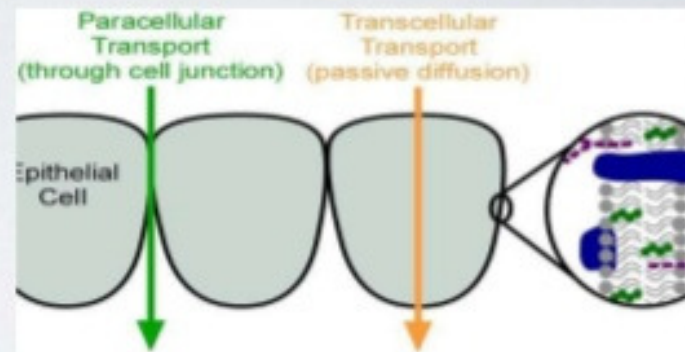


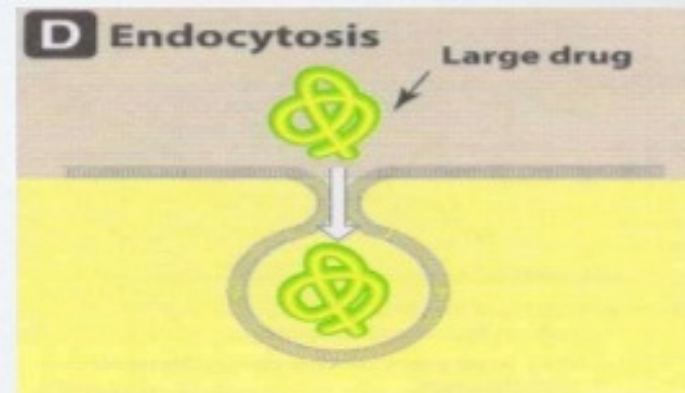
Lægemedlers passage over membraner

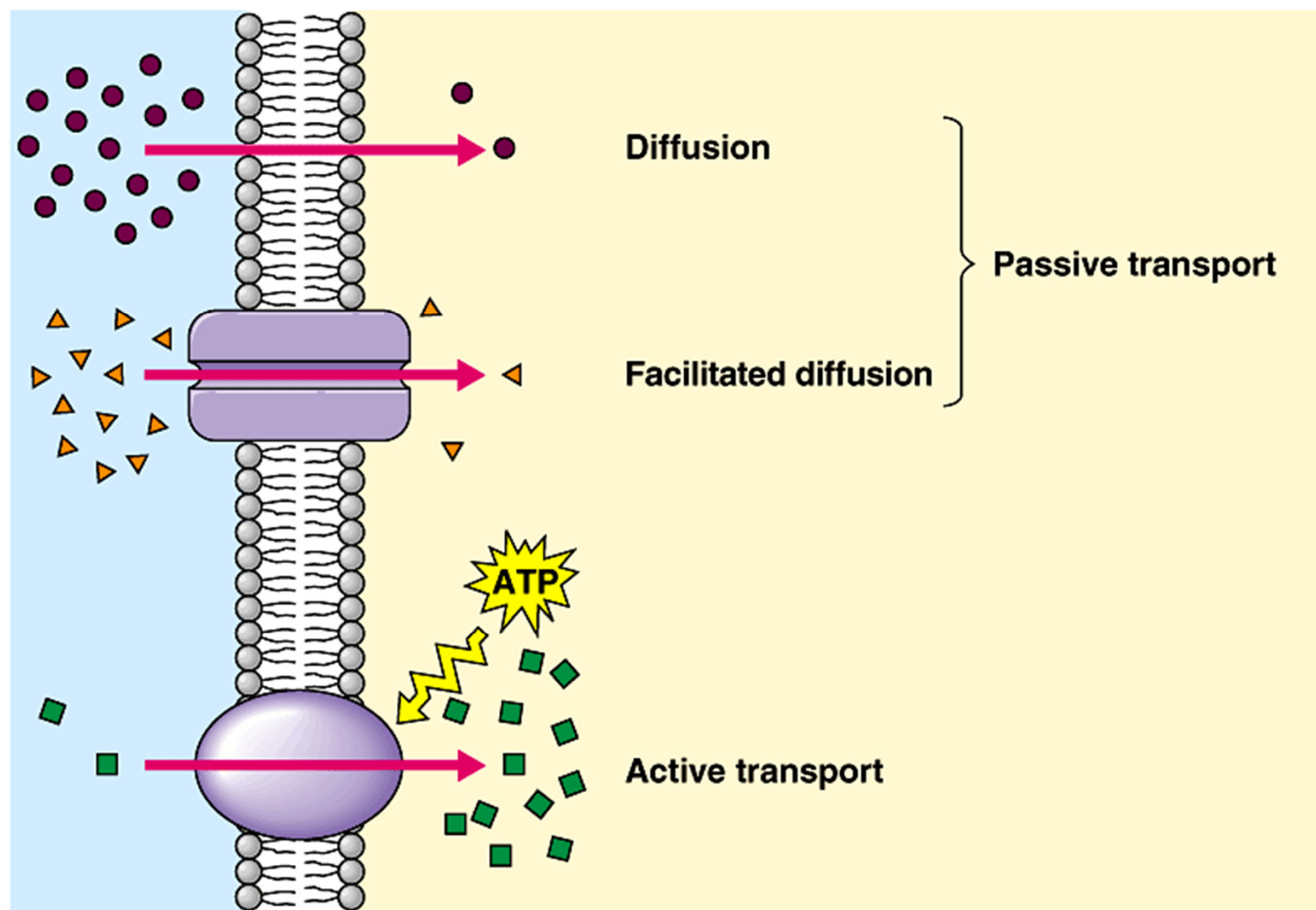
MECHANISMS IN DRUG TRANSPORT

- Transcellular transport
- Paracellular transport
- Vesicular transport



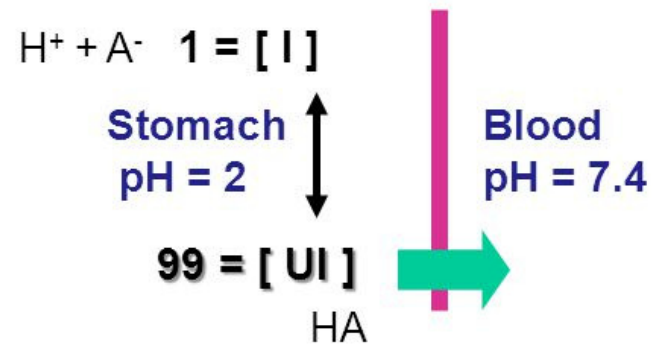
Methods of passive drug transport across cell membranes:



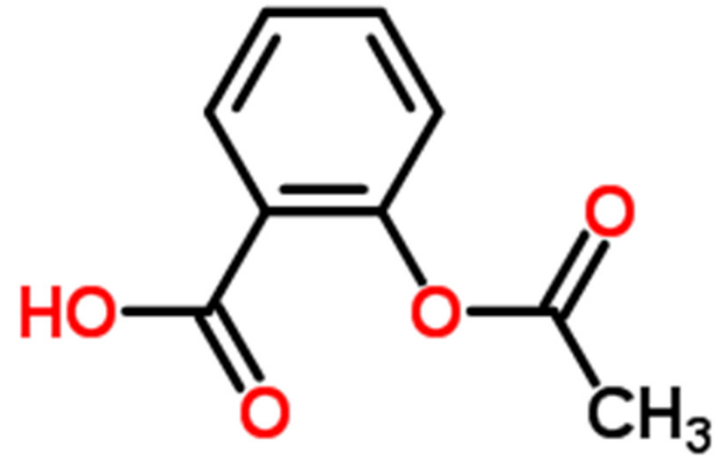


Mechanisms of Drug Transport

ASPIRIN pKa = 4.5 (weak acid)
100mg orally



Acetylsalicylsyre (Asperin)



Chemspider/Chemicalize

le-sø... x In Vitro ABC Transporter A... x bioliteracy | Just another W... x Aspirin | C9H8O4 | ChemS... x Chemicalize x +

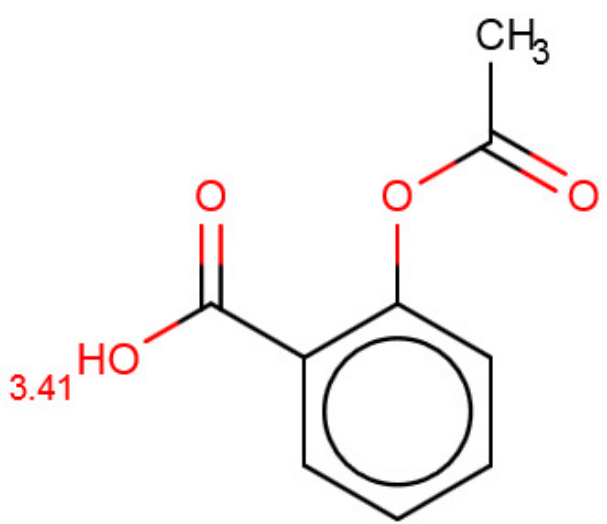
calize.com/#/calculation

med Firefox Foreslåede websteder

ATION STRUCTURE SEARCH DOCUMENT SEARCH WEB VIEWER COMPLIANCE CREDITS: 0

e, SMILES, InChI, or CAS number [e.g. niacin] DRAW CALCULATE

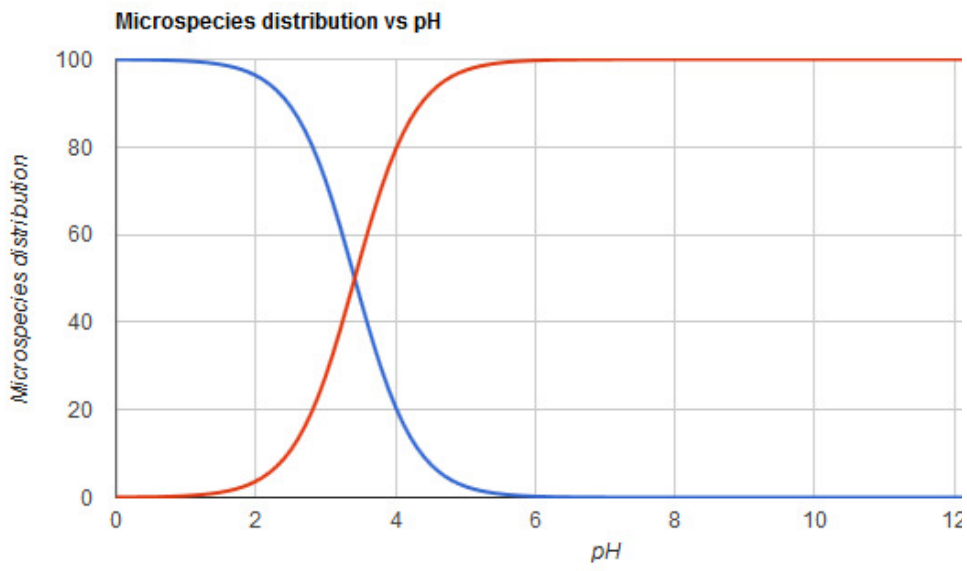
pKa



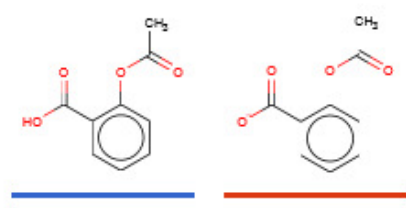
3.41

Strongest acidic pKa: 3.41

Microspecies distribution vs pH



pH	Acidic Form (%)	Basic Form (%)
0	100	0
2	95	5
3.41	50	50
4	20	80
6	0	100
8	0	100
10	0	100
12	0	100



Chemspider/Chemicalize

drug transport - Google-sø... x Aspirin | C9H8O4 | ChemS... x Chemicalize x Partition coefficient - Wiki... x +

https://chemicalize.com/#/calculation

Mest besøgte m I gang med Firefox Foreslåede websteder

CALCULATION STRUCTURE SEARCH DOCUMENT SEARCH WEB VIEWER COMPLIANCE

Enter a molecule name, SMILES, InChI, or CAS number (e.g. niacin) DRAW CALCULATE

logP and logD

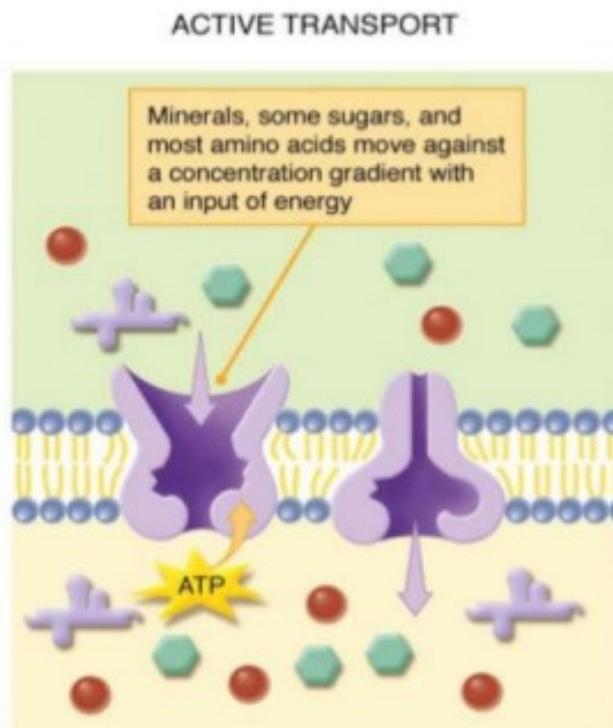
logD vs pH

pH	logD
1.7	1.23
4.6	0.03
6.5	-1.71
7.4	-2.16
8.0	-2.25

logP: 1.24

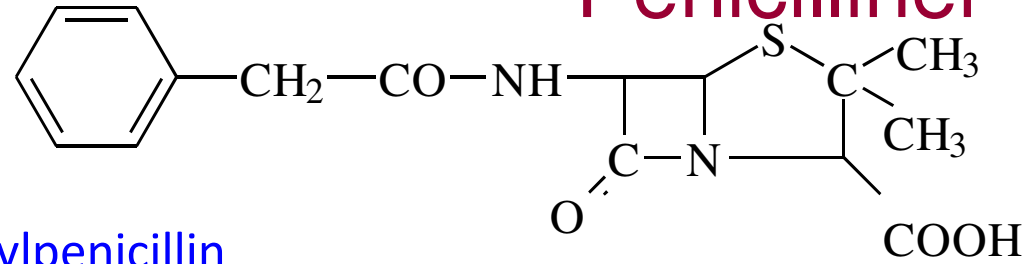
DA 99%

ACTIVE TRANSPORT

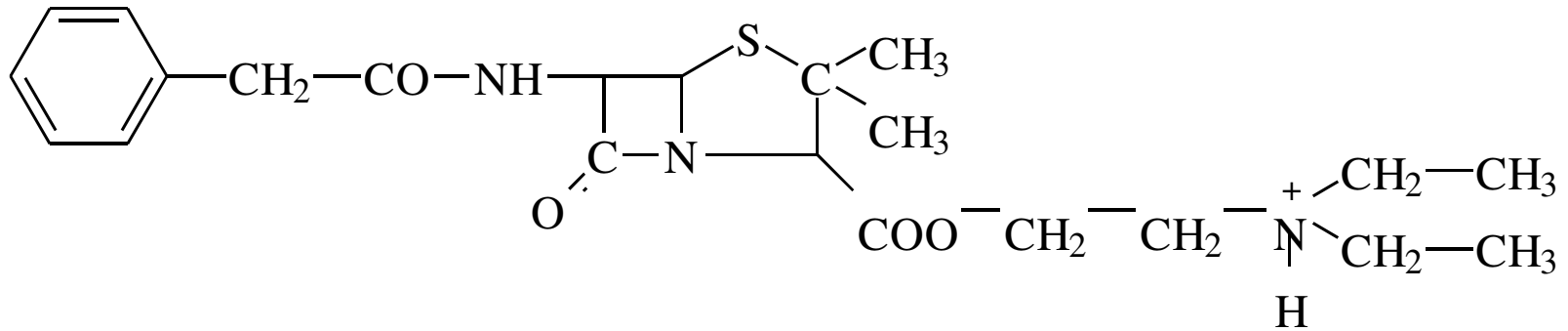


- Requires energy, which is provided by hydrolysis of ATP for transportation.
- More commonly, metabolic energy is provided by the active transport of Na^+ , or is dependent on the electrochemical gradient produced by the sodium pump, **Na^+/K^+ ATPase** (secondary active transport).

Penicilliner



benzylpenicillin
(syre)



benzylpenicillin
(syre)

diethylaminoethanol
(basisk alkohol)

svagt basisk ester

Udskillelse af Pen G
Procain og
Penetamat i mælk efter
IM administration
af 10.000 i.e./kg IM

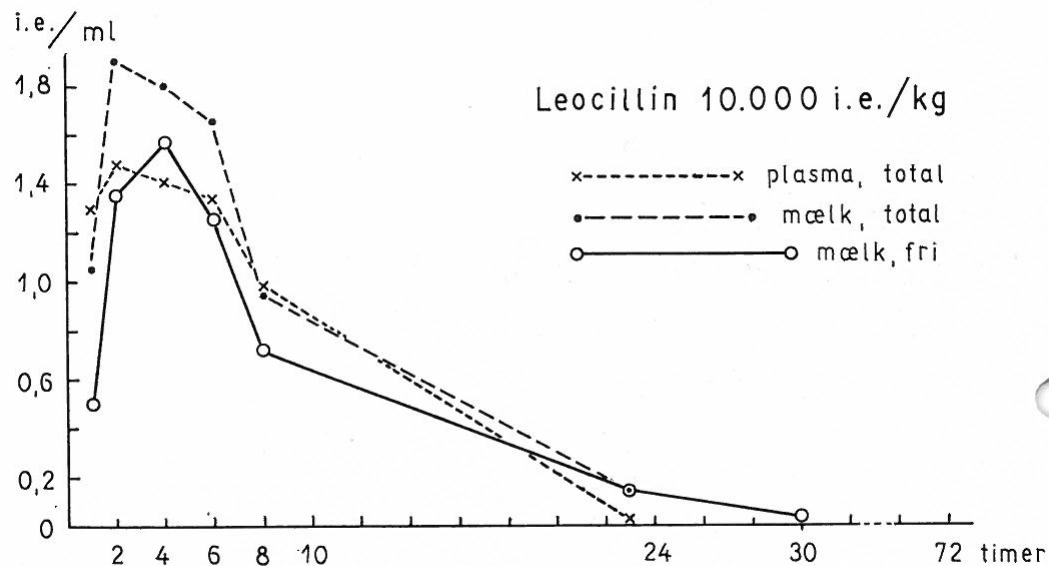


Fig. 1. Koncentrationen af benzylpenicillin i mælk \circ — \circ , og af benzylpenicillin + penicillinester i mælk \bullet — \bullet og i plasma \times — \times efter injektion af

Mammær ekskretion af penicillin

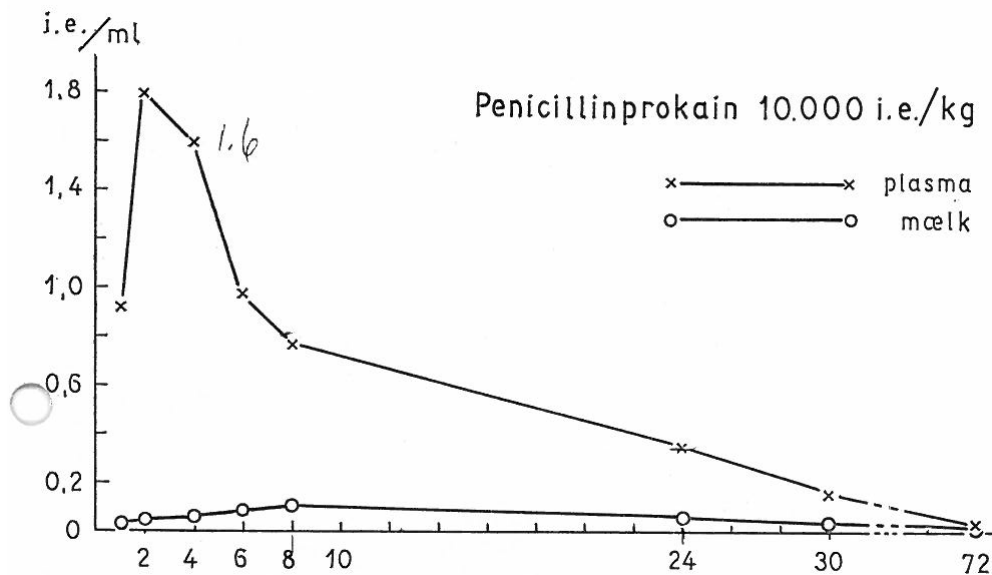


Fig. 2. Koncentrationen af benzylpenicillin i mælk \circ — \circ og i plasma \times — \times efter injektion af penicillinprocain suspenderet i vand.