

# SWIM, BIKE, RUN

What You Need To Know



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Endurance Journey  
Coaching

Our Learning Checklist

# WHAT WE'LL COVER IN THIS SERIES



What It Takes



Goal Setting



How To Train  
(Fit it all in)



Swim, Bike, +  
Run - What You  
Need To Know

Health Vs.  
Fitness

Nutrition For  
Training and  
Events

Event Day  
Planning

February Triathlon 101

# SWIM, BIKE, AND RUN

## WHAT YOU NEED TO KNOW



What we'll cover in this session...

①

Understand  
Forces

You + Gear =  
Speed

②

Technique + Gear  
Faster Swim

③

Bike Essentials -  
Effort, Technique,  
Gear

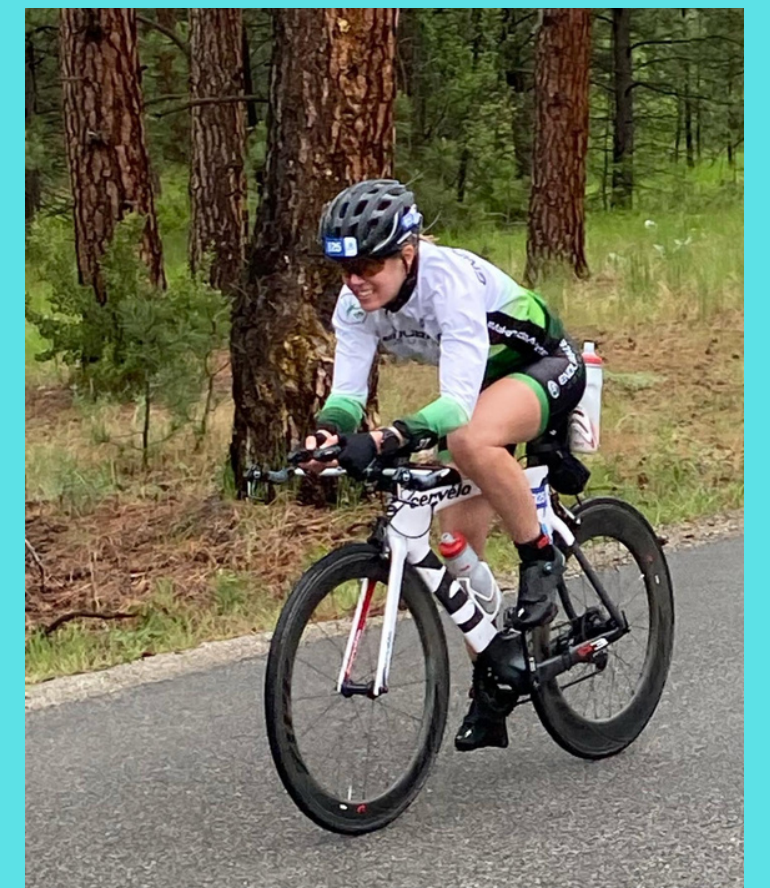
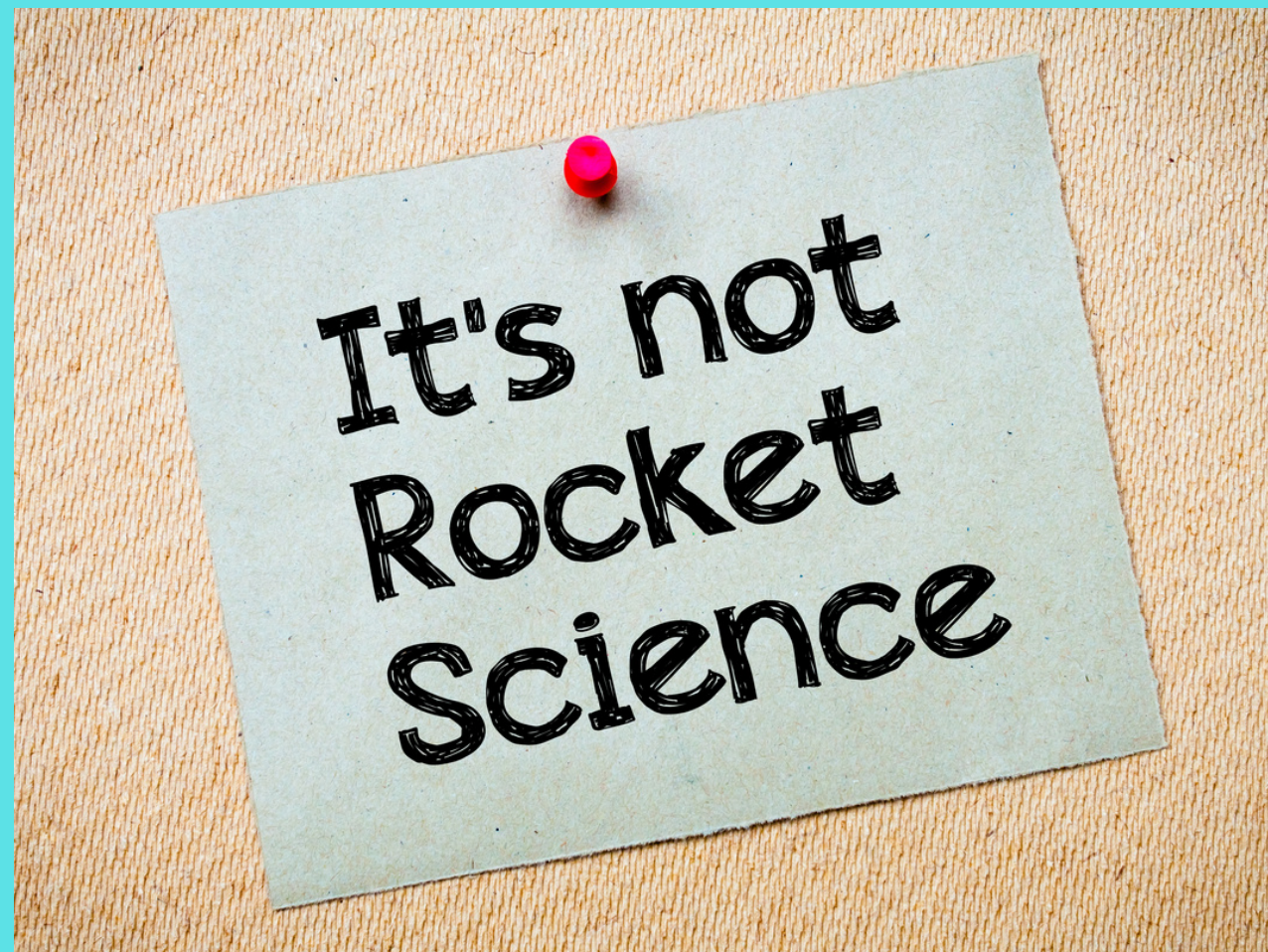
④

Faster Run - Tips  
and Gear

1

# BODY & MEDIUM

Your Effort Against Resistance



1

# BODY & MEDIUM

Your Effort Against Resistance



Body = Swimmer

Medium (Resistance) =  
Water, Air, Gravity



Body = Cyclist and Bike

Medium (Resistance) =  
Ground, Air, Gravity



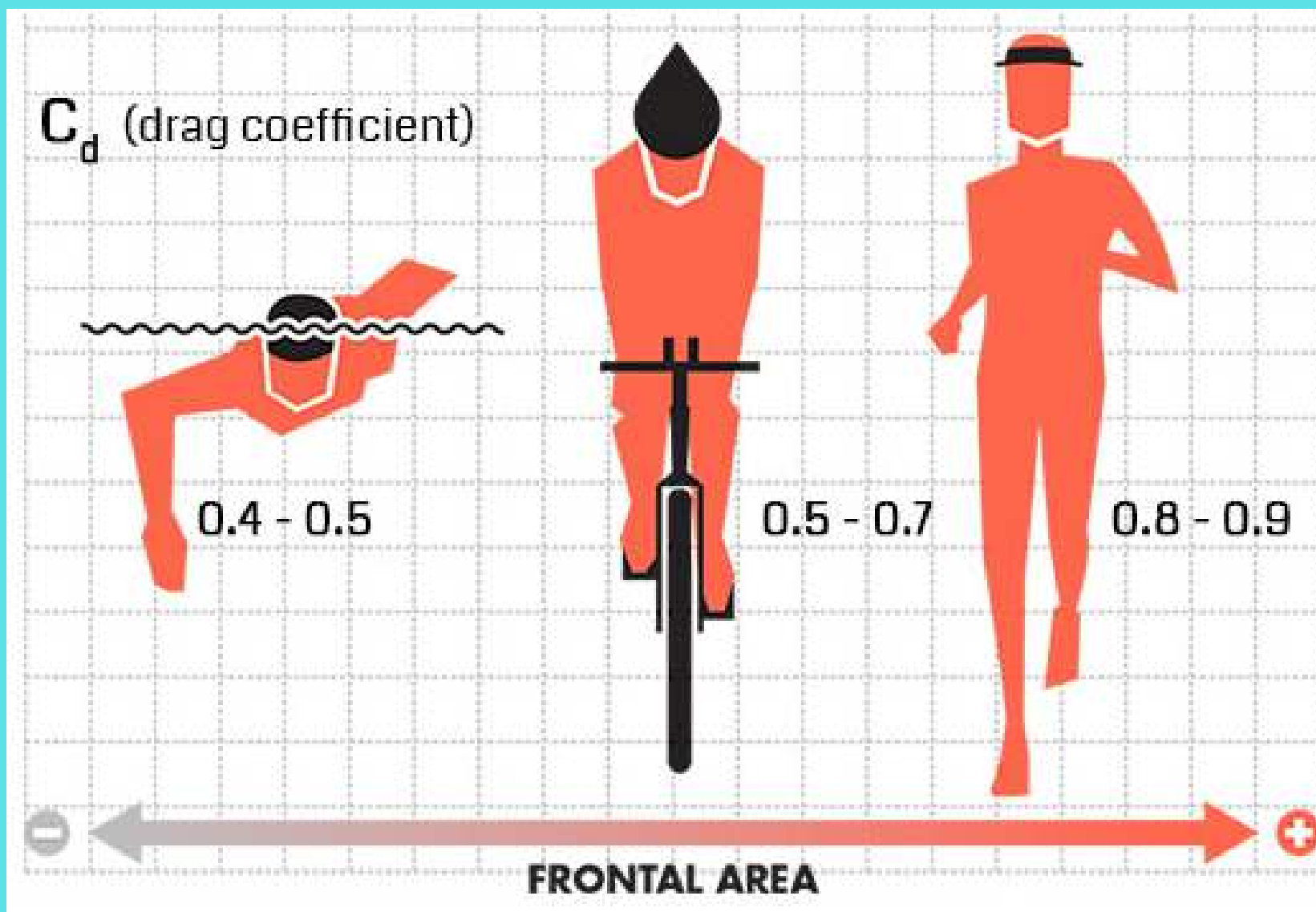
Body = Runner and Shoes

Medium (Resistance) =  
Ground, Air, Gravity

①

# UNDERSTANDING FORCES

Your size, speed, shape, orientation, and the density of the medium (i.e., air/water/ground) it moves through affects how fast the object is able to move



## Key Points

1. The Greater The Frontal Area - The Greater The Drag Force
2. The Greater the Friction (interaction between 2 surfaces) - The Greater The Force Required to Move Forward

①

# SWIM BIKE RUN BROKEN DOWN

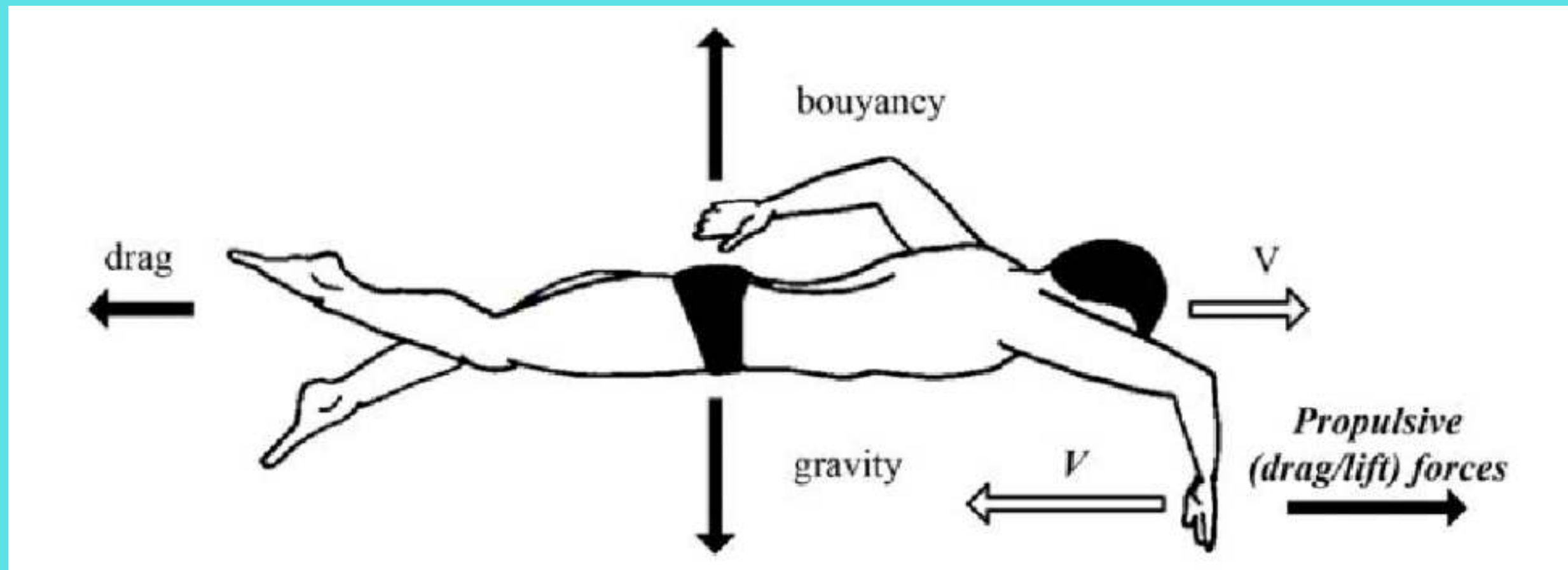
Technique + Consistent Effort  
(Sweat Equity)

Gear (Buy Speed)



# FASTER SWIM?

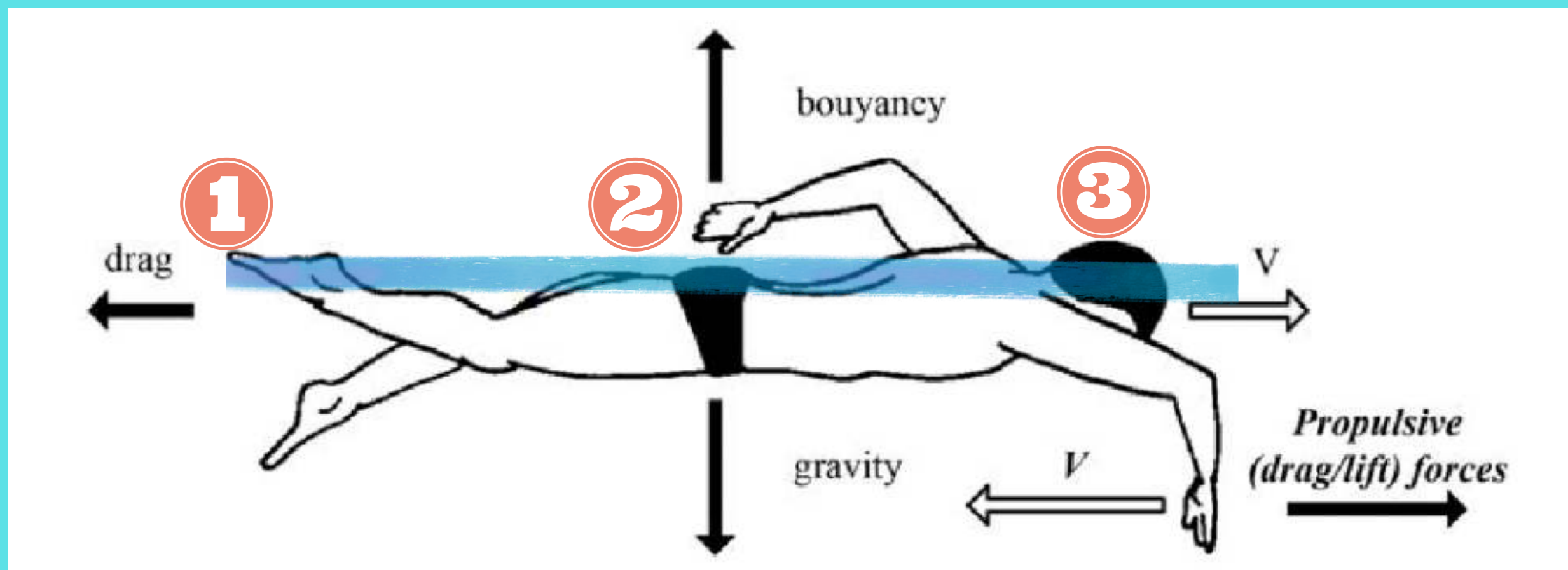
## IMPROVE TECHNIQUE



Source: Reaserch Gate

# FASTER SWIM - STEP #1

## 3 POINTS OF CONTACT



**Ideal Body Position For Least Frontal Resistance/Drag**  
Head, Hips, and Heels Contact the Surface of Water

2

# FASTER SWIM - STEP #1

## 3 POINTS OF CONTACT



Avoid High Head Position - Leading With Forehead High

2

# FASTER SWIM - STEP #1

## 3 POINTS OF CONTACT



**Ideal Body Position For Least Frontal Resistance/Drag**

**Head Stays Low to Keep Hips and Feet Up**

**When sighting - only goggles out**

2

# **FASTER SWIM - STEP #2**

## **ONE EYE BREATHING**

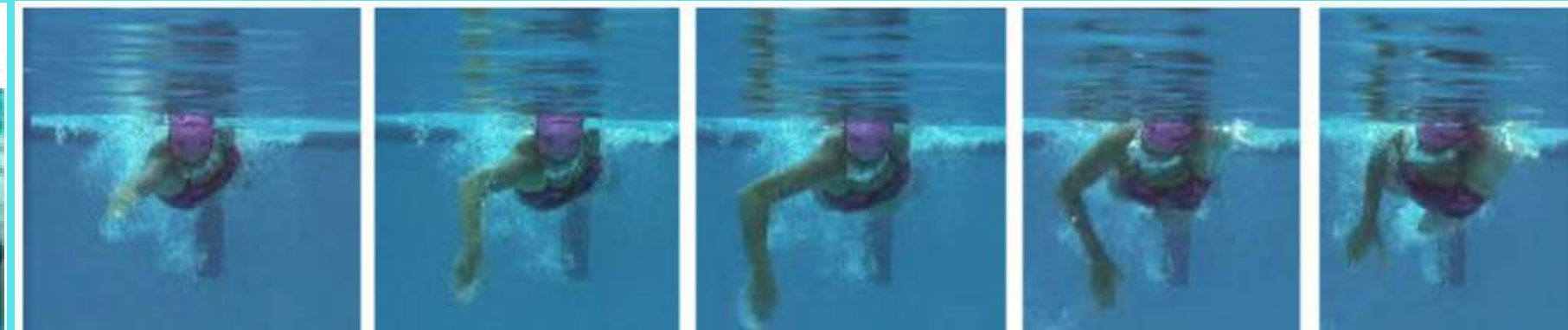
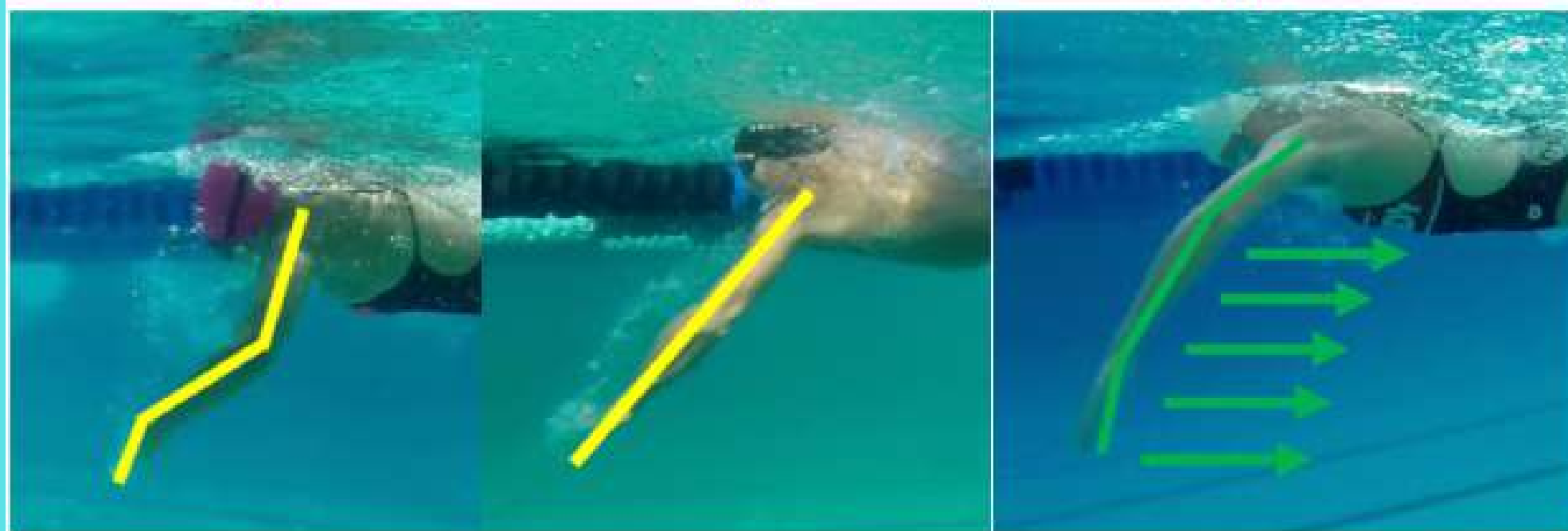


### **Key Techniques:**

- 1. Initiate the breathe by turning the chin to top side shoulder - bottom eye stay submerged**
- 2. Exhale and blow bubbles out the entire time head in water between breaths - helps to keep hips and feet closer to the surface and allows you to stay relaxed**

# FASTER SWIM - STEP #3

## HIGH ELBOW FOREARM PUSH



Source: Break Water Sports Training



Thumb Out , fingers slightly spread  
maximizing surface area

### Key Techniques:

1. Get forearm vertical (pointed to bottom) - Hand/wrist firm. Fingers slightly spaced apart to increase paddle side (5mm).
2. Push water straight back behind you.
3. Hands in tracks throughout the stroke to maintain alignment.

# FASTER SWIM

## GEAR AND TIPS

### Gear Considerations

- Goggles (clear+tinted), swimsuit, Wetsuit, Tri Suit, Swim Skin, Fins, Front Facing Snorkel, Pull Buoy - try before you buy when possible to ensure proper fit
- Wetsuit and swim skin - give you some more options regardless of conditions (i.e., cooler and warmer water conditions)
- Don't forget the chamois cream (chafing really sucks!!)



# FASTER SWIM

## GEAR AND TIPS

### Tips

- Practice, Practice, Practice - swim in groups when you can.
  - Open Water -
    - warm up always
    - get comfortable breathing in the water before you start swimming
    - practice sighting
  - Tri Swim Group/Master Swim Group - coaching helps!
  - Get used to sharing space and contact with other swimmers

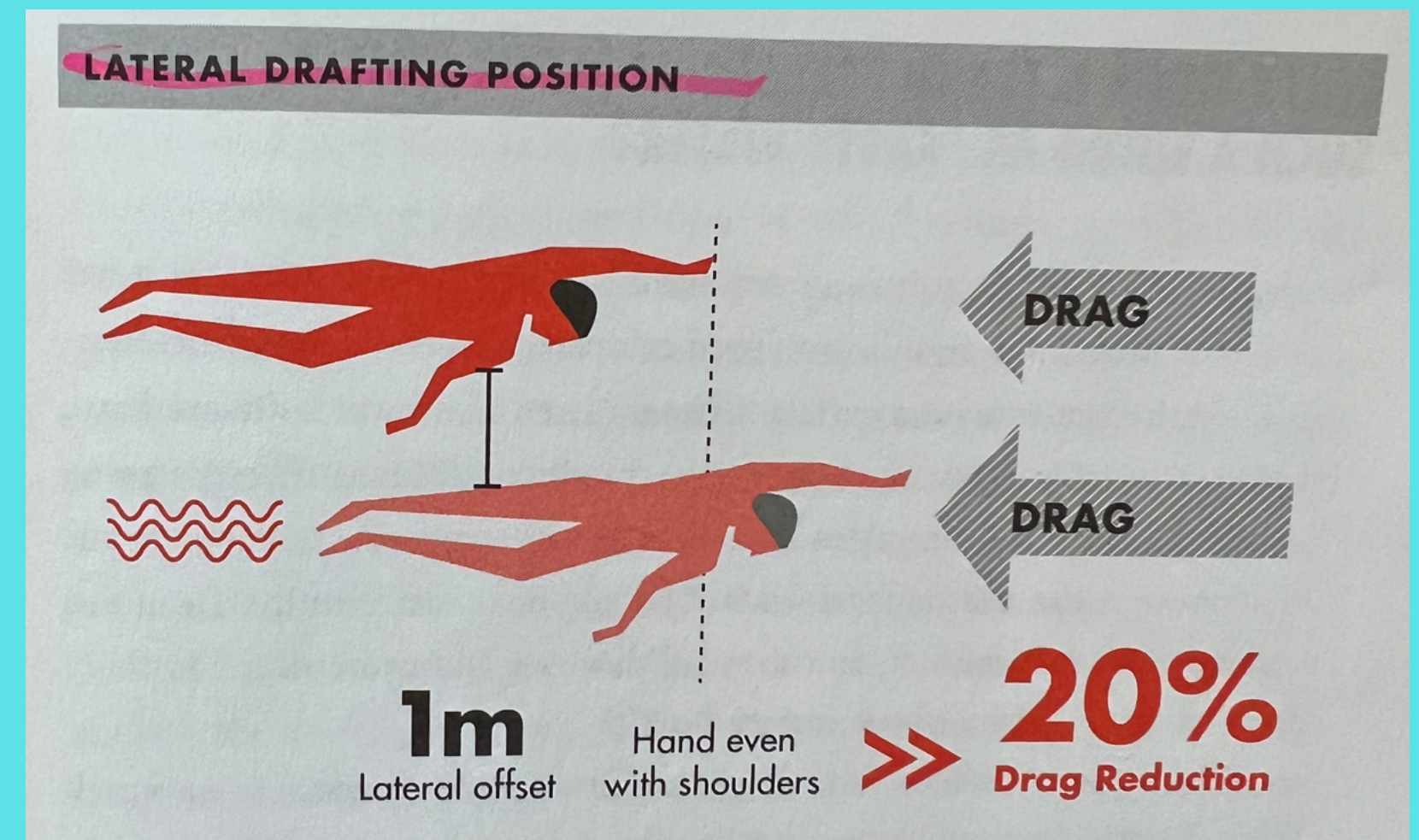


# FASTER SWIM

## GEAR AND TIPS

### Tips

- Swim the distance required for your event + 10% - race simulations can be helpful
- Practice Drafting (up to 20-30% drag reduction when a 1m or less behind lead swimmer)
- Practice Transitions (i.e., swim to bike) - learn how to change gear quickly and efficiently well before your event



Source: Jim Gourley - Faster: Demystifying the Science of Triathlon Speed

3

# Faster Bike

## Technique and Gear Considerations



1

Technique and tips -  
Master Easy and  
Moderate Before All  
Else

2

Prioritizing Your  
Gear - Choices

3

# Faster Bike

## Technique - Effort



## Master Easy and Moderate Efforts Before All Else

Zone	How does the effort feel?	Heart Rate % Of Threshold	Pace/Watts % Of Threshold
1	<ul style="list-style-type: none"> <li>• Easy</li> <li>• Comfortably able to talk in sentences</li> <li>• Moving the body to loosen up/recover</li> </ul>	<68%	<55%
2	<ul style="list-style-type: none"> <li>• Moderate</li> <li>• Can talk in broken sentences</li> <li>• A comfortable effort for the duration of the session</li> <li>• Eat and drink comfortably at this effort</li> </ul>	69-83%	56-75%
3	<ul style="list-style-type: none"> <li>• Moderate Hard/Tempo</li> <li>• Can say words but not sentences</li> <li>• 10 to 60 min intervals</li> </ul>	84-94%	76-90%
4	<ul style="list-style-type: none"> <li>• Hard/Threshold</li> <li>• Breathing is heavy/difficult to talk</li> <li>• 5 to 20 min intervals</li> </ul>	95-105%	95-105%
5	<ul style="list-style-type: none"> <li>• Fast/Sprints/Strides</li> <li>• Completely focused on the effort</li> <li>• Fast with great technique and form</li> <li>• 30 seconds or less</li> </ul>	>106%	>106%

- Learn how to pedal, sustain easy to moderate effort, over your planned distance before adding red zone intervals
- Finish your training sessions feeling like you could do a little bit more
- Heart rate and power can be useful tools once you master effort

3

# Faster Bike

## Technique - How to Pedal in 3 Steps



1

**“Kick the ball”**: At the top of the pedal stroke imagine you are kicking a ball, this will bring your foot through quicker

2

**"Scrape the mud off your shoes"**: At the bottom of the pedal stroke imagine scraping the mud off your shoes as you pull the pedal back

3

**Unweight the pedal in recovery**: During the recovery phase don't waste energy “pulling up” but do unweight the pedal so that your pedaling action becomes smoother

3

# Faster Bike

## Technique - 2 Pedal Technique Drills Sets To Practice



1

**Slow Cadence Drills** – Climbing at 40-50RPM will help identify dead spots in your pedalling technique

2

**High Cadence Spin Ups** – Spinning up from 90RPM to the point where you bounce in the saddle will help smooth out your pedal stroke

**\*For Each Drill- Limit upper body movement**

### Practice Set:

Start with 30 seconds intervals with 30 seconds to 1 minute easy effort spinning between each

- Begin with a total of 5 minutes and work up to 20 minutes

***Always finish feeling like you can do more***

3

# Faster Bike

## Technique - Shifting Gears Well Is a Skill



1

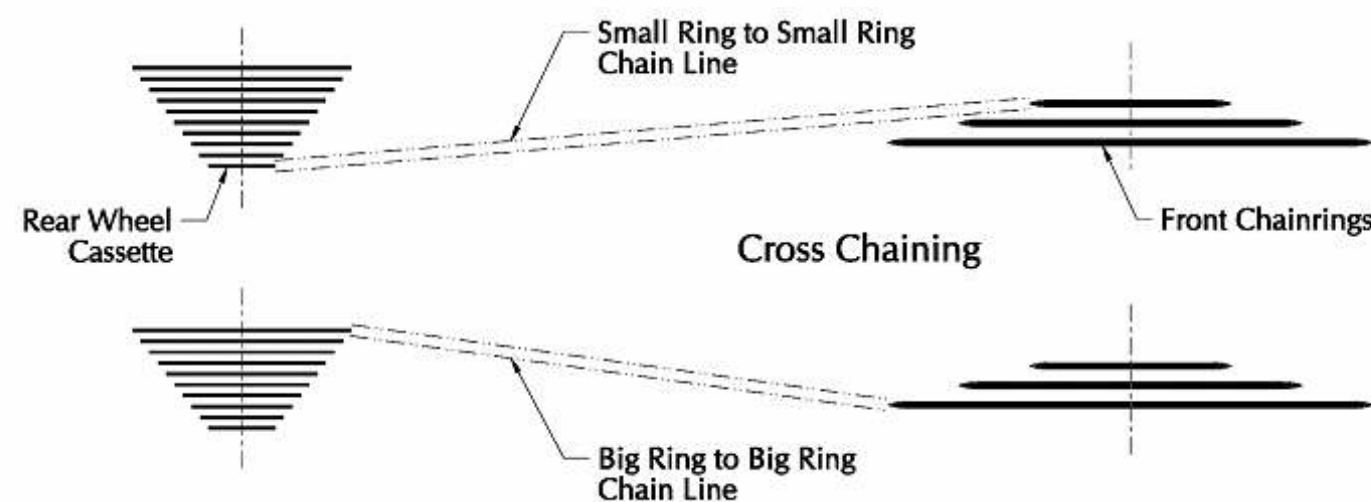
Learn to ride in a gearing that allows you to maintain the maximum speed while at an easy to moderate effort on various types of terrain (e.g., flat vs uphill vs standing)

2

Take note of the cadence that you normally ride at - most triathletes ride between 75-95 RPM depending on the conditions and terrain

3

Avoid Cross Chain Gearing



3

# Faster Bike

## Position and Comfort Matter



1

One of the best investments you can make it to get a professional bike fit

- e.g., RETUL Bike Fit

2

If you have the option on your bike, learn to ride in the upright and aero positions comfortably for prolonged periods

- Get efficient and comfortable in aero position (in aero bars or drops) - less drag to go faster in this position
- and drink from your water bottle too

3

Learn to take big deep breaths when you are cycling easy/moderate to manage your effort

3

# Faster Bike

## Gear Priorities



- 1 Helmet** - Proper fit, ANSI/SNELL approved. Check for cracks, deformities, or broken/ripped straps and replace as needed prior to use
- 2 Operational bike** - tune up, bike fit, bottle cages
- 3 Bike Shoes/Cleats/Pedals (i.e., clipless pedals)** - Worth the investment to help transfer power to pedals and save your arches from stress.

3

# Faster Bike

## Gear Priorities



**CHECK OUT**

**<https://www.dcrainmaker.com/>**  
**for excellent gear and tech reviews**

4

**Bike or Tri Shorts/Jersey** - Take care up (and down) there...need I say more.



5

**Chamois Creme** - again your friend you should never forget



6

**Indoor Trainer (smart, fluid magnetic):**

- Convenience of riding your bike at home
- easier to stay consistent with your riding in the winter months or if there is really poor weather during outdoor season.
- many indoor cycling group option to join

4

# Faster Run

## Technique and Gear Considerations



**1** Technique and tips -  
Master Easy and  
Moderate Before All  
Else

**2** Prioritizing Your  
Gear - Choices

4

# Faster Run

## Technique - Effort



## Master Easy and Moderate Efforts Before All Else

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4

# Faster Run

## Technique - How to Run Better in 4 Easy Steps



1

**"Run Tall"**: Keep as much space as you can between your ribs and your hips

2

**"Chest Up, Chin Back"**: Even a slightly forward neck and head posture negatively affects your running efficiency. Eyes ahead, never down

3

**"Thumbs Scrape Bottom of Ribs"**: Keeps your arms a comfortable angle and allows you to quickly increase arm swing speed to increase leg speed - *quick arms, quick feet!*

4

**"Feet Land Under the Hips"** - prevents overstriding and limits foot contact time on the ground (cadence + 5)

### Run Form Focus Practice Session:

- Start with 30 second to 1 minutes intervals with 1 to 2 minutes easy effort running between each
- Begin with a total of 5 minutes and work up to 20 minutes

***Always finish feeling like you can do more***

4

# Faster Run

## Gear - some essentials



1

### Tri Shorts Run Shorts/Top

- can where your tri suit save time
- cycling top, tri shorts
- or separate run top

2

### Comfortable Running Shoes

#### (+socks), hat, and Speed Laces:

Allows for easy transition between bike and run

3

### Chamois Creme - enough said



4

### Practice bike run "brick" sessions

throughout the year: this will help prepare you for the unique feeling and use your gear most efficiently

February Triathlon 101

# SWIM, BIKE, AND RUN

## WHAT YOU NEED TO KNOW



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①

Understand  
Forces

You + Gear =  
Speed

②

Technique + Gear  
Faster Swim

③

Bike Essentials -  
Effort, Technique,  
Gear

④

Faster Run - Tips  
and Gear

# THANK YOU!



## NEED SOME HELP? CONTACT ME HERE...



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