

# ↑ LACTATE

## Type A

### ↓ Perfusion

Diffuse

- ↓BP
- Normotensive cardiogenic shock

Localized

- Mesenteric ischemia
- Compartment syndrome

### Cellular hypoxia

↓PaO<sub>2</sub>

↓HgB

- Severe anemia
- CO
- MetHgb

### ↑ Metabolic demand

- Seizure
- Shivering

## Type B

### ↓ Krebs cycle

Toxin

- ETOH
- Sepsis
- Cyanide

Meds

- Metformin
- Linezolid
- Propofol

Genetic

↓Thiamine

### Exogenous

- Propylene glycol
- Lactated Ringers + cirrhosis

### ↓ Gluconeogenesis

Liver disease

### ↑ Glycolysis

Cancer via Warburg effect

↑ Adrenergic state

- Albuterol
- Cocaine
- Caffeine
- Pheochromocytoma

