

NUTRITION FOR LONGEVITY

ENERGY SYSTEMS

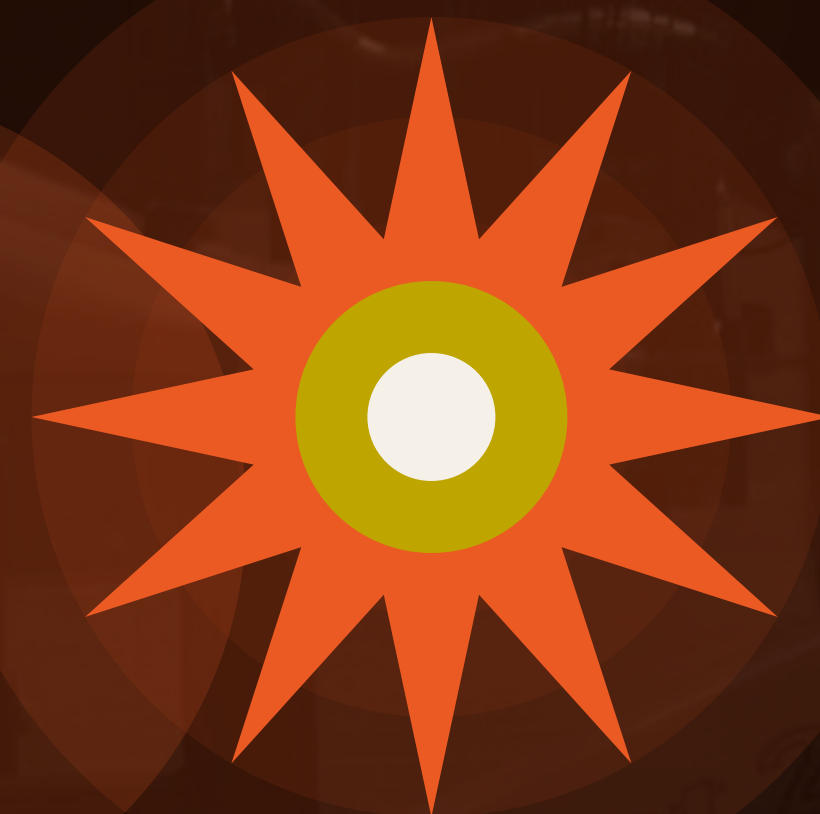
You don't burn fat or carbs. You burn energy.



CANDLE



MATCH



BOMB

THE HOOK

CANDLE. MATCH. BOMB.



CANDLE
OXIDATIVE

Steady. All day.

Low intensity, long duration



MATCH
GLYCOLYTIC

Quick. Minutes.

Moderate-hard, 1-20 min



BOMB
ATP-CP

Explosive. Seconds.

Max effort, 10-30 sec

THE FRAMEWORK

THE THREE ENERGY SYSTEMS

ATP-CP

Explosive power

10 - 30 sec

FUEL

ATP + creatine phosphate

USE

Sprints / jumps / max lifts

GLYCOLYTIC

Moderate - hard

~1 - 20 min

FUEL

Glycogen (carbs)

USE

Intervals / circuits / hard sets

OXIDATIVE

The long game

20 min +

FUEL

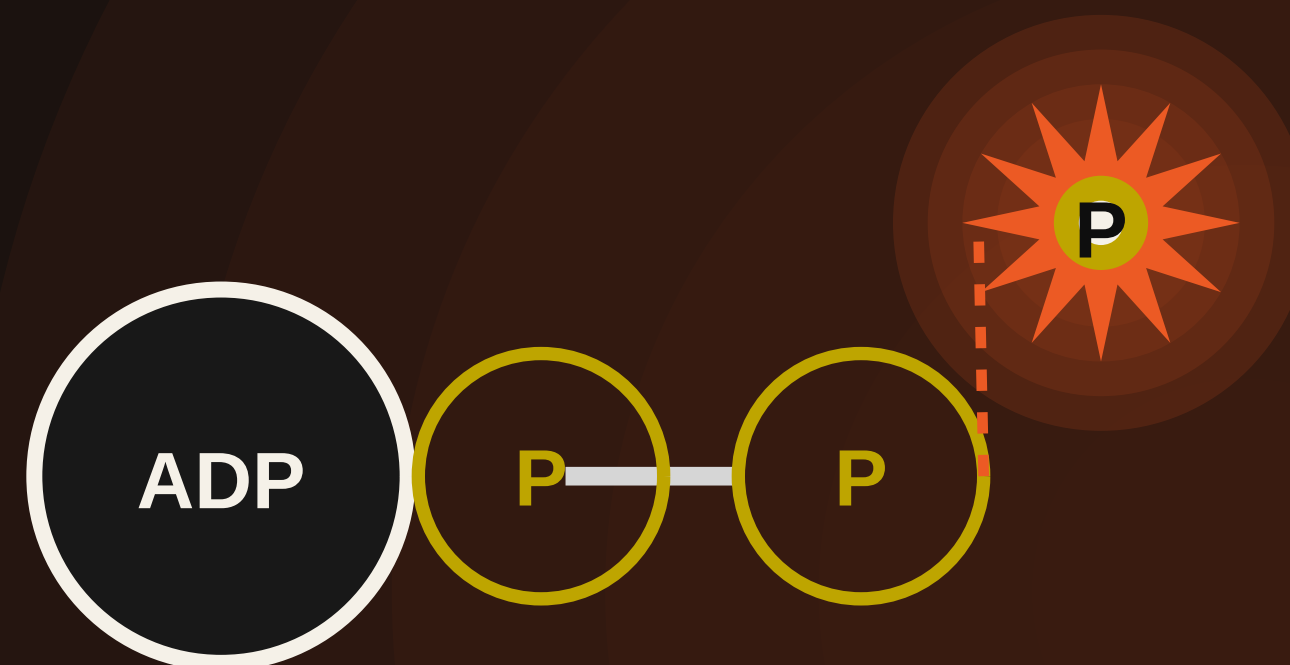
Fat (+ oxygen)

USE

Steady / low-mod / baseline

SYSTEM ONE

ATP-CP / EXPLOSIVE



10 - 30 SEC

your fastest pathway

- No oxygen. No glucose.
- Creatine phosphate recharges ATP.
- Power first - endurance irrelevant.
- Sprints, jumps, heavy lifts.

SYSTEM TWO

GLYCOLYTIC / MODERATE-HIGH

~1 - 20 MIN

zone 3 to zone 4



- Fuel: carbohydrate / glycogen.
- Where most people train.
- Intervals, circuits, hard sets.
- Demanding - and expensive.

SYSTEM THREE

OXIDATIVE / FAT OXIDATION

slow to rise, then it carries you



20 MIN +

high efficiency

- Low to moderate intensity.
- Long duration.
- Fuel: fat, with oxygen.
- Your baseline - right now.

THE CONTINUUM

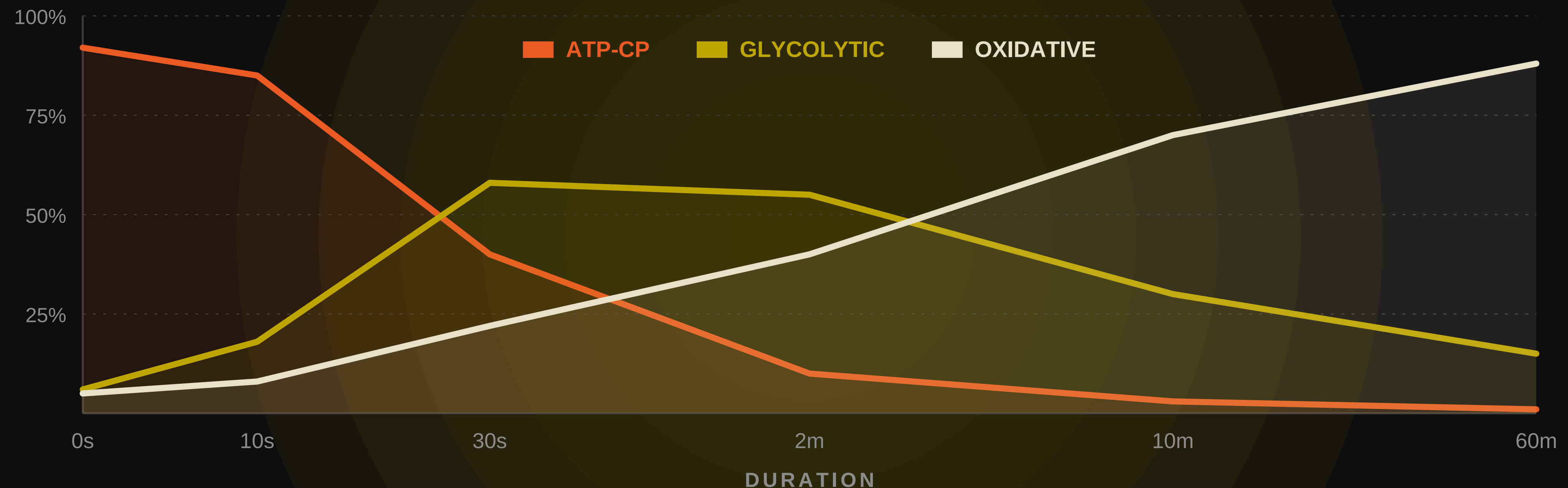
NOT SWITCHES - A DIAL



You're always using all three. Your body just turns the dial.

THE EVIDENCE

WHO FUELS WHAT, OVER TIME



Intensity and duration drive the system - not diet labels.