

Plasma Composition

Osmolarity: 275-295mOsm/L
 Na⁺: 135-145 mmol/L
 K⁺: 3.5-5.3 mmol/L
 Cl⁻: 95-105 mmol/L
 Mg²⁺: 1.5 mmol/L
 Ca²⁺: 2.2-2.6 mmol/L
 Glucose: 3.5-5.5 mmol/L
 Bicarbonate: 24-32 mmol/L

Anaestheasier

Novice

Summary Sheet: IV Fluids

Maintenance Fluids



First
10kg

4ml/kg =



Next
10-20kg

2ml/kg =



>20kg

1ml/kg =

Hourly requirements =

Total Body Water

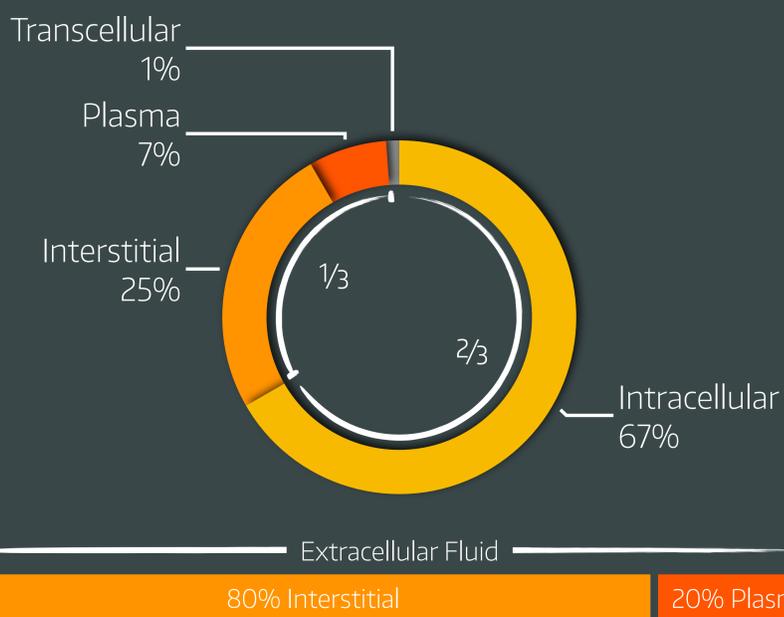


~60% body weight

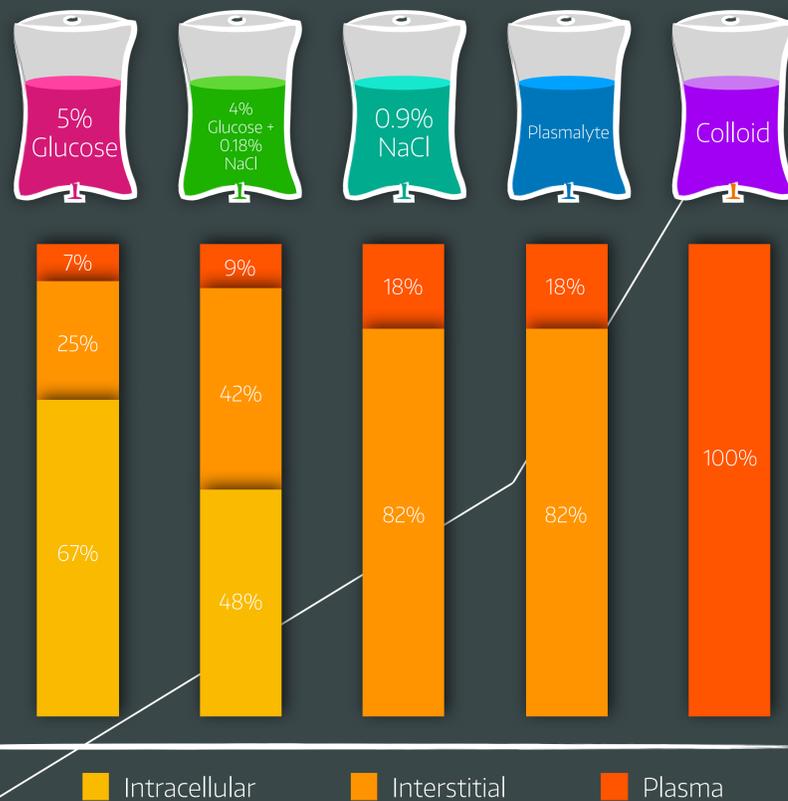


~50-55% body weight

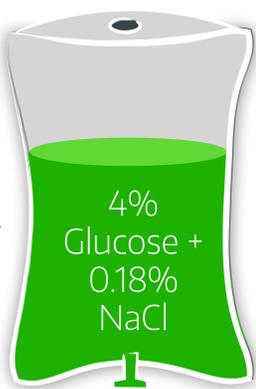
Body Fluid Compartments



IV Fluid Distribution



pH 3.5-5.5
278mOsm/L
Gluc 278



pH 4.5
308mOsm/L
Na⁺ 31
Cl⁻ 31
Gluc 222



pH 4.5 - 7.0
308mOsm/L
Na⁺ 154
Cl⁻ 154

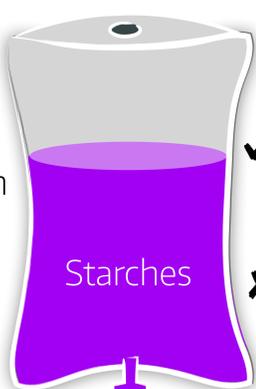


pH 7.4
308mOsm/L
Na⁺ 140
K⁺ 5.0
Cl⁻ 98
Acetate 27
Gluconate 23
Mg²⁺ 1.5

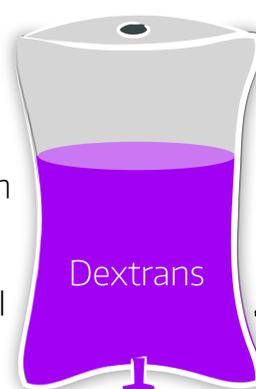
Crystalloids



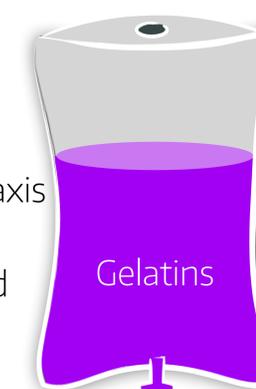
✓ Good plasma expansion
✓ Minimal side-effects



✓ Good plasma expansion
✗ ↓vWF & Factor VIII



✗ Renal failure
✗ Anaphylaxis risk
✗ Deranged clotting



✓ 2 hours plasma expansion
✗ Anaphylaxis risk

Colloids