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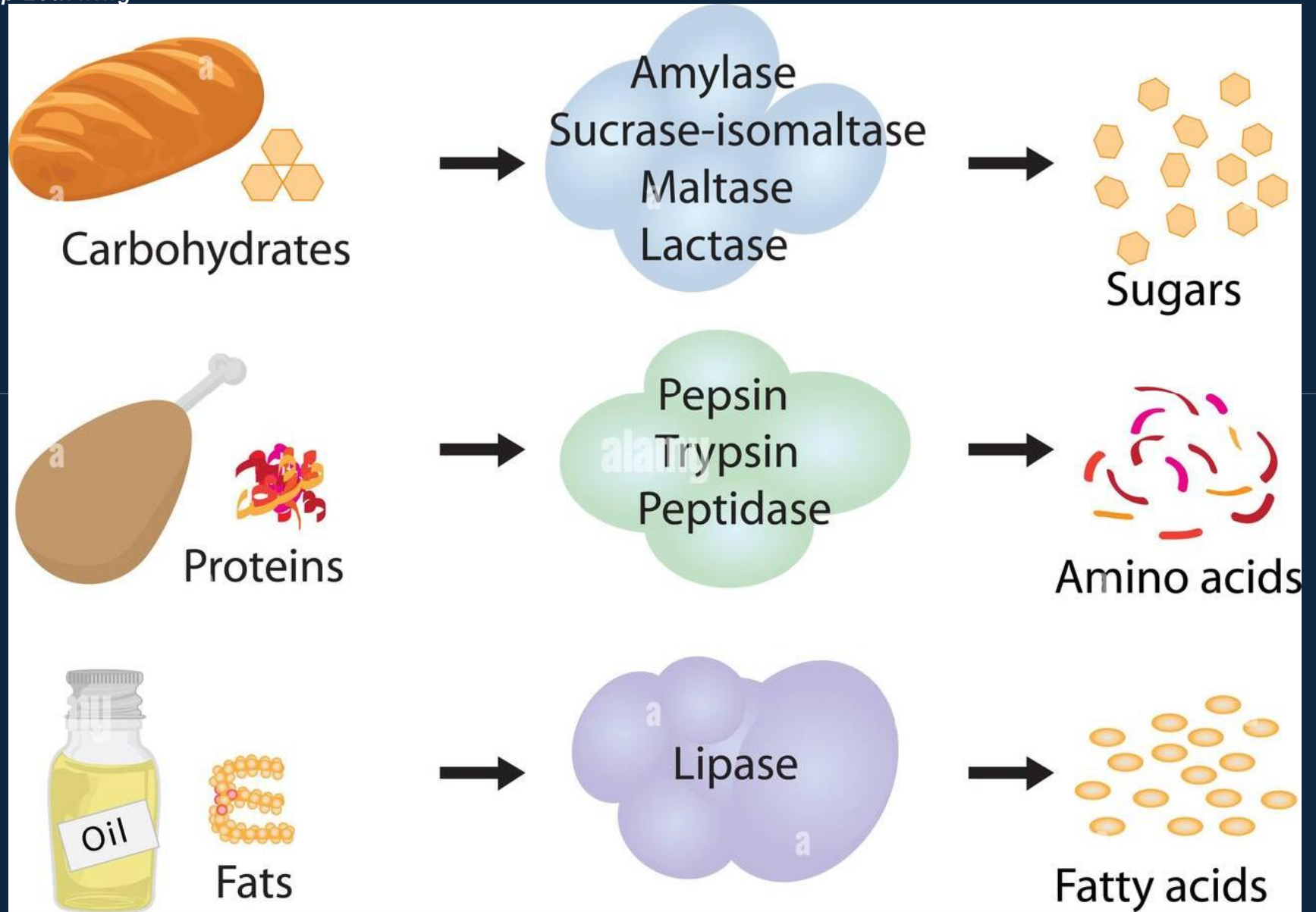
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Maladies Métaboliques



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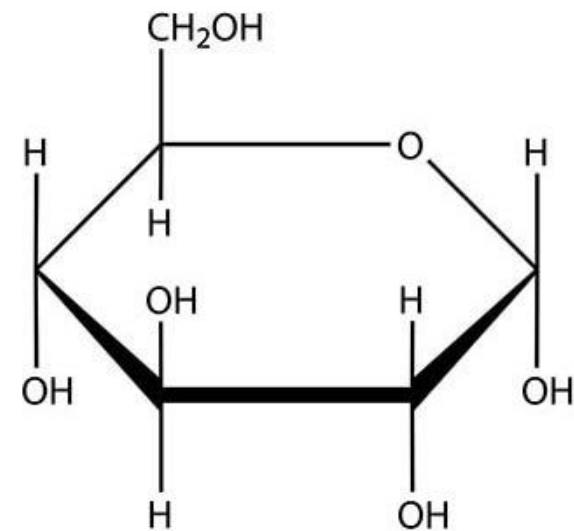
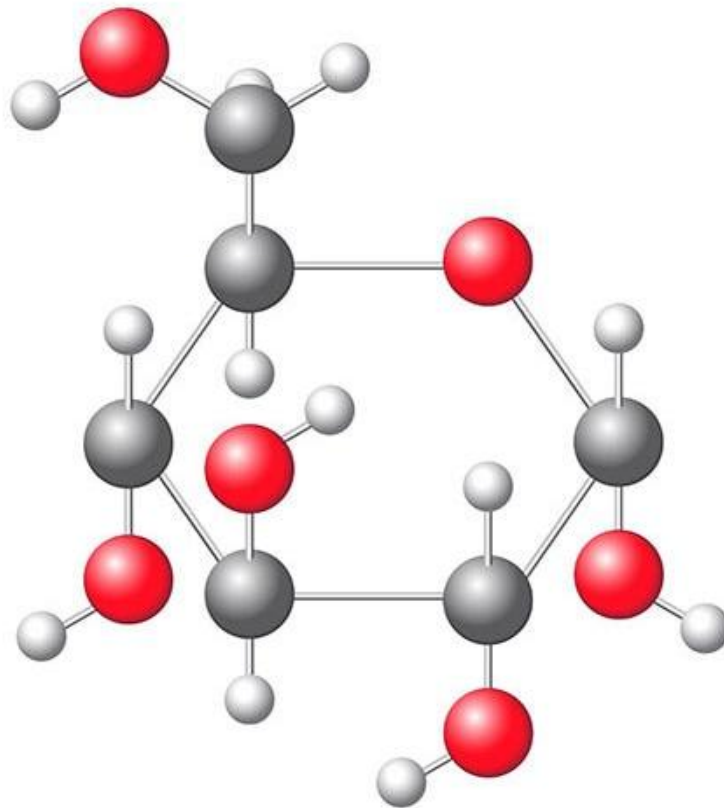




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α -D-Glucose (cyclic)



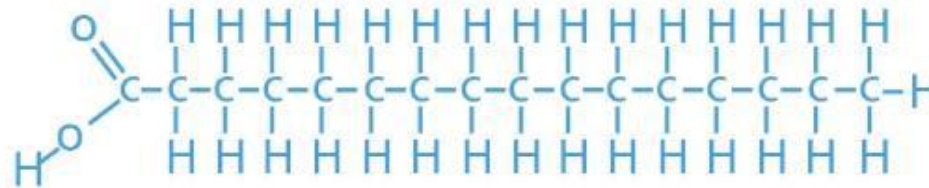


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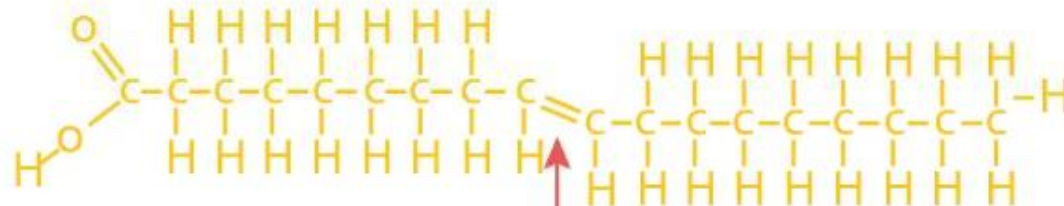
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Types d'acides gras reconnaissables à leur structure

Acide gras
saturé

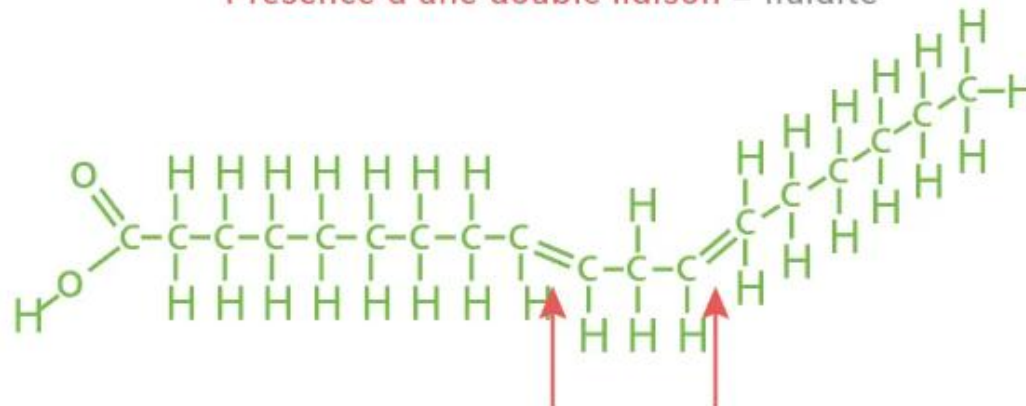


Acide gras
insaturé



Présence d'une double liaison = fluidité

Acide gras
polyinsaturé

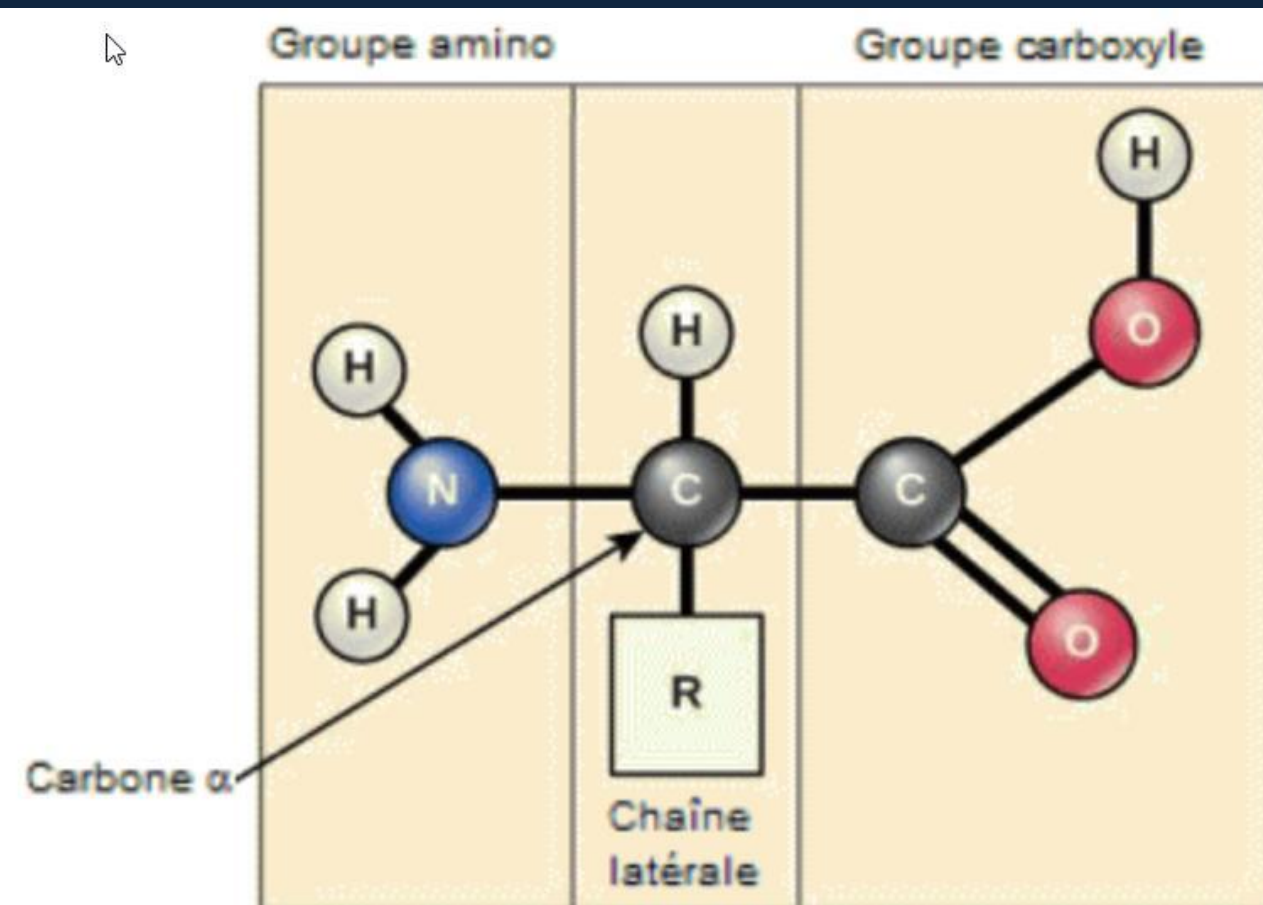


Présence de plusieurs doubles liaisons = fluidité



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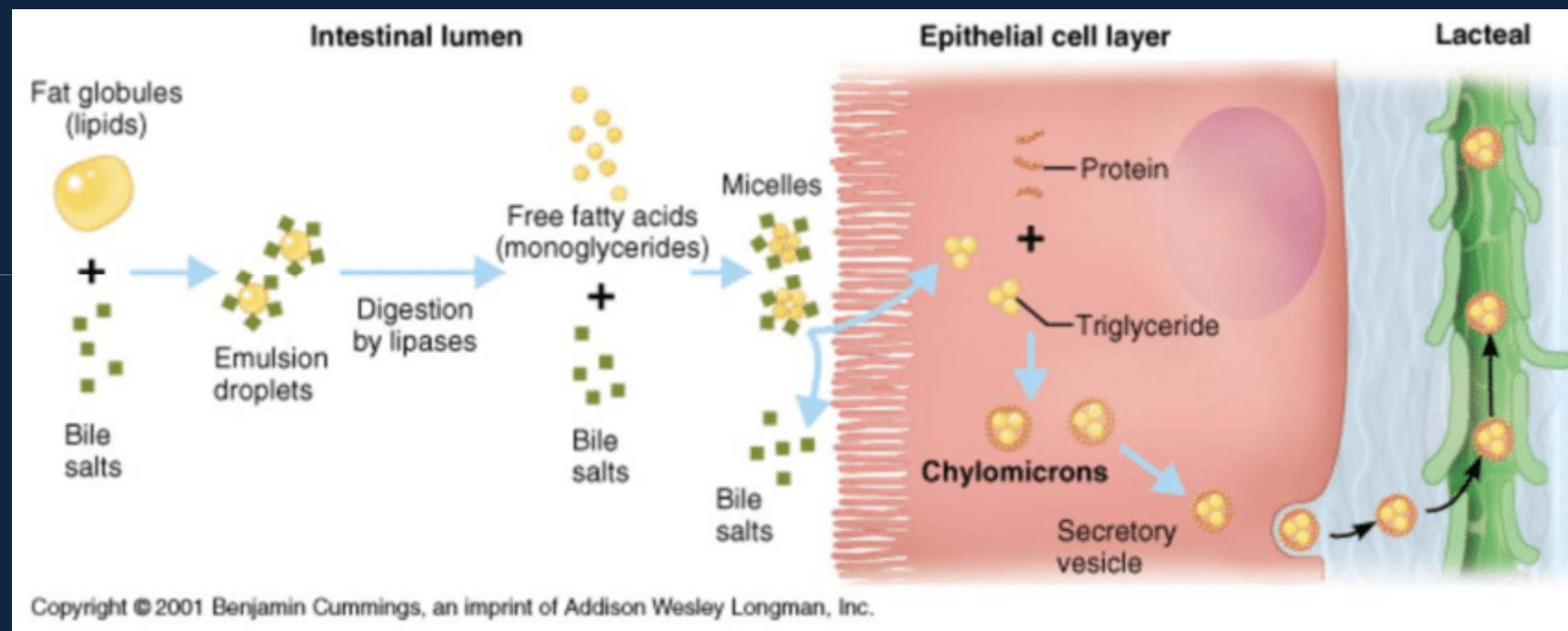


Les acides aminés possèdent un atome de carbone asymétrique central auquel sont attachés un groupe amino, un groupe carboxyle, un atome d'hydrogène et une chaîne latérale (groupe R).



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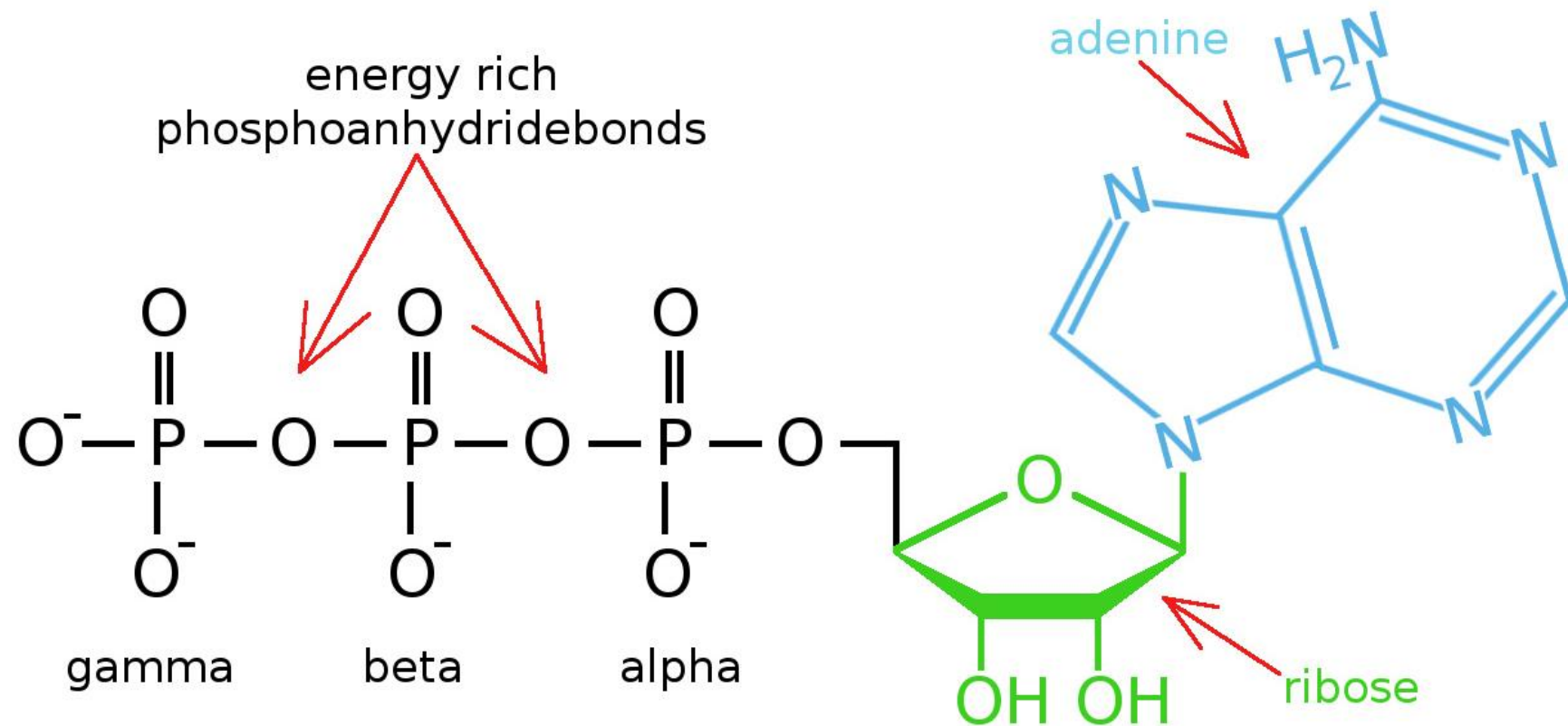
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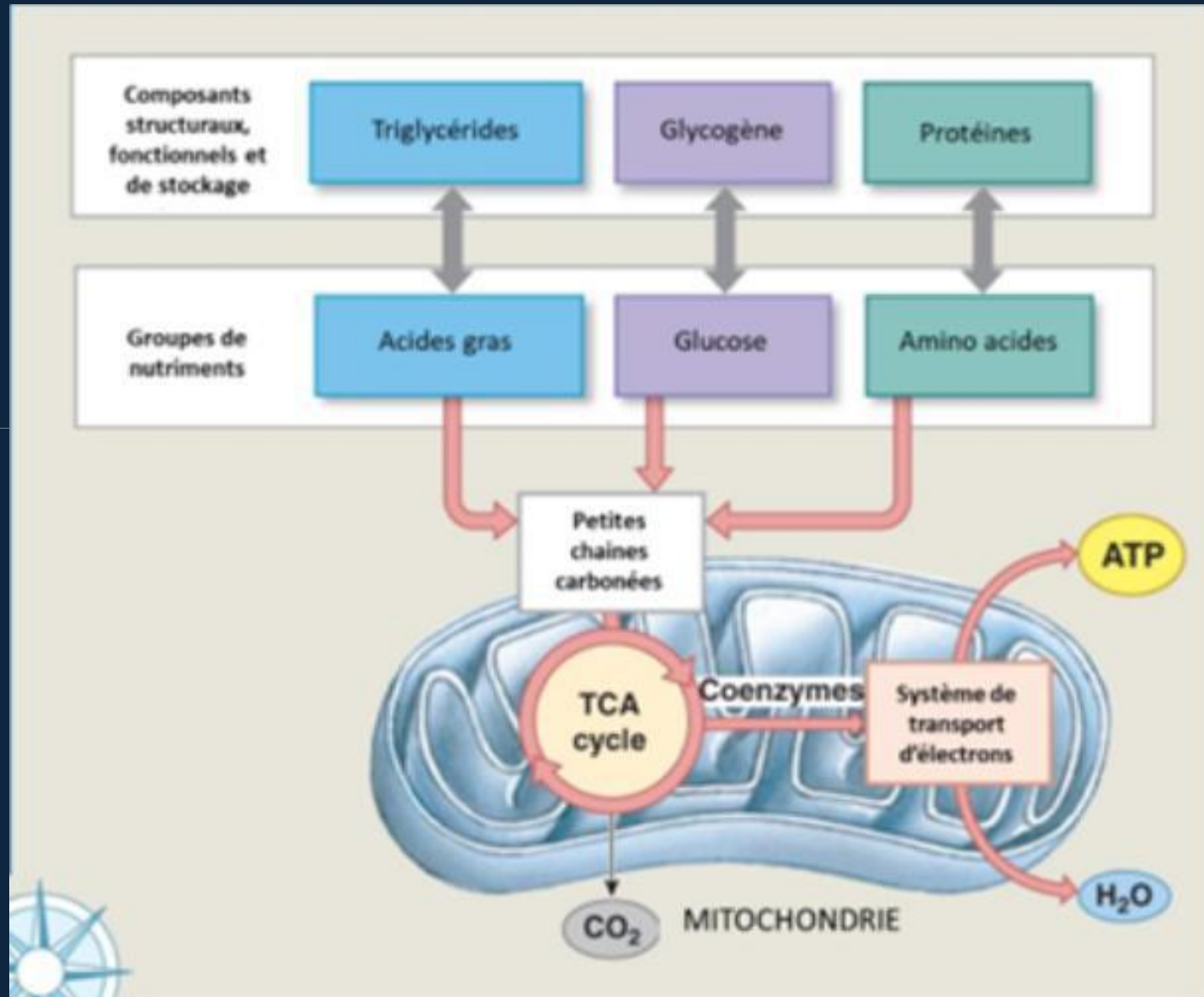
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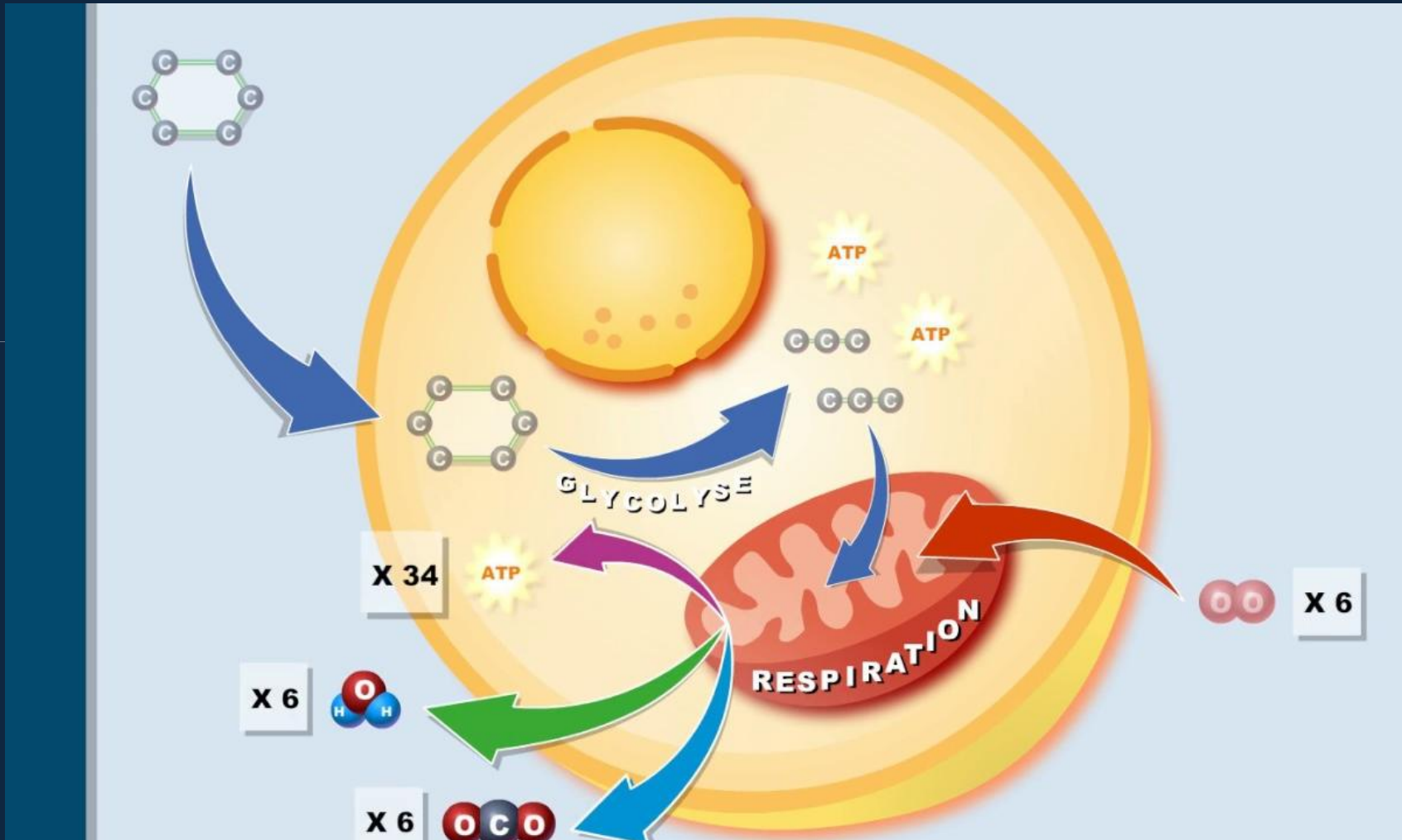
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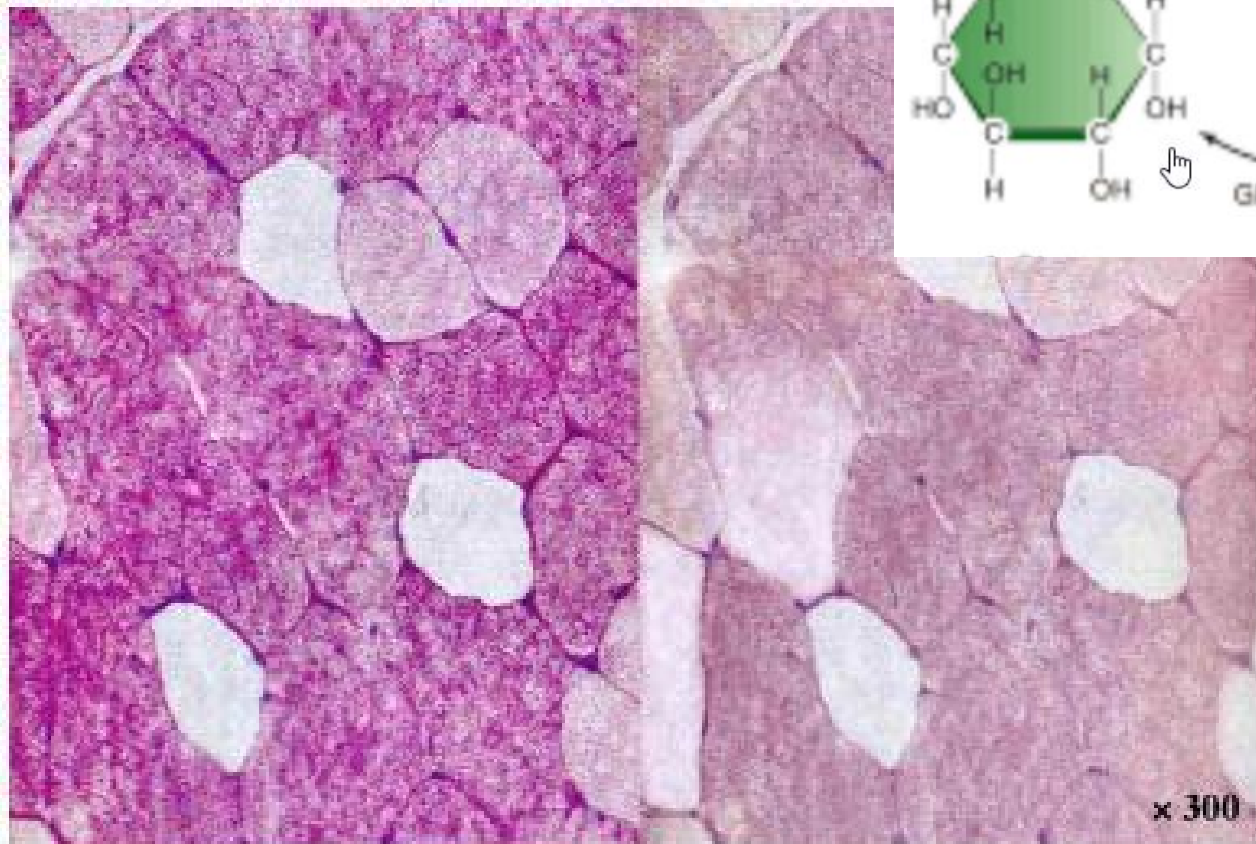
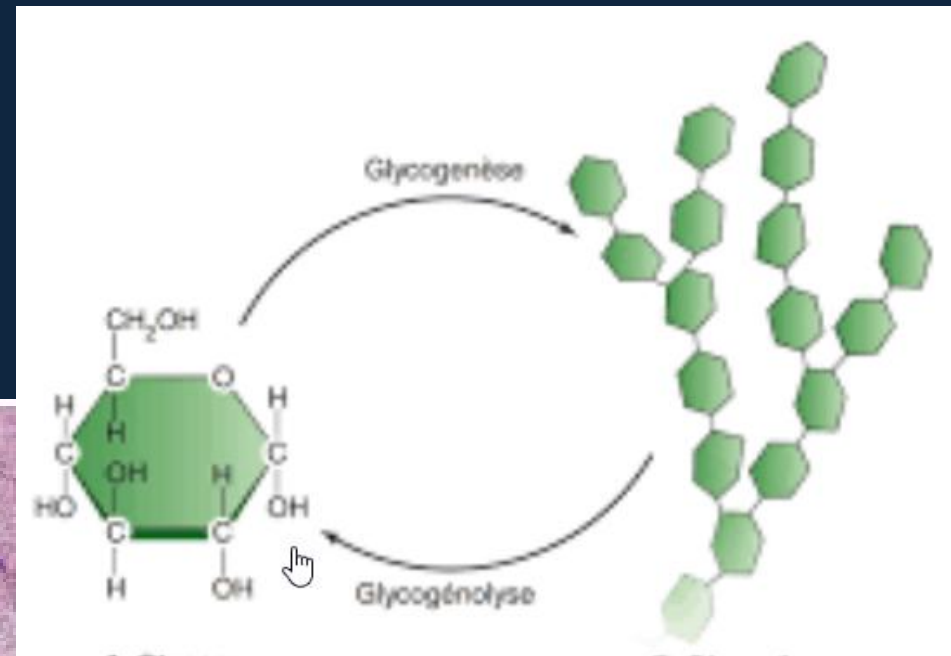
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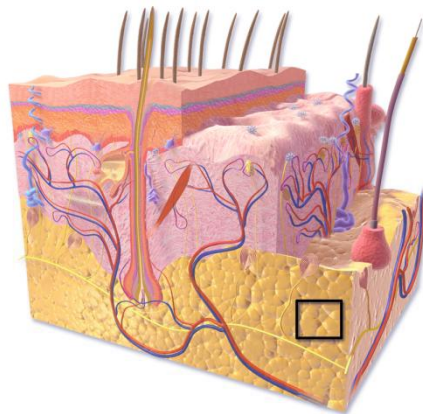


Coupe transversale de muscle avant (à gauche) et après (à droite) contraction
Le glycogène est coloré en violet



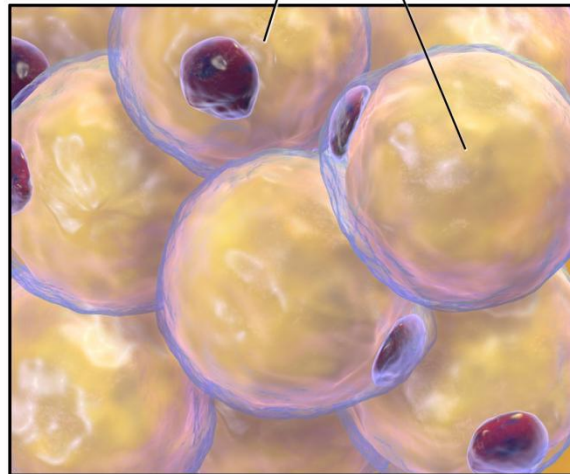
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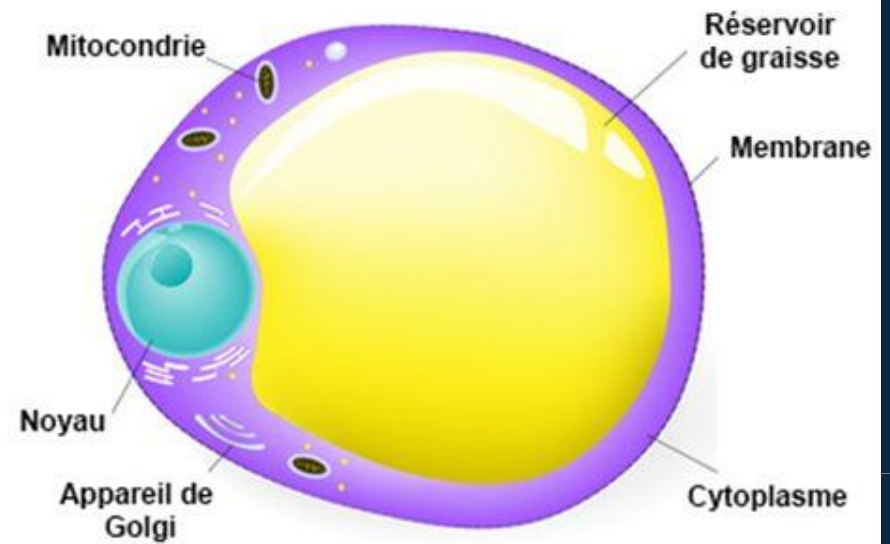


Adipose Tissue

Adipocytes
(white adipose cells)



Adipocyte

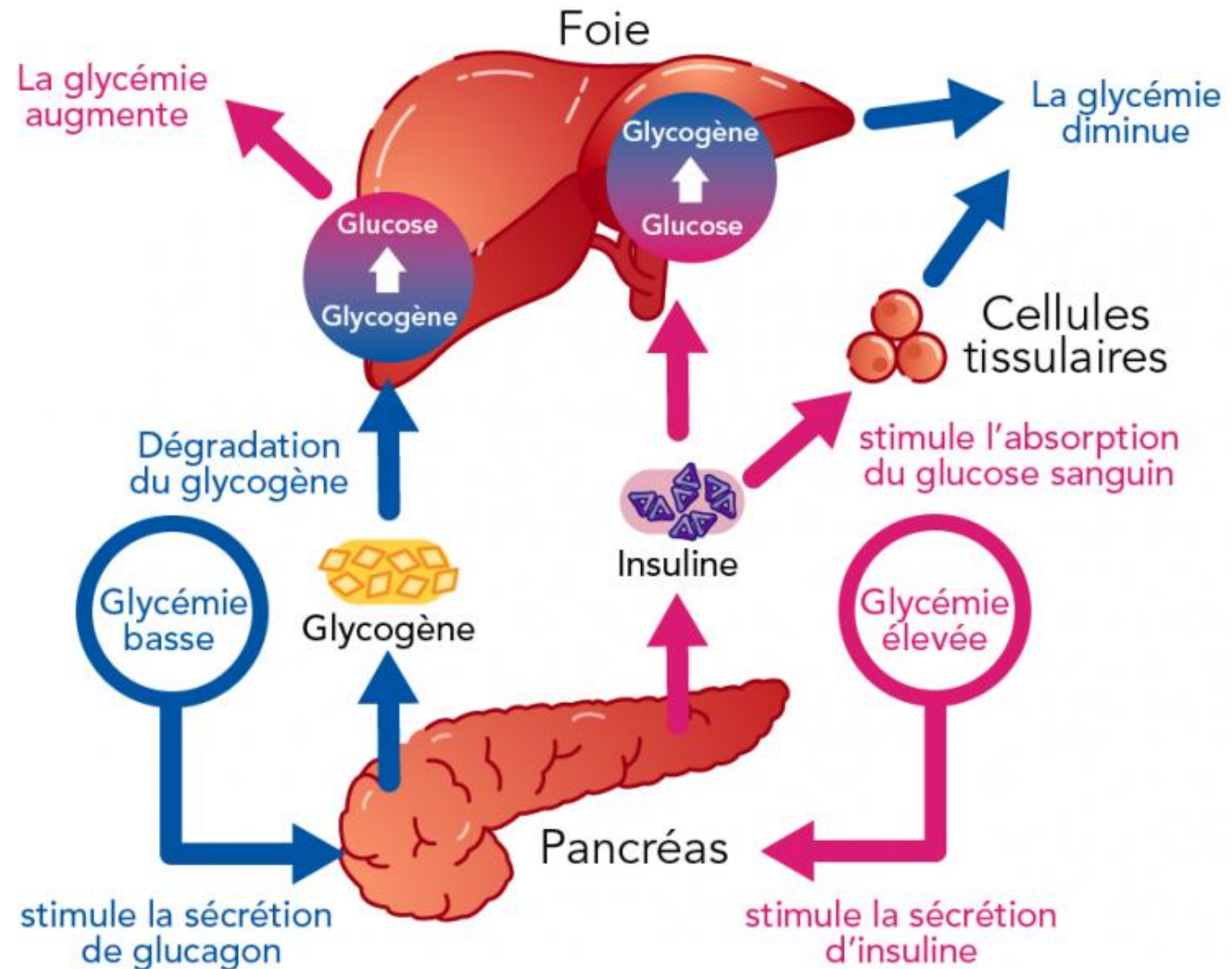




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Processus de régulation de la glycémie

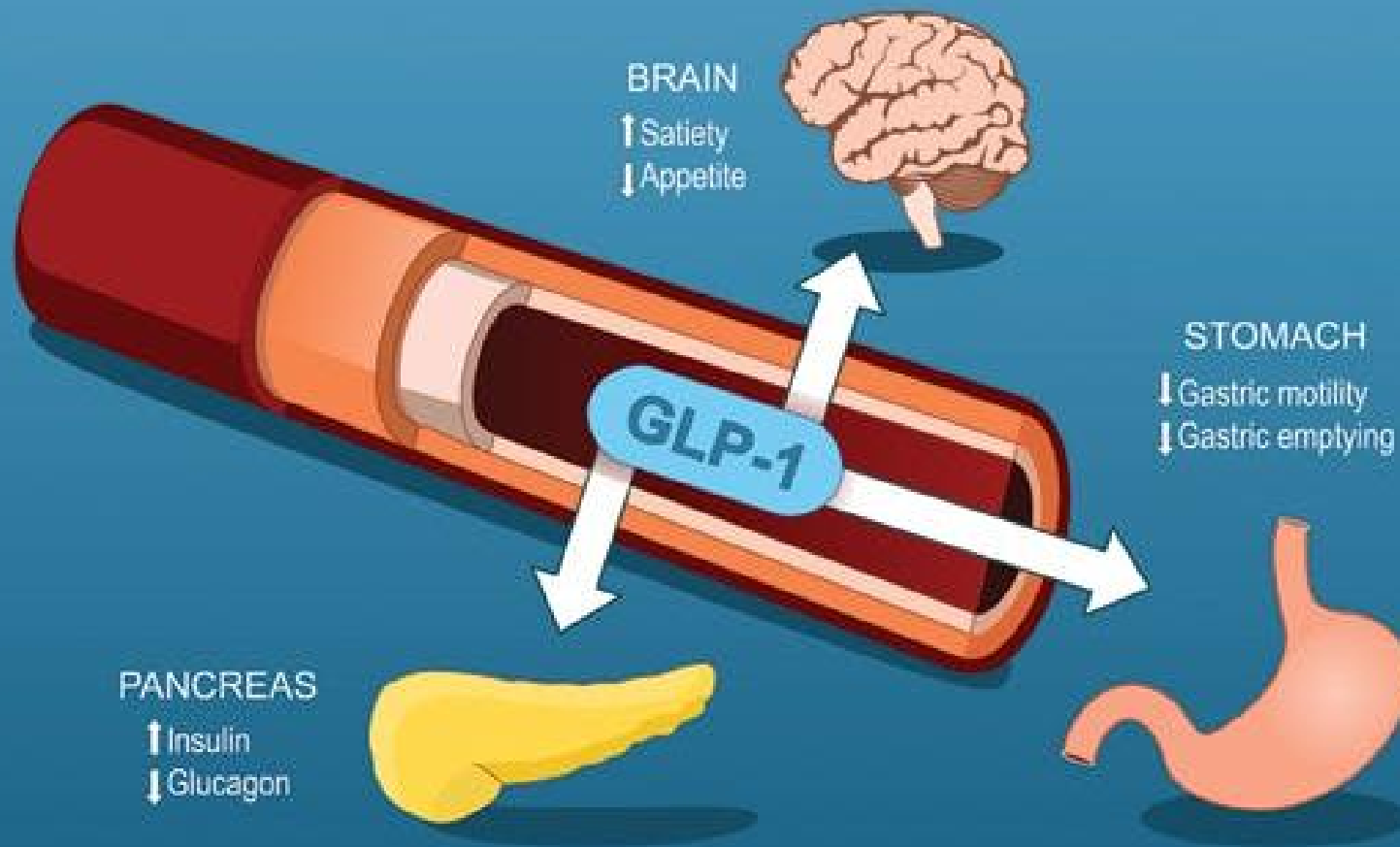




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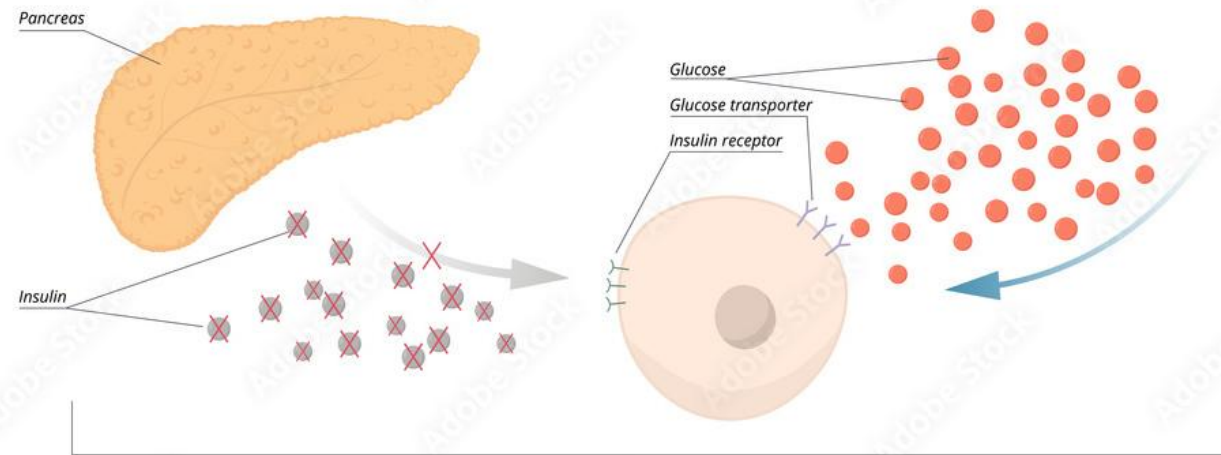
Glucagon-like peptide-1



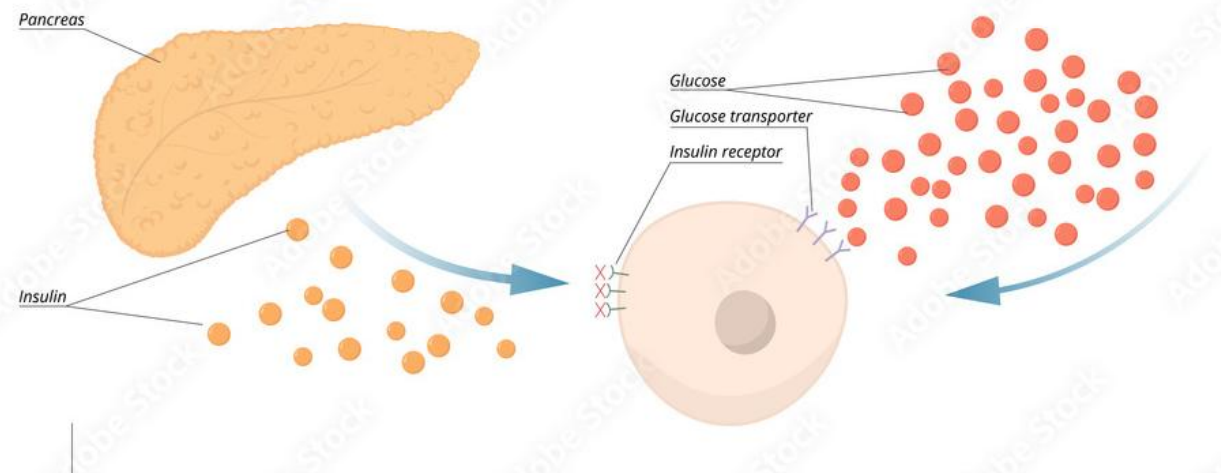


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Diabetes type I



Diabetes type II

Diabetes type I and II



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Types of Diabetes



Type 1 Diabetes	Type 2 Diabetes	Gestational Diabetes	Monogenic Diabetes	Other
				
due to autoimmune β -cell destruction by possible viral infections	due to a non-autoimmune progressive loss of adequate β -cell insulin secretion	beta-HCG increases insulin resistance	<i>INS, ABCC8, HNF</i> mutations	disease associated or intake of chemical
absolute insulin deficiency, NO family history	insulin secretion decreased, strong family history	diagnosed in the second or third trimester (24–28 weeks of gestation)	autosomal dominant inheritance pattern	inflammation
includes latent autoimmune diabetes of adulthood (LADA)	insulin resistance and metabolic syndrome	NO overt diabetes prior to gestation	includes neonatal diabetes and maturity-onset diabetes of the young (MODY)	exocrine pancreas dysfunction (cystic fibrosis, pancreatitis, infection), drug or chemical induced (alcohol, glucocorticoid use, treatment of HIV, or immunosuppressant use after organ transplantation)
anti-GAD anti-islet cell (ICA) anti-Znc8	HbA1c %>6.5	one step: 75-g OGTT two-step: 50-g (nonfasting) screen followed by a 100-g OGTT	MODY is seen in early adulthood and MODY3 is the most common; neonatal diabetes exhibit IUGR, developmental delays, seizures, cardiac abnormalities	
insulin	metformin, insulin, sulfonylureas, DDP4 inh, GLP-1 agonists	insulin	sulfonylureas	treat underlying cause



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Qu'est-ce que le syndrome métabolique ?

Syndrome métabolique =
au moins 3 de ces critères :



Excès de graisse
abdominale



Tour de taille > 88 cm



Tour de taille > 102 cm



Taux de triglycérides



Triglycérides > 1,5 g/L



Pression artérielle



Pression artérielle
≥ 130 / 85 mm Hg



Taux de « bon »
cholestérol
HDL



Taux de HDL < 0,40 g/L



Taux de HDL < 0,50 g/L



Glycémie à jeun



Glycémie ≥ 1,10 g/L

Conséquences

Diabète de type 2



Maladies cardiovasculaires



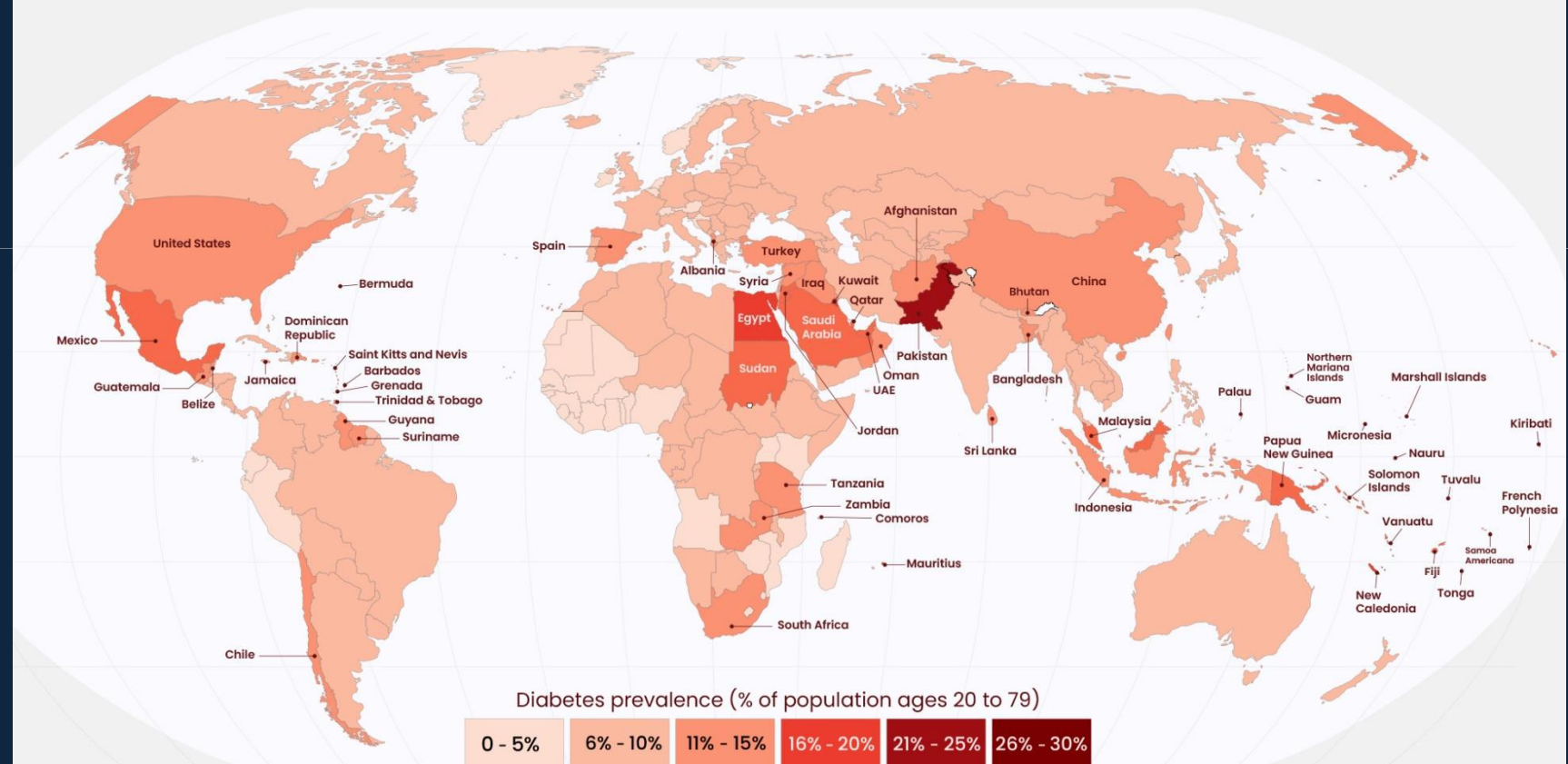
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World's most Diabetic countries

Over 537 million adults aged 20-79 worldwide are currently living with diabetes, accounting for 10.5% of the population in this age range.

 Countries highlighted are those with a diabetes prevalence higher than 10%.



Diabetes incidence is predicted to rise to 643 million (11.3%) by 2030, and to 783 million (12.2%) by 2045.

Source: The World Bank 2021, IDF Atlas 10th edition



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Diabetes around the world - 2024

Number of adults (20-79 years) with diabetes worldwide



World			
2050	852.5 Million	↑	45% increase
2024	588.7 Million		

Africa (AFR)			
2050	59.5 Million	↑	142% increase
2024	24.6 Million		

Europe (EUR)			
2050	72.4 Million	↑	10% increase
2024	65.6 Million		

Middle-East and North Africa (MENA)			
2050	162.6 Million	↑	92% increase
2024	84.7 Million		



Highlights

- 589 million adults (20-79 years) are living with diabetes worldwide – 1 in 9.
- The total number of adults with diabetes is predicted to rise to 853 million by 2050 – 1 in 8.
- 4 in 5 adults with diabetes (81%) live in low and middle-income countries.
- Diabetes caused 3.4 million deaths in 2024 – 1 every 6 seconds.
- An estimated 43% of adults living with diabetes (252 million people) are undiagnosed. Almost 90% live in low and middle-income countries.
- Diabetes was responsible for an estimated USD 1.015 trillion in global health expenditure in 2024. This represents a 338% increase over the past 17 years.
- 635 million adults worldwide (1 in 8) have impaired glucose tolerance and 488 million have impaired fasting glucose (1 in 11) placing them at high risk of type 2 diabetes.
- 1 in 5 live births are affected by hyperglycaemia in pregnancy.

North America and Caribbean (NAC)			
2050	68.1 Million	↑	21% increase
2024	56.2 Million		

South and Central America (SACA)			
2050	51.5 Million	↑	45% increase
2024	35.4 Million		

South-East Asia (SEA)			
2050	184.5 Million	↑	73% increase
2024	106.9 Million		

Western Pacific (WP)			
2050	253.8 Million	↑	18% increase
2024	215.4 Million		

The IDF Diabetes Atlas 11th edition has been produced thanks to unrestricted educational grants from

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Need more information?

Visit diabetesatlas.org
Contact atlas@idf.org

