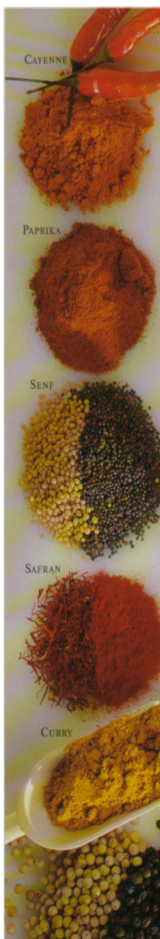


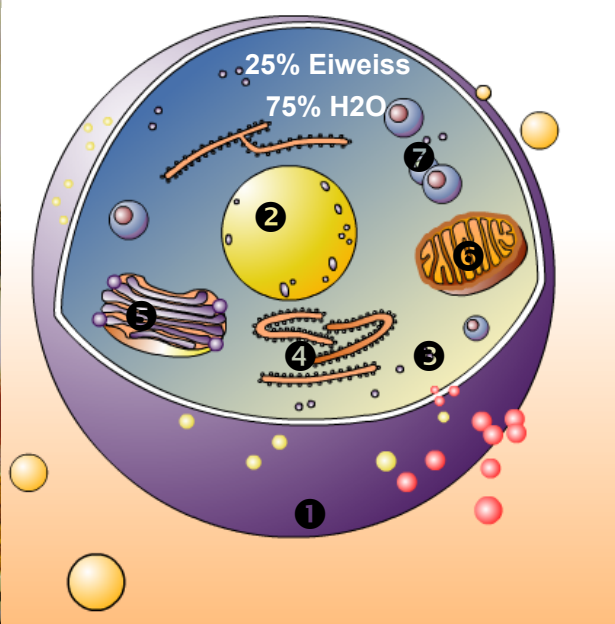
Der Belastungsstoffwechsel im Sport

Kursleitung: Tommaso Cimeli, dipl Ernährungsberater HF
Ausbilder mit Eidg. Fachausweis

1



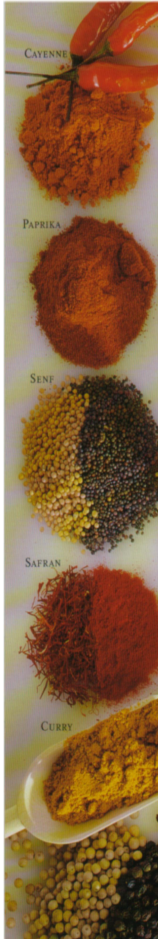
Anatomie der Zelle



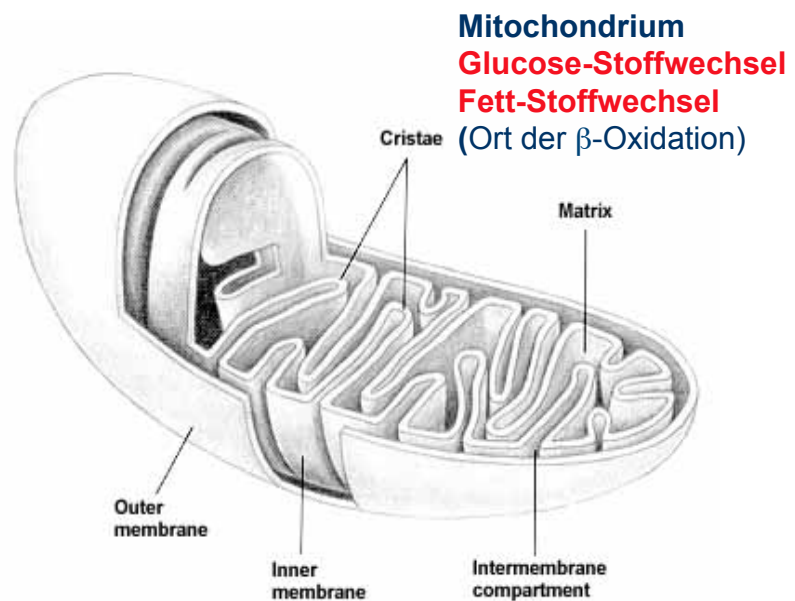
- ① Zellmembran
- ② Zellkern / Zytoplasma
- ③ Ribosomen
- ④ Endoplasmatisches Reticulum
- ⑤ Golgi-Apparat
- ⑥ Mitochondrien
- ⑦ Lysosomen / Peroxisomen

Quelle: Sandra Jent / Dipl. Ernährungsberaterin / Ausbilderin FA

2



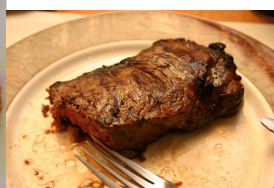
Aerober Energiestoffwechsel



3



Energielieferanten



Aminosäuren



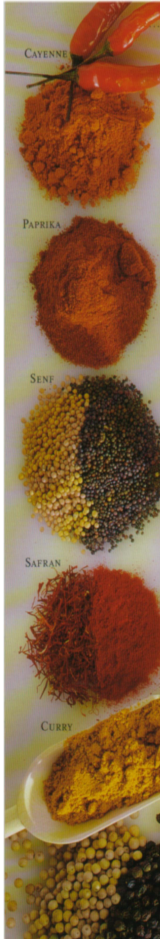
(Gluconeogenese)

Glukose



Fettsäuren

4



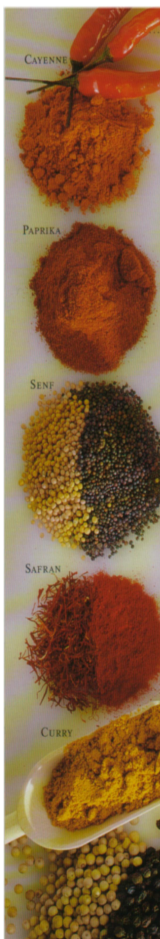
Definition Anabolie - Katabolie

Anabol = Aufbauend

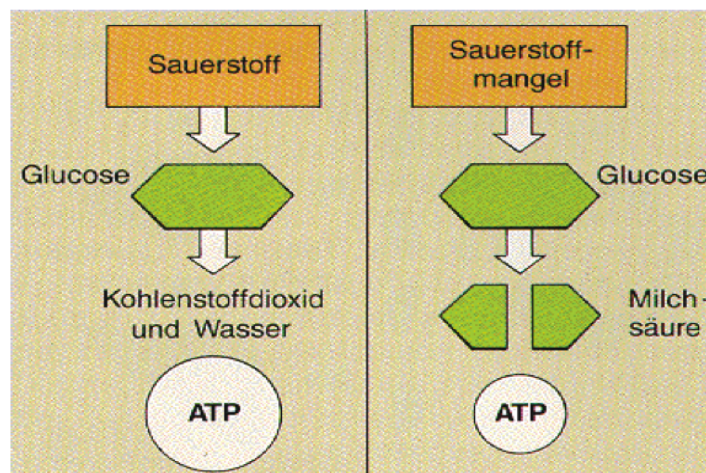
Katabol = Abbauend



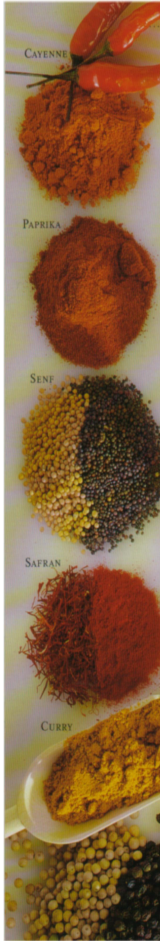
5



Energiegewinnung Aerob Anaerob



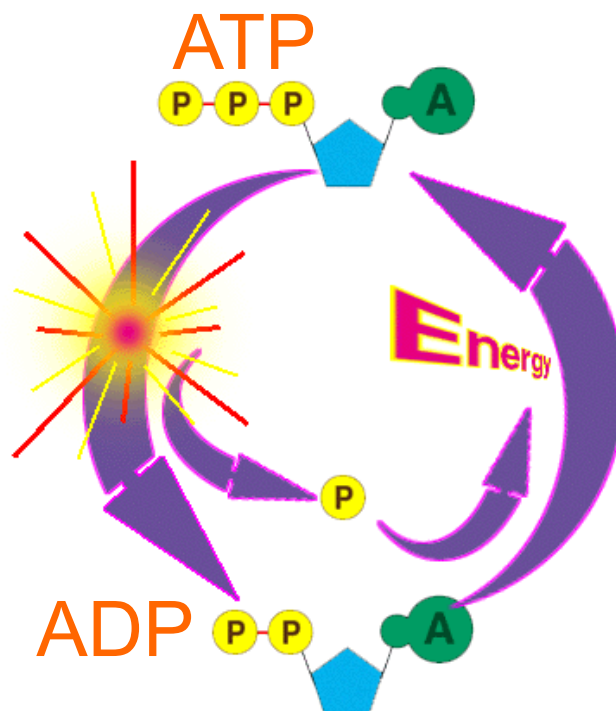
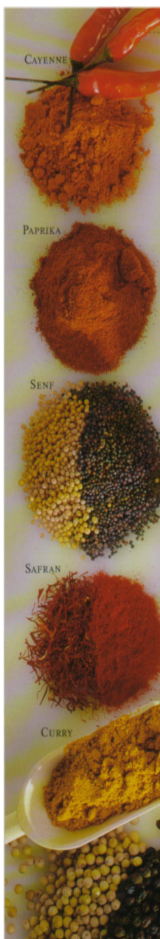
6



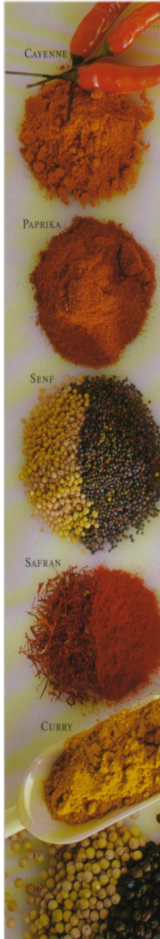
Drei Wege der Energiefreisetzung

1. **Anaerobe-alaktazide Energiefreisetzung**
Zerfall von ATP und KP ohne Beteiligung von Sauerstoff und ohne Lactatbildung
2. **Anaerobe-laktazide Energiefreisetzung**
3. **Aerobe Energiefreisetzung**

7



8

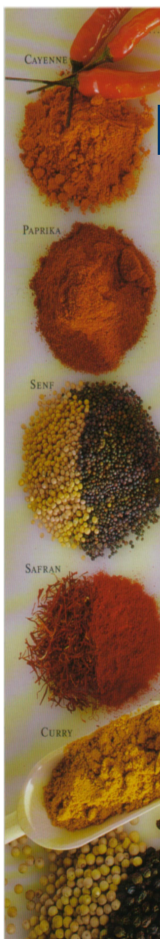


Energiequelle ATP



- sofort verfügbar
- sehr kleine Menge gespeichert
- => 1,5 kcal

9



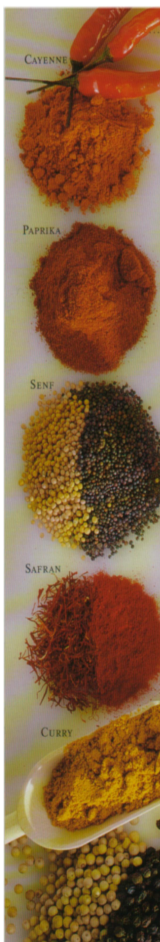
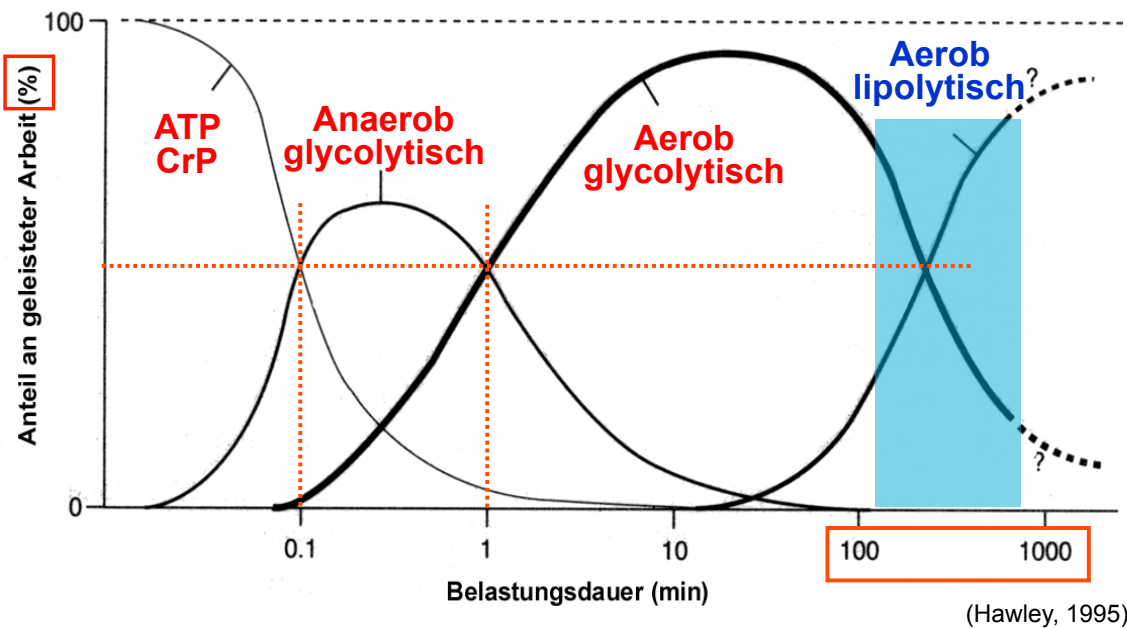
Energiequelle Kreatinphosphat



- sofort verfügbar
- kleine Menge gespeichert
- => 3,5 kcal

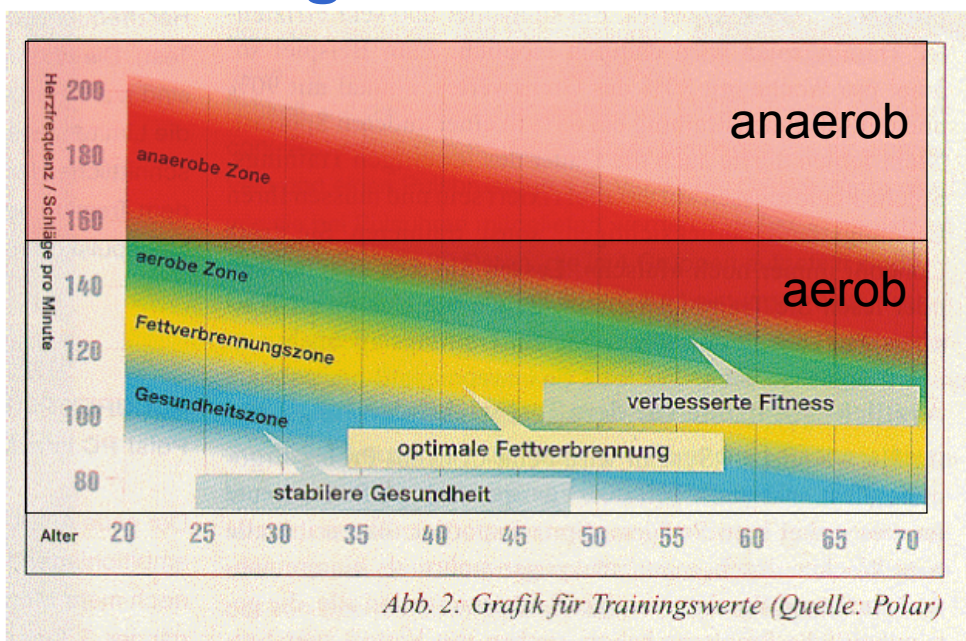
10

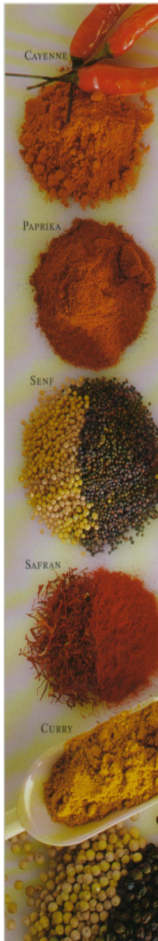
Energieliefernde Systeme



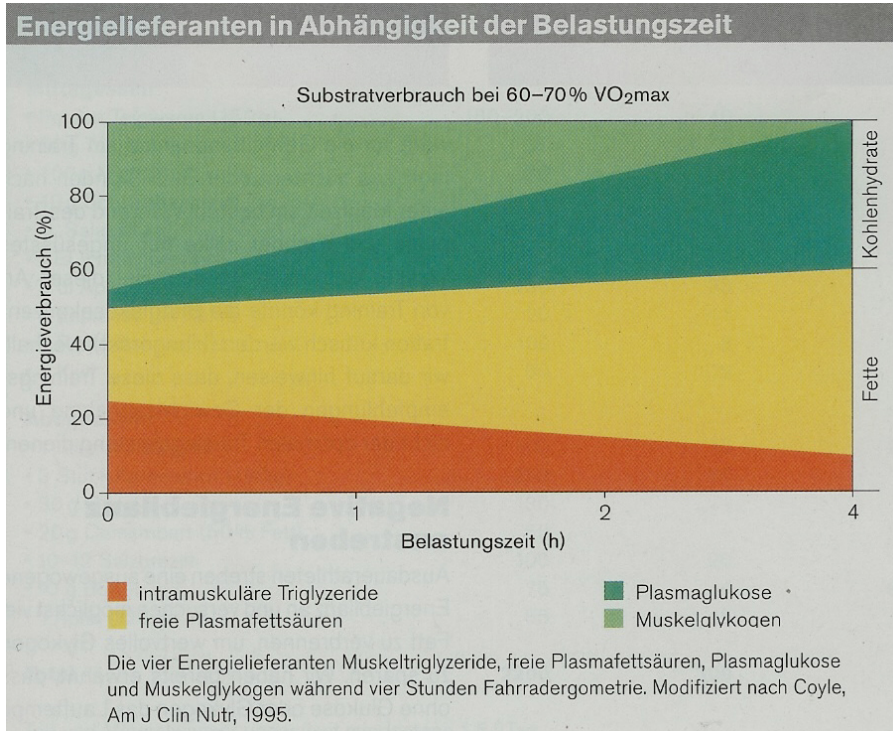
Aerobe und anaerobe Belastung

Ernährungsberatung
C i M E L i





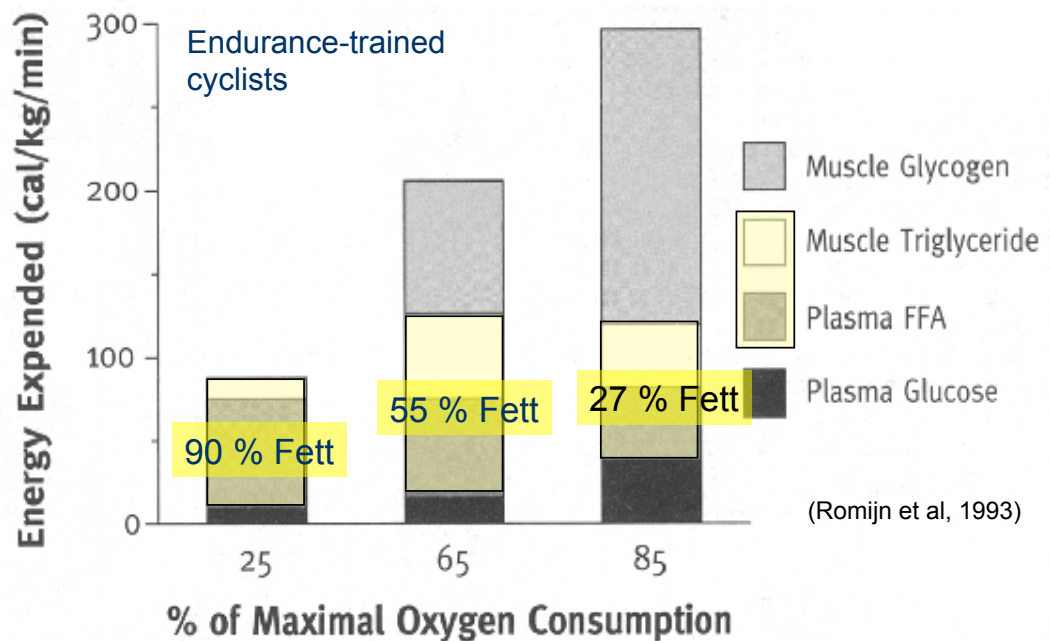
Energielieferanten



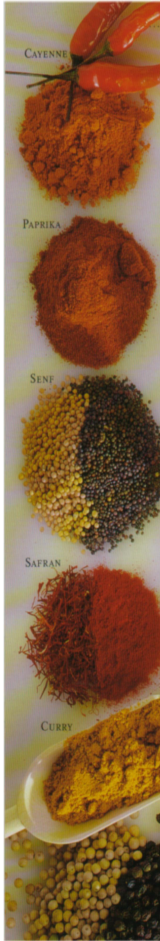
13



Energiebereitstellung während 30 min Veloergometer



14



Energiespeicher

ATP / KP

=

5 kcal

Fette

=

50`000 kcal

Eiweisse

=

Muskel

Glykogen

=

1200 kcal