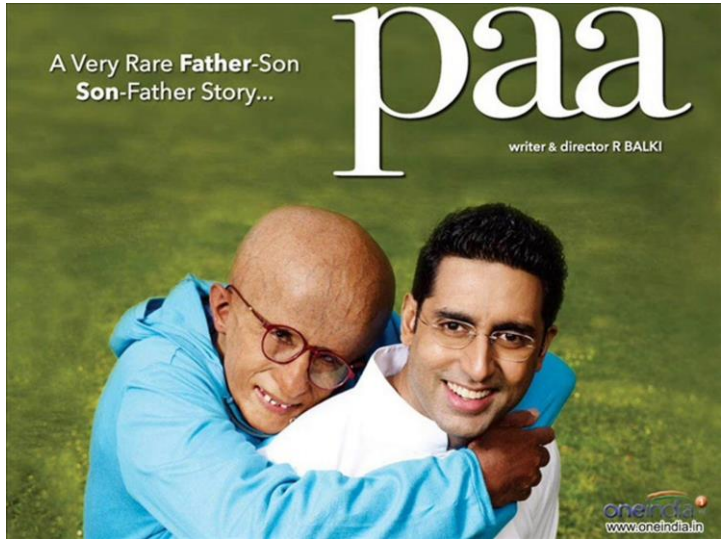
- Hemochromatosis- Body absorbs excess Iron from food. Leads to darkening of skin & hyperglycemia.
- Cystic Fibrosis- Salt (Na) does not pump out of cells, thick mucus secreted, blocks organs of digestive system.

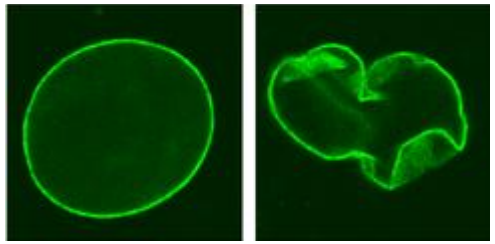
Chromosomal mutations

- Down's Syndrome- Trisomy of Chr 21
- Klinefelter's Syndrome- 47 (XXY)









Progeric Cell nucleus
(Laminin Proteins)

PROGERIA

Also known as Hutchinson-Gilford Syndrome, is an extremely rare, progressive genetic disorder that causes children to age rapidly, beginning in their first two years of life.

Sampson Gordon "Sam" Berns *was an American who suffered from progeria and helped raise awareness about the disease.*

USUAL CAUSES OF DEATH OF CHILDREN WITH PROGERIA

Heart Problems

Strokes

LIFE EXPECTANCY

Average life expectancy for child with progeria is about 13 years, but some with the disease die younger and some live 20 years or longer.

MEDICAL OBSERVER

www.medicalobserverPH.com

SOME EFFECTS OF PROGERIA

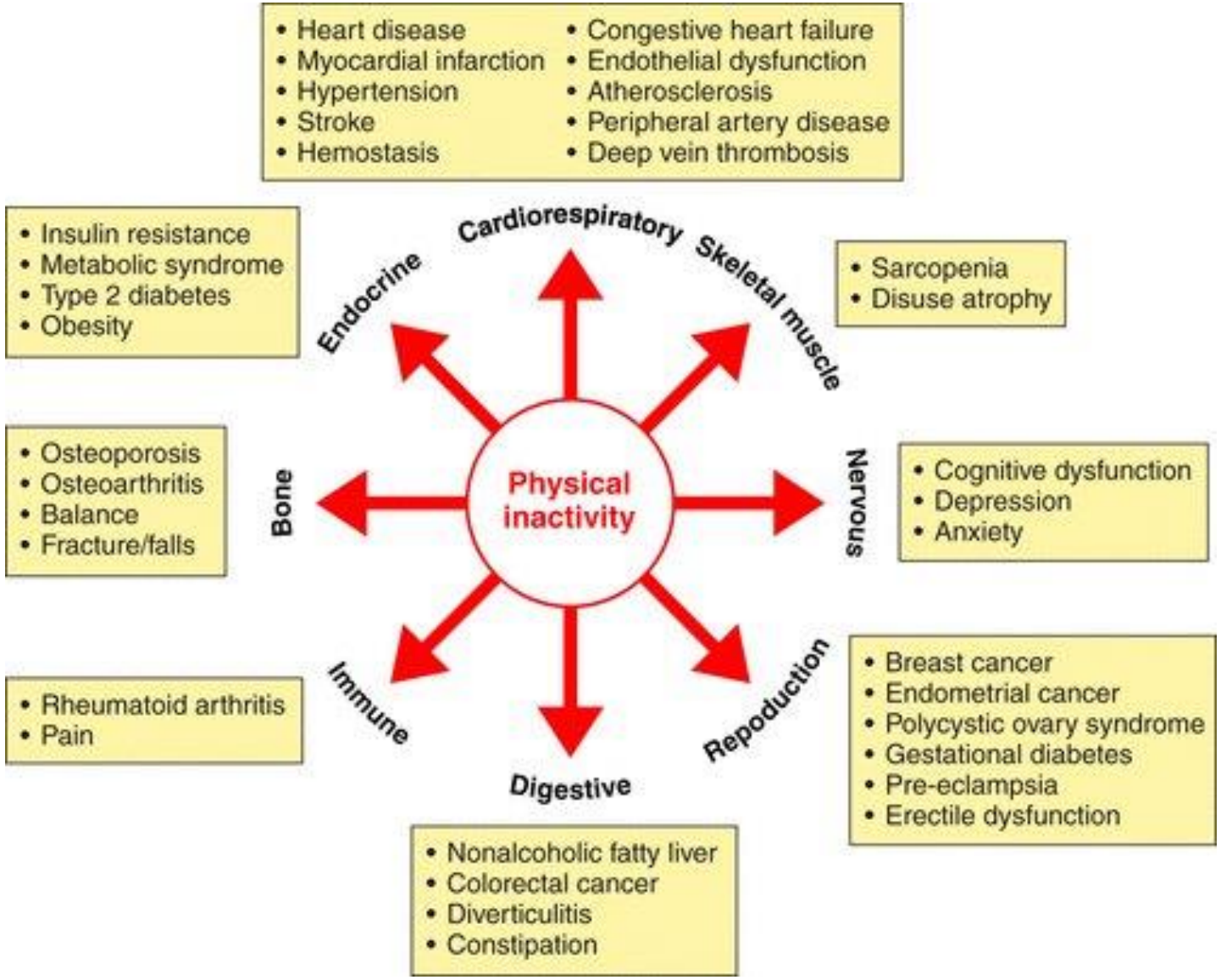
HEART DISEASE

STINTED GROWTH

TIGHTENING OF SKIN

LACK OF WEIGHT GAIN

PHYSIOLOGICAL DISEASE

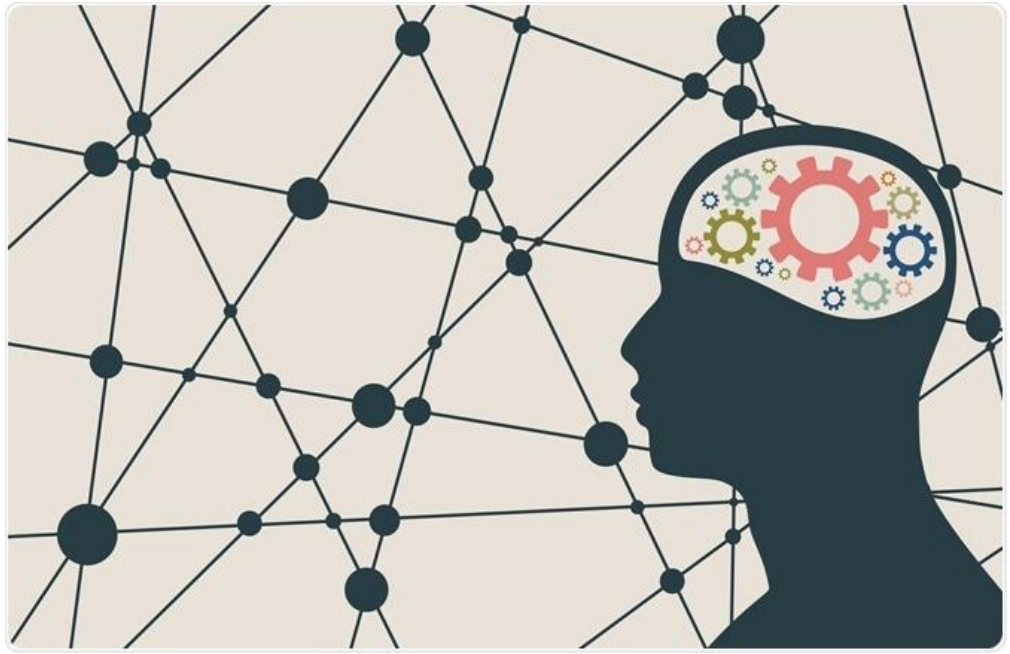


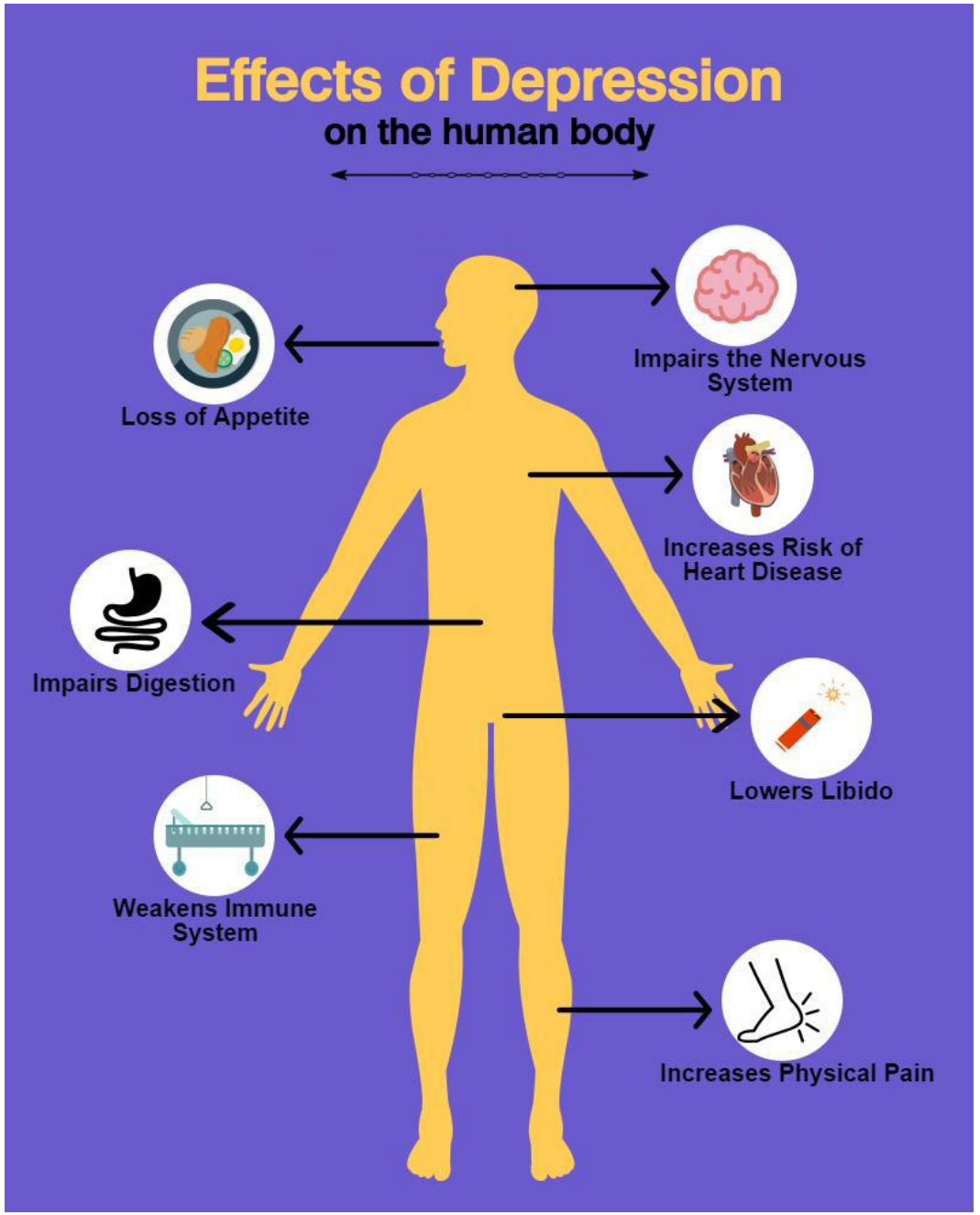
PHYSICAL INJURY

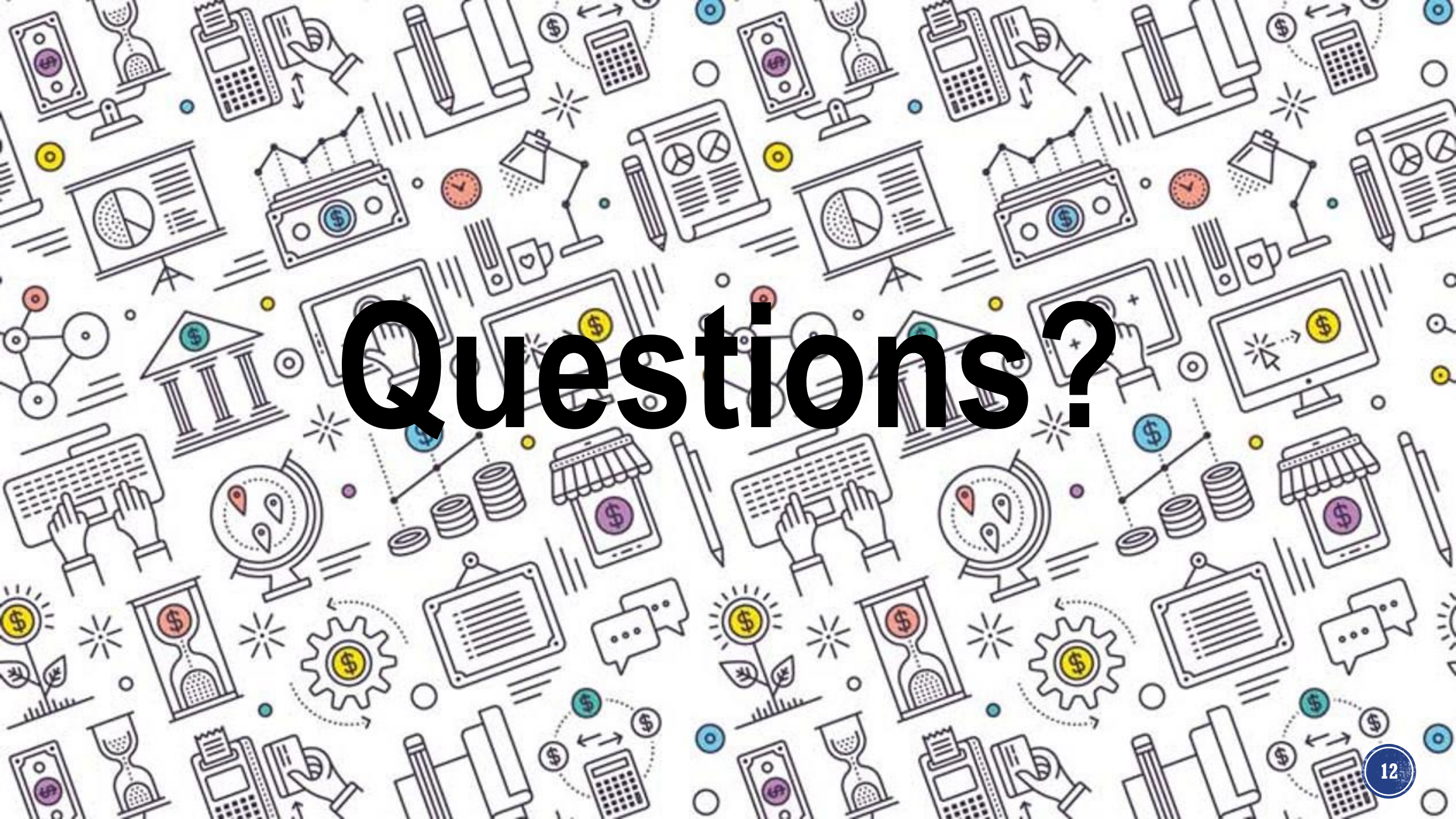
Vehicle Accidents
Pedestrian injuries
Occupational
Drowning
Violence

MENTAL DISORDERS

- ✓ Anxiety
- ✓ Depression
- ✓ Sleep-wake
- ✓ Eating
- ✓ OCD
- ✓ Bipolar






Questions?