# Performance Gains

# General Calorie Guidelines for Swim Athletes (Based on a Typical 1-2 hour practice day)

## Girls

- 10-11 y/o
  - 2,300-2,800 calories
- 12-13 y/o
  - 2,520-3,020 calories
- 14-18 y/o
  - 2,700-3200 calories

## Guys

- 10-11 y/o
  - 2,700-3,200 calories
- 12-13 y/o
  - 2,900-3,400 calories
- 14-15 y/o
  - 3,100-3,800 calories
- 16-18 y/o
  - 3,500-4,000 calories

*Calorie needs are highly individual. Talk to your SSDL Nutrition Coach for more info!

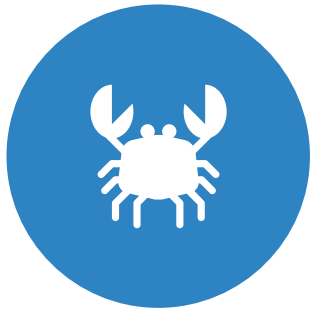
# Eat Enough

Min. 0.7g+/lb/day

2.7-4.5g/lb/day (more when training load increases)

20-35% of diet

*Macronutrient needs are highly individual. Talk to your SSDL Nutrition Coach for more info!



ZINC

MAGNESIUM

VITAMIN D

NITRATES

# Vary What You Eat

# Zinc

- Role in muscle + energy production, protein synthesis, muscle recovery
- Essential for healthy immune system
  - Enhances antioxidant activity → fights infection

# Magnesium

- Mineral that plays a part in:
  - Energy metabolism → converting food into energy
  - Muscle contraction
  - Protein synthesis
  - Regulating blood pressure
  - Cellular growth

# Vitamin D

- Functions like a hormone in the body for numerous processes
  - Bone health
  - Inflammation
  - Immunity
  - Protein synthesis

# Nitrates

- Increased blood flow allows for more oxygen + nutrients to be delivered to your muscles
- Studies have shown athletes experience improvement in both endurance and intensity during a workout, + shorter recovery times between training sessions

SLEEP

DE-STRESS

BE CONSISTENT

HYDRATE

# Recover

# Sleep

One study showed acute sleep deprivation led to:

- Anabolic resistance
- 18% decrease in MPS
- 24% decrease in testosterone
- 21% increase in cortisol

Study: Sleep extension with swimmers

# After extending time in bed to 10hr/night for several weeks collegiate swimmers showed improvements of

**+8%** 15m sprint speed

**+20%** reaction time off the block

**+10%** turn time efficiency

**+19%** kickstrokes

Extended Sleep and the Effects on Mood and Athletic Performance in Collegiate Swimmers.
Mah CD,Mah KE, Dement WC, Psychiatry and Behavioural Sciences, Stanford University, CA

# Sleep Recommendations

## 13u

- 9-11 hours

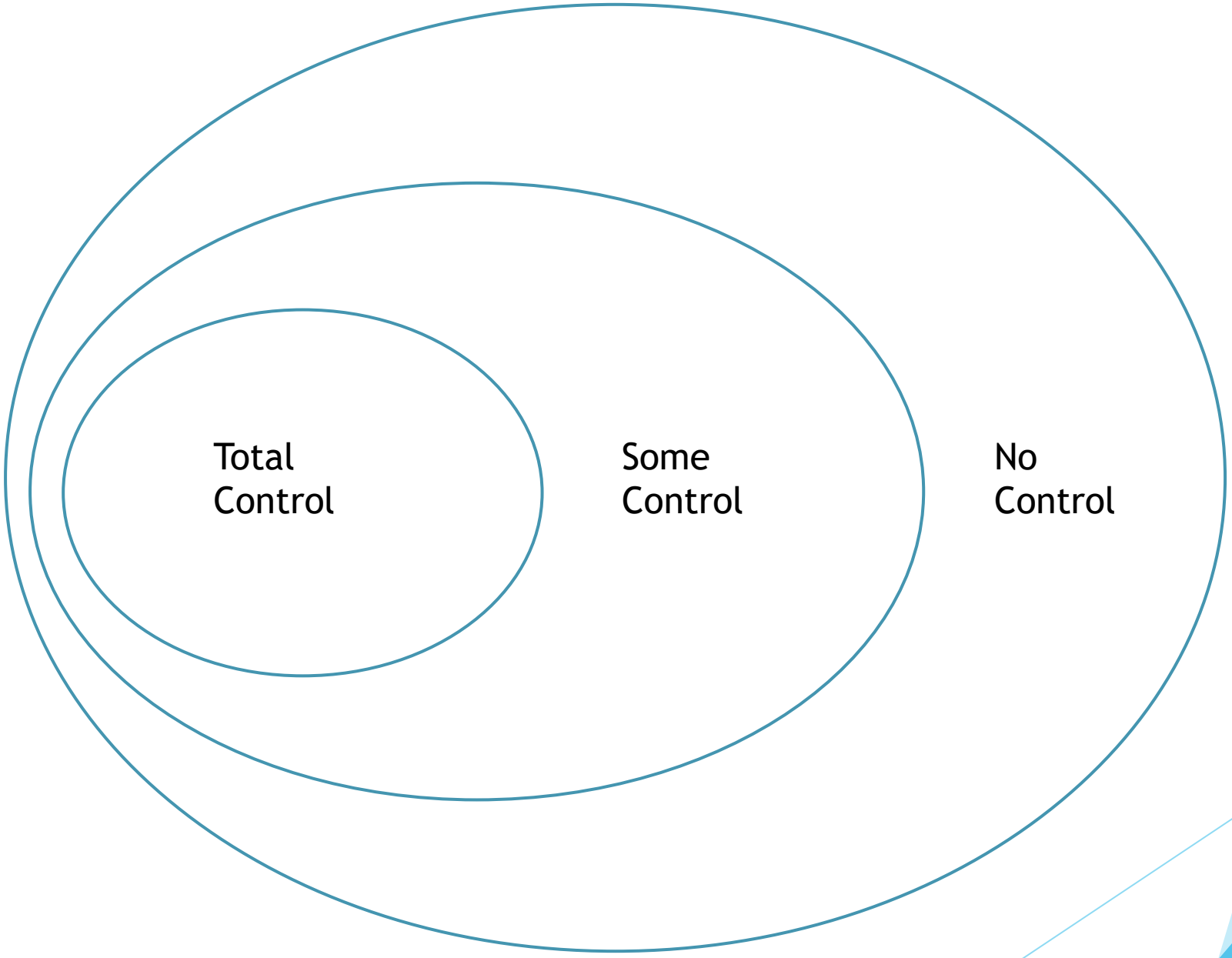
## 14+

- 8-10 hours

Chronic Stress can elevate cortisol

Cortisol breaks down muscle protein

# De-Stress


Total
Control
Some
Control
No
Control

# Be Consistent

One study showed increasing meal frequency in athletes led to:

- Increase in lean body mass by 1.2kg
- Decrease in body fat by 1.03%
- Significant increase in anaerobic power + energy output

# Hydrate

A small 2% drop in hydration levels will affect:

- Endurance
- Agility
- Speed
- Reaction time
- Mental clarity