

# Preparing for the Frosty Freestyle

Three weeks to faster skiing



# Coach and Cheerleader

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- A struggling masters skier, juggling work, family, training and racing.
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# Three weeks to skiing faster

<b>Week 1 Fitness</b>	<b>Week 2 Technique</b>	<b>Week 3 Gear &amp; Strategy</b>
Getting in the right zone The fastest way to get fit Strength training - where it counts Making it specific Roller skiing? But I have no time to train!	Classic technique Skate technique The single most important technique Do I need to stay in the tracks? Downhills Corners Passing and being passed	Classic vs. skating: differences in boots, skis, poles, bindings Fish scales vs. "the hairies" Pole length Fashion and function Strategies for your first race Skiing in a group How to race smarter

# Week 1: Fitness

## Fitness

- Training zones
- Strength: Abs, core, upper body
- Dryland training
- Rollerskiing
- Transition, dryland to snow
- Where to train/ski



# The uniqueness of skiing

- Full body exercise
- Constant state of imbalance
- Technical skills
- Equipment skills

# Training Levels or Zones

Zone	Heart Rate Range	Goal	Difficulty
1	60-70%	Increase aerobic efficiency	Very easy to talk
2	70-80%	Increase aerobic efficiency	Easy to talk
3	80-90%	Increase work capacity at Lactate Threshold	Hard to talk
4	91-95%	Increase VO2 Max (Maximal aerobic capacity)	Very hard to talk
5	95-100%	Increase anaerobic capacity	Cannot talk
6	NA	Increase biomechanical efficiency at speed	NA

# Zone 1: Distance Training

- Distance training
  - Get tired from length of session NOT intensity
  - It should be very easy to talk
- Benefits
  - Increases cardiac efficiency
  - Increases capillarisation
  - Increases fat burning efficiency

# Zone 1: Distance Training

- 90 minutes +
- Ski, rollerski, running, biking, hiking
- If skiing/rollerskiing: Use good technique
  - Practice makes permanent
- Very hard to go this slow!
- Ideal for high volume training
- Less ideal for skiers with limited training time

# Zone 1: Recovery

- Easy 20-30 minutes
- Recovery after a hard day or session.
- Get the lead out.

# Zone 2: Endurance / Technique

- 30-90 minute distance sessions
- To be avoided if doing high volume training
- OK or recommended for low volume training
- Use for technique training
- Level 2 “happens” during Level 1 sessions

# Zone 3: Threshold / Steady State

- Improve aerobic efficiency and aerobic capacity
- Sample sessions
  - Time Trial (NOT all out effort)
  - 3x8 minute, 4x6 minute intervals
  - Increase length as you get in better shape
  - Rest 1-3 minutes between intervals
- Should feel like you can go faster or longer.
- Best on skis, rollerskis, or ski walking

# Zone 4: Max VO<sub>2</sub> Training

- Improve VO<sub>2</sub> max & max aerobic work capacity
- Think “heart” training
- Intervals: 3-6 minutes, rest 3 minutes.
- Examples:
  - 3x3, 3x4, 4x4 intervals
  - Add more/longer intervals as fitness increases
  - These are HARD. Must be rested to have a quality session.

# Zone 5: Anaerobic

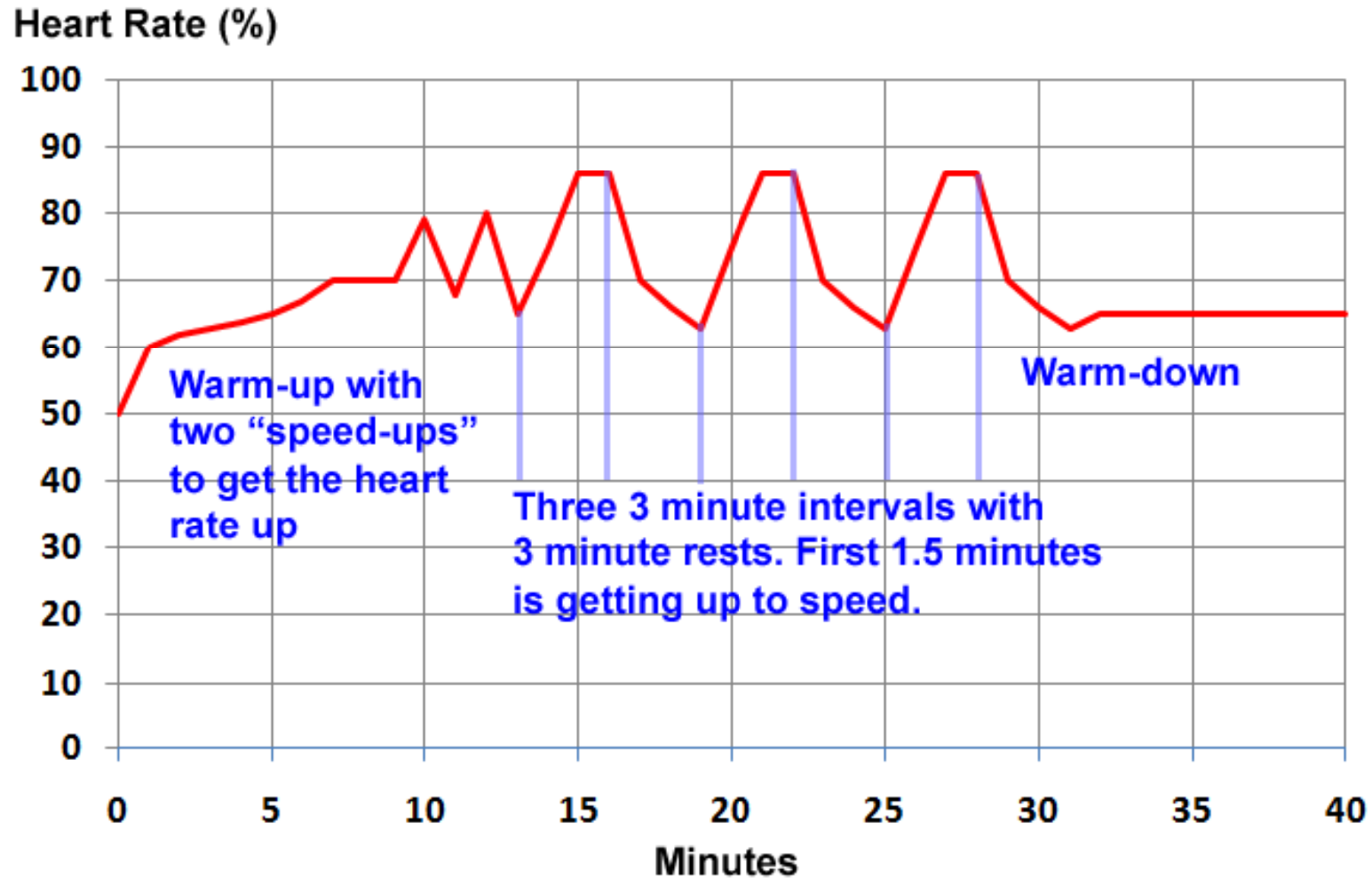
- How often to do go anaerobic in a DISTANCE ski race?
- Forget about 'em...

# Zone 6: Speed



- Improve maximum velocity
- Must be fresh
- Skiing or rollerskiing only
- Sample session:
  - 5-10 intervals x 8-10 seconds,  
2-3 minute rests
  - All out fast!
- Practice on flats, uphill, downhill, transitions

# Anatomy of an interval session



# Tips on Zone 3/4 interval training

- Slowly build up speed over first 1-2 minutes
  - Takes that long for body to adjust
  - Reduces buildup of lactate
- Same distance or longer on each interval
- If the intervals get slower,
  - You started too hard
  - You're going too long for you're current level of fitness
- Stop if intervals degrade or recovery is difficult

# Quality vs. Quantity!

- Focus on Quality workouts:
  - 1-3 interval sessions per week
  - 1 distance session (considered a hard session)
  - Everything else is easy!
  - Must be well rested to do quality intervals
- DON'T JUST HAMMER!  
(you're really just going medium)

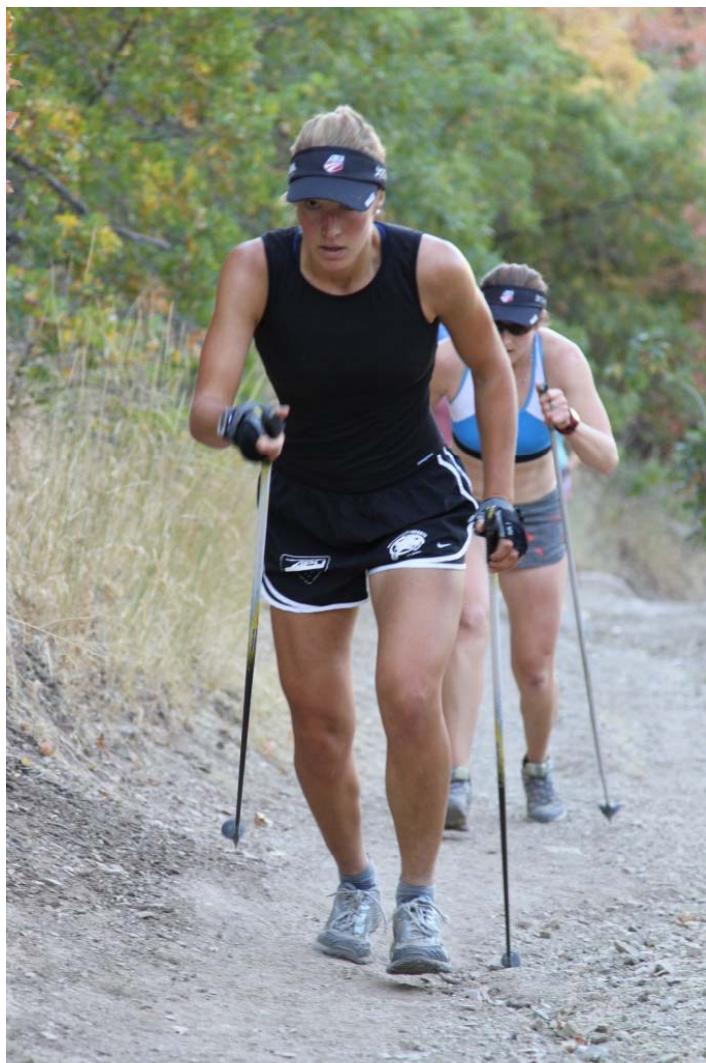
# Training time

- Only have 1-2 hours a week?
  - Workouts should have a “hard” component
  - Zone 3 intervals
  - Zone 2-3 distance sessions
  - Zone 1: worthless

# Training tips

- Hills are your friends!
- Don't have rollerskis? Ski walk
- Train to train harder
- Specific training is best

# Ski walking / Bounding



# Ski walking / bounding

- Ski walking
  - One foot is always on the ground
  - Fast! Don't need poles
  - Emulates diagonal stride
  - Distance and interval training
- Ski bounding
  - Both feet off the ground during bound
  - Explosive diagonal stride
  - Specific strength

# Rollerskiing

- Most specific (after skiing)
- Skate rollerskis:
  - Shorter: easier to maneuver, safer
  - Longer: feel more like skis
  - Lighter: Better for technique
  - 100mm diameter wheels best

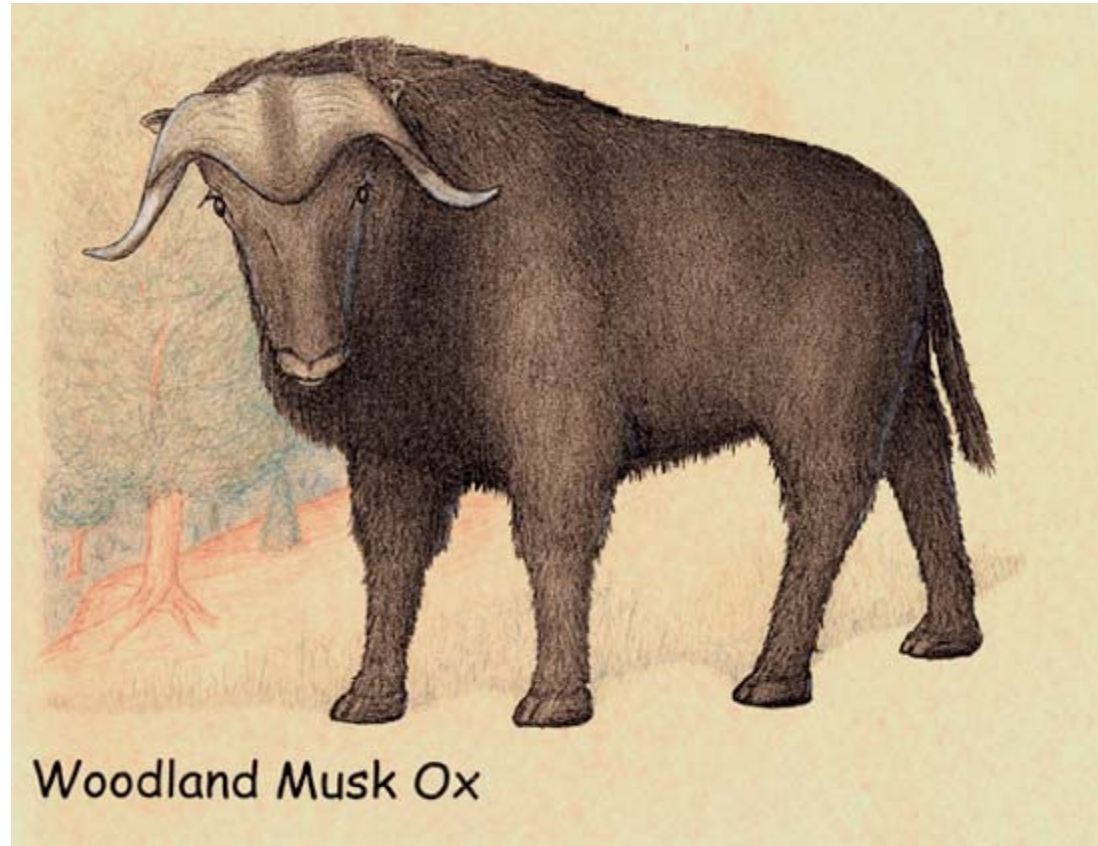
# Rollerskiing

- Classic Rollerskis:
  - Longer than long skate rollerskis
  - Lighter = better technique
  - Bigger wheels = better ride (but heavier)
  - 70mm diameter good compromise
  - Doublepole or kick-doublepole only  
(unless you KNOW you have good diagonal stride technique)

# Rollerskiing

- Helmet – always!
- Many have brake / speed reducer option
- Fenders are nice
- Buy ferrules for ski poles
- Sharp tips make rollerskiing much easier
- Act like a bicycle – same side as traffic

# Strength Training



Woodland Musk Ox

# Strength: Core vs. Abs

- Skiing is UNSTABLE!
- Using arms and legs for balance...  
...reduces their use for forward momentum
- Core muscles stabilize:
  - Transverse Abdominus
  - Wraps horizontally around the abdominal area
  - Used to stabilize the spine...  
...and to stay upright on skis

# Strength: Core vs. Abs

- Abs
  - Rectus Abdominus (“six pack”)
  - Run vertically
  - Used in crunches...  
...and to propel you forward.
- Faster skiers make extensive use of abs...  
...and strong abs will make you a faster skier

# Drills: Core and Abs

- Core:
  - Planks: side, front, back
  - Supermans and Jane Fonda's
  - Twists
- Abs
  - Crunches of various sorts...
  - Bicycles

# General Strength: Lower body

- Step ups
- Lateral jumps with touch
- Single legs hops: distance or height
- Squats
- Broad jump

# General Strength: Upper body

- Push ups
- Arm recovery
- Dips
- If you have bands:
  - Doublepole
  - Single stick (diagonal stride)

# Assignment!

- 1 or 2 intervals sessions:
  - 3x3 minutes, fixed distance
- 2 or 3 strength sessions:

## Core:

- Planks
- Supermans
- Jane Fonda's

## Abs:

- Crunches, feet on ground
- Crunches, feet on chair
- Bicycles

## Other:

- Dips
- Push-ups
- Step-ups
- Skate with touch
- Pole recovery