



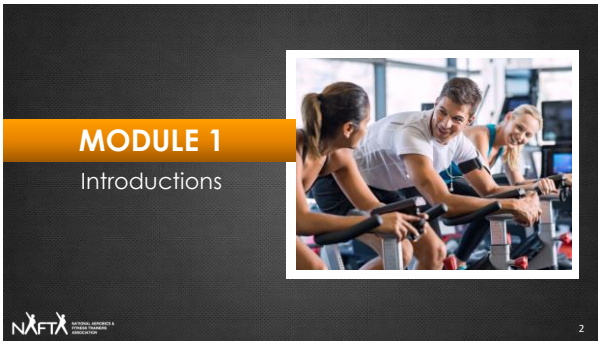
Power Cycling
NAFTA TRAINING




NAFTA NATIONAL ASSOCIATION OF FITNESS TRAINERS & INSTRUCTORS

This slide features a photograph of a man and a woman on stationary bikes in a gym. The text 'Power Cycling' is in a large, bold font, with 'NAFTA TRAINING' below it. The NAFTA logo is in the bottom right corner.

1



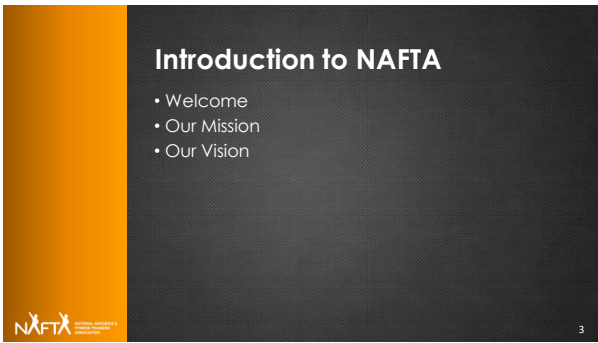
MODULE 1
Introductions



2


This slide features a photograph of a man and a woman on stationary bikes. The text 'MODULE 1' is in a large, bold font, with 'Introductions' below it. The NAFTA logo is in the bottom left corner.

2



Introduction to NAFTA

- Welcome
- Our Mission
- Our Vision



3

This slide features a dark background with an orange vertical bar on the left. The text 'Introduction to NAFTA' is in a large, bold font. Below it is a bulleted list: 'Welcome', 'Our Mission', and 'Our Vision'. The NAFTA logo is in the bottom left corner.

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Recertification Requirements

- Certification Requirements
 - 2 Years
 - 15 CEUS
 - 1 Home study
 - CPR/AED





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Introduction to Power Cycle


- Johnny Goldberg (Johnny G)
- 1980s
- 1994
- 2004
- 2015



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THIS CONCLUDES
MODULE 1



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MODULE 2
Let the Journey Begin



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Let the Journey Begin

- Power Cycling Definition
- Power Cycling Benefits

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Equipment Selection

- Footwear Guidelines
- Apparel Guidelines
- Towel
- Water Bottle


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The Science of Power Cycling

- Physiology of Power Cycling
- Workload and Cadence
- Intensity For Health Benefits




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Biomechanics of Power Cycling


- Maximize Propulsive Force
- Fitting Guidelines for Interfacing



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THIS CONCLUDES
MODULE 2



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MODULE 3
The Bike



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Power Cycling: Let the Journey Begin

- Basic Bike
- Multi Position Fore/AFT Adjustment
- 1/2 inch increment height adjustment



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Bike Set Up

- Seat Set Up
- Handlebar Set Up

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Seat Set Up



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Heel Check



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Saddle Fore/Aft/Plum Line



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Seat Plum Line




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Handle Bar Set Up



DISTANCE MUST ALIGN WITH ARM

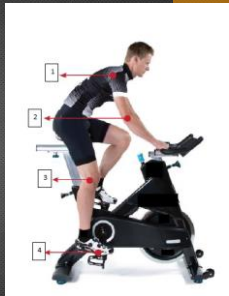
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Proper Bike Set Up

- 1. Relaxed Shoulders
- 2. Slight Bend in the elbows
- 3. Knee at 25-35 degree of flexion at bottom of the pedal stroke
- 4. Ball of the foot over the pedal spindle




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THIS CONCLUDES
MODULE 3



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MODULE 4
Hand Positions



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Hand Positions on the Bike



INDOOR CYCLING BASICS
Hand Positions

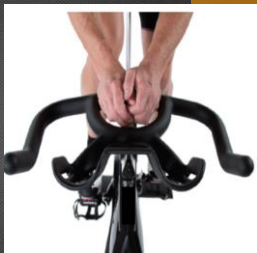


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Hand Positions

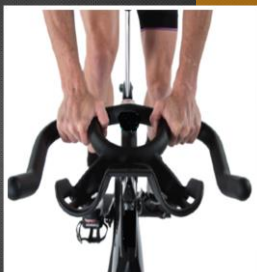
- Hand Position for Seated Run



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Hand Positions

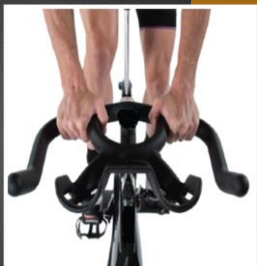
- Hand Position for Seated Climb and Standing Run



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Hand Positions

- Hand Position for Seated Climb and Standing Run



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Hand Positions

- Hand Position for Standing Climb



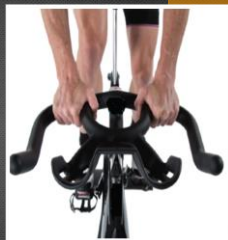
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Hand Position-1



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Hand Position-2



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Hand position-2.0 and 2.5




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Hand position-3.0



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MODULE 4

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MODULE 5
Safety



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Minimize Orthopedic Stress

- Knees
- Neck
- Back
- Wrists and Hands
- Pelvic Floor
- Feet

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Minimize Orthopedic


- Neutral Alignment
- Proper Biomechanical Setup
- Assistance of the Diaphragm

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THIS CONCLUDES
MODULE 5



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MODULE 6
 Psychology of Power Cycling





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Psychology of Power Cycling

- Outstanding Leadership
- Commitment to Goals
- Relaxed and Positive
- Communication




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Tools For Effective Leaders

- Voice Tone
- Verbal Instructions
- Visual Images
- Music




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Motivational Methods

- Establish Rhythm and Mood
- Use Directors and Cueing Layers
- Visualization and Distractions for Coping Strategies
- Visualization for the Ride




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Rules of the Road

- Guidelines for Instructors
- Guidelines for Riders
- Training for Weight Loss
- Exercise Intensity




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Guidelines for the Instructor

- 20-27 Strokes for 15 seconds
- Cadence Building
- Increase RPM
- Constant Level of Resistance
- Resistance Loading
- Increase Resistance
- Rhythm Release
- Bottoming Out




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Breathing Through the Nose


- Filters
- Hydrates
- Warms the Oxygen



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THIS CONCLUDES
MODULE 6



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MODULE 7
Positioning
on the Bike



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Torso Position
• Idea Torso Position
Neutral Spine



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Torso Position
• Incorrect Position



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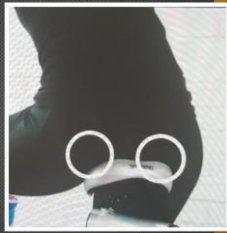
Handlebar Height-Incorrect

- Incorrect Position



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Seated Position




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Correct Image on the Bike



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THIS CONCLUDES
MODULE 7



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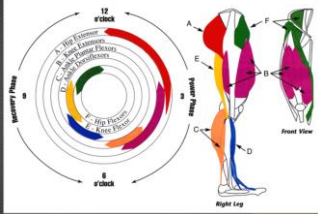

MODULE 8
Cadence and Pedal Stroke

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Muscle Phases

58

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Foot Positions

1. HIP EXTENSION
2. HIP FLEXION
3. ANKLE PLANTAR FLEXION
4. ANKLE DORSIFLEXION
5. ANKLE FLEXION
6. HIP FLEXION

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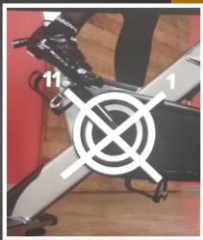
Pedal Position

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Pedal Position

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Pedal Strokes-
Quadrant 1:
11-1




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Pedal Position-
Quadrant 2:
1-5

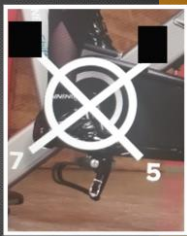


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Pedal Positions-
Quadrant 3:
5-7



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**Pedal Position-
Quadrant 4:
11-7**



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Pedal Stroke

- 20-27 Strokes for 15 seconds

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RPM Recommendations

- Flat-80-110 RPM
- Hill-60-80 RPM
- Pedaling Higher than 110 RPM-Unsafe
- Pedaling Lower than 60 RPM-Unsafe

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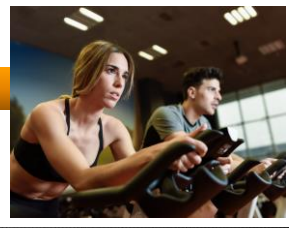
THIS CONCLUDES
MODULE 8



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MODULE 9
Let the Rides Begin



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Seated Climb



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Seated Climb 60-80 RPM
15-20 STROKES for 15 SECONDS x 4 = 60-80 RPMS



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Standing Positions



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Running on a Hill
Cadence: 60-80 rpm
Hand Position: 2 or 2.5



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Standing Climb



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Standing Climb


Cadence: 60–80 rpm
Hand Position: 3

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Jumps



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Jumps
Cadence: 60–80 rpm
Hand Positions: 2, 2.5 and 3

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THIS CONCLUDES
MODULE 9

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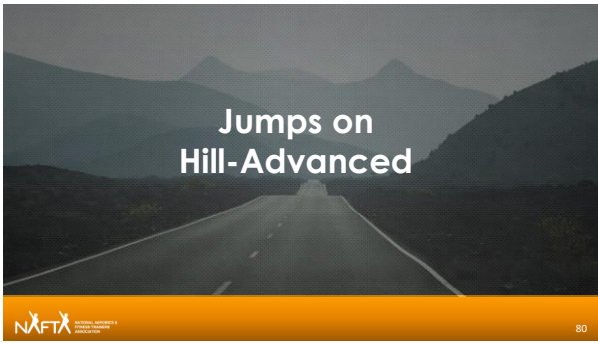
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MODULE 10
Advanced Movements



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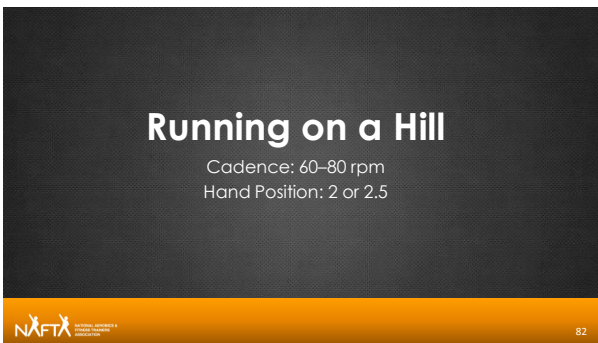
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80




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Sprints on a Flat



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Sprints on a Flat
Cadence: 80–110 rpm
Hand Positions: 2, 2.5, and 3



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Sprints on a Flat
6 Weeks before attempting sprints



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THIS CONCLUDES
MODULE 10



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MODULE 11
Unsafe/Excessive
Movement

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Hovering

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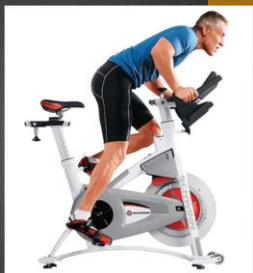
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Popcorn Jumps

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Pushups



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Side to Side Leaning

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Weight Lifting



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Seated Riding in Hand Position 3




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Aerodynamic Riding




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Riding with
1 Hand or
No Hands



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Squats and Hovers and
Isolated Movements



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Pedaling Backwards



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One Foot on Cage




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No Seat



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MODULE 11

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MODULE 12
Cycling Sessions,
Techniques and
Positions



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Common Cycling Terms

- Cadence & RPM
- Saddle
- Gear Up
- Resistance Mechanism
- Resistance
- Power
- Power Phase
- Push Point

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Typical Riding Techniques and Positions

- Seated Flat
- Seated hill
- Standing hill
- Sprinting
- Jumping

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MODULE 12



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MODULE 13
Delivery




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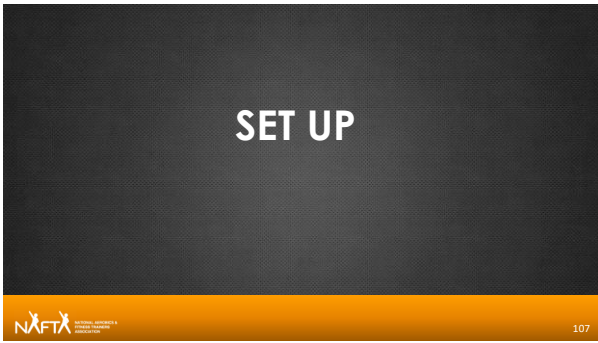
Four Basic Sections to a Workout

- Set Up
- Warm Up
- Presentation
- Cool Down

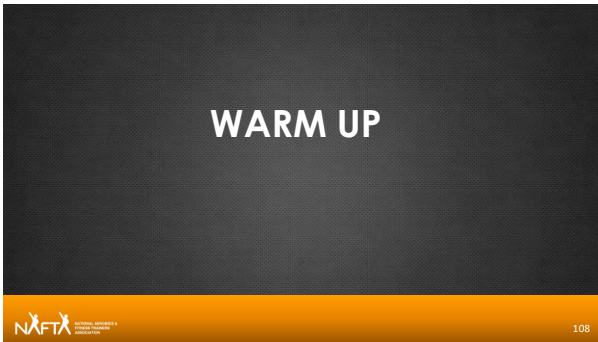


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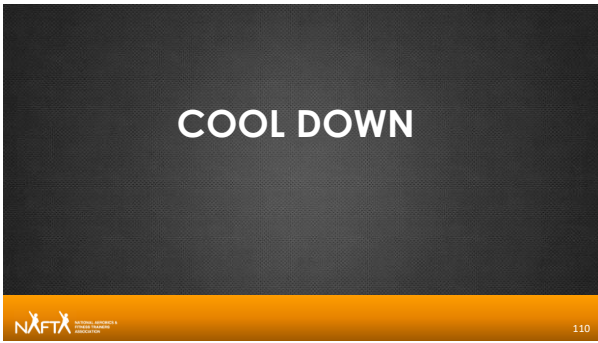
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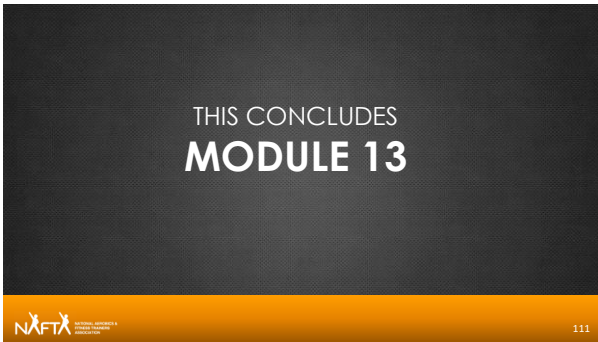
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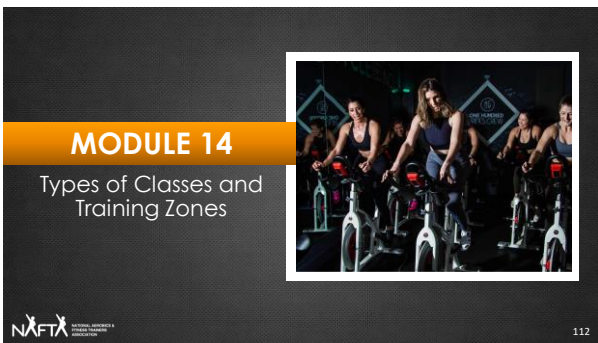
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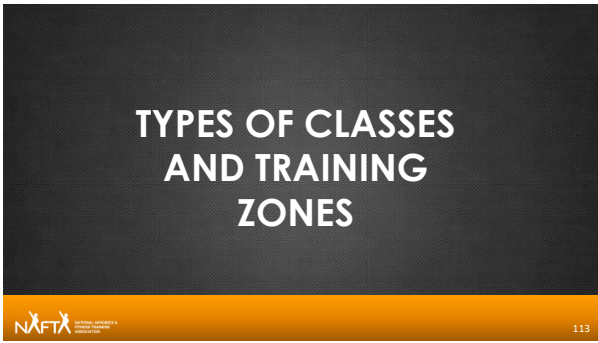
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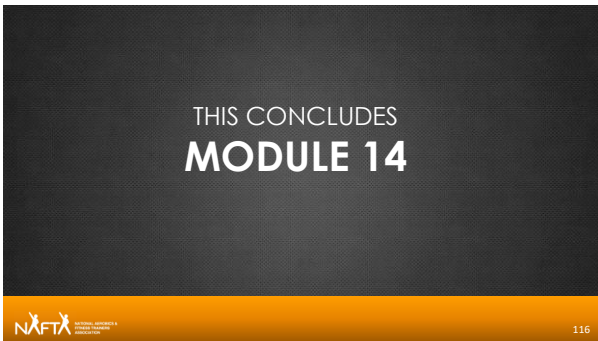
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Movement	Hand Position	Resistance Level	Cadence	Terrain	Energy Zone	Heart Rate Range	Perceived Exertion
Seated Flat	1, 2, 3, 5	Light/Moderate	80-110	Flat Road	All	50-70%	Easy to Moderate
Standing Push/Pulling	2 or 2.5	Moderate	80-110	Flat Road	INTERVAL, ENDURANCE (Double effort during Recovery Energy Zone)	75-85%	Moderate to Heavy
Jumps	2 or 2.5	Moderate	80-110	Flat Road	Endurance Interval	75% MIB- Max Effort	Moderate to Very Heavy
Seated Climb	1	Moderate to Heavy	60-80	Hill	Endurance Strength Interval Race Day	75-85%	Moderate to Hard
Standing Climb	2 or 2.5	Heavy	60-80	Hill	Endurance Strength Interval Race Day	80% MIB- Max Effort	Hard to Very Hard
Running on a Hill	2 or 2.5, 1	Moderate to Heavy	60-80	Hill	Strength Interval Race Day	75-85%	Moderate to Hard
Jumps on a Hill	2 or 2.5, 1	Heavy	60-80	Hill	Strength Interval Race Day	80% MIB- Max Effort	Hard to Very Hard
Sprints on a Flat	2 or 2.5, 1	Moderate/Heavy	80-110	Flat Road	Interval Race Day	80% MIB- Max Effort	Very Hard
Sprints on a Hill	2 or 2.5, 1	Heavy	60-80	Hill	Interval Race Day	80% MIB- Max Effort	Very Hard

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MODULE 15
Class Profiles



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ENDURANCE RIDE

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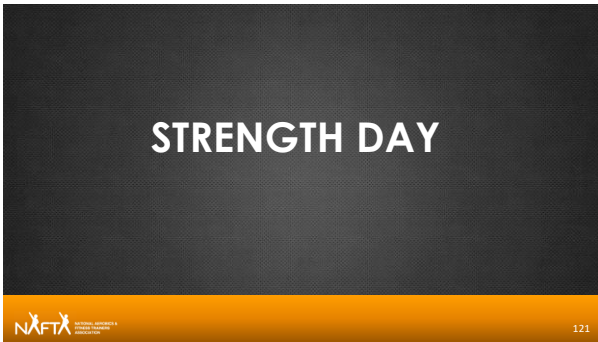
RACE DAY

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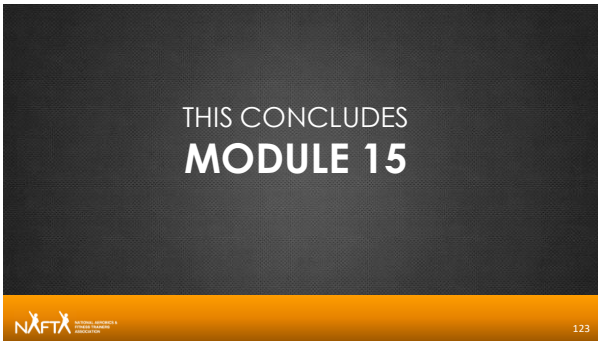
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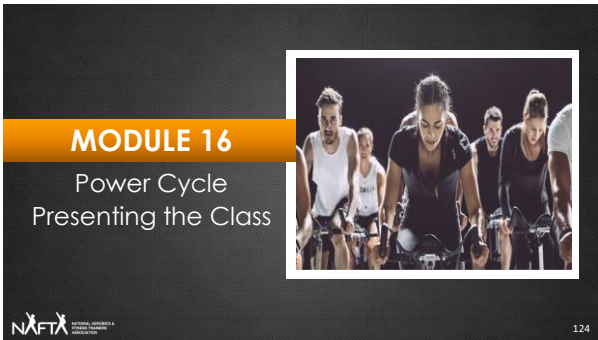
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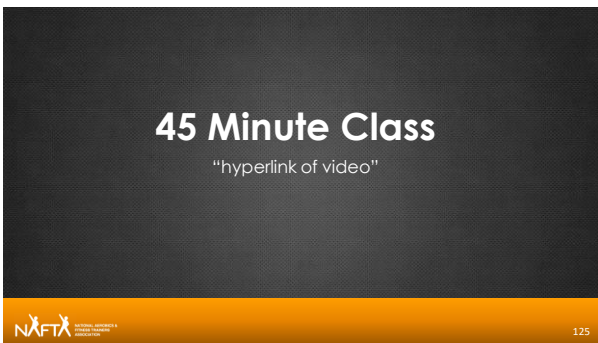
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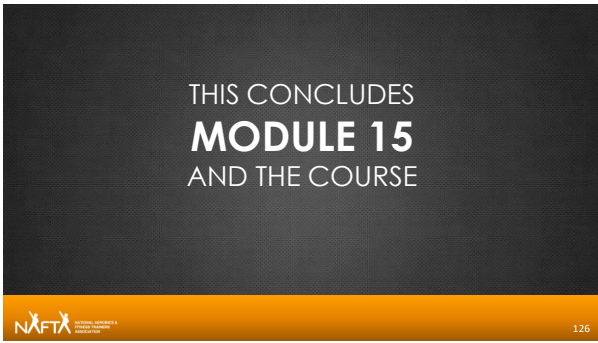
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