



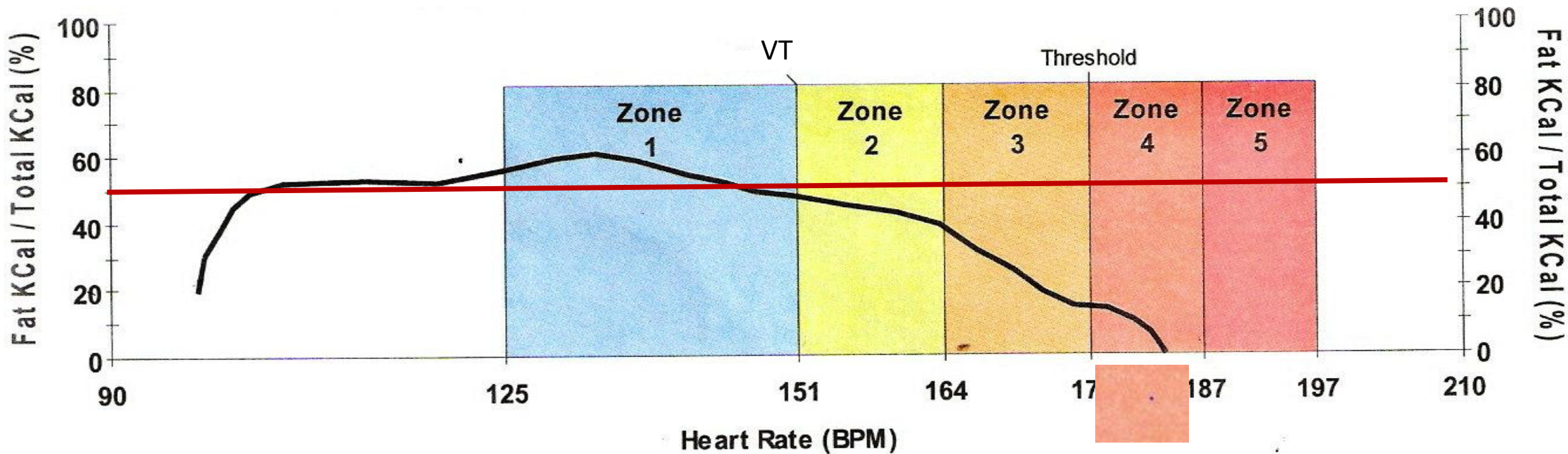
***2019 NSCA TACTICAL
ANNUAL TRAINING***

Conflict of Interest Statement

I have no actual or potential conflict of interest in relation to this presentation.

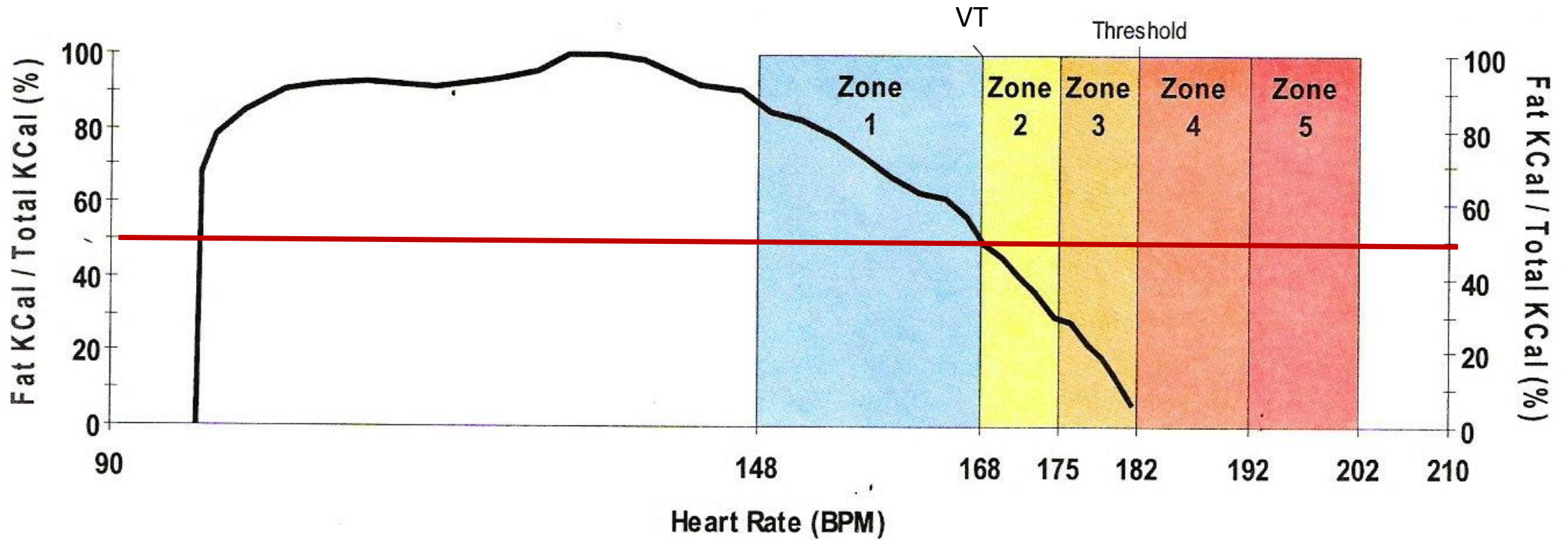


- Improve Performance**
- Improve Endurance**
- Improve Strength**
 - Increased type 1 fiber function
 - Increased blood flow w new capillaries
 - Increased mitochondrial density
- Recover faster**
- Carry Less Fatigue
- Gain Accountability**
- Go Further and Faster with less effort**
- Improve Job Performance**



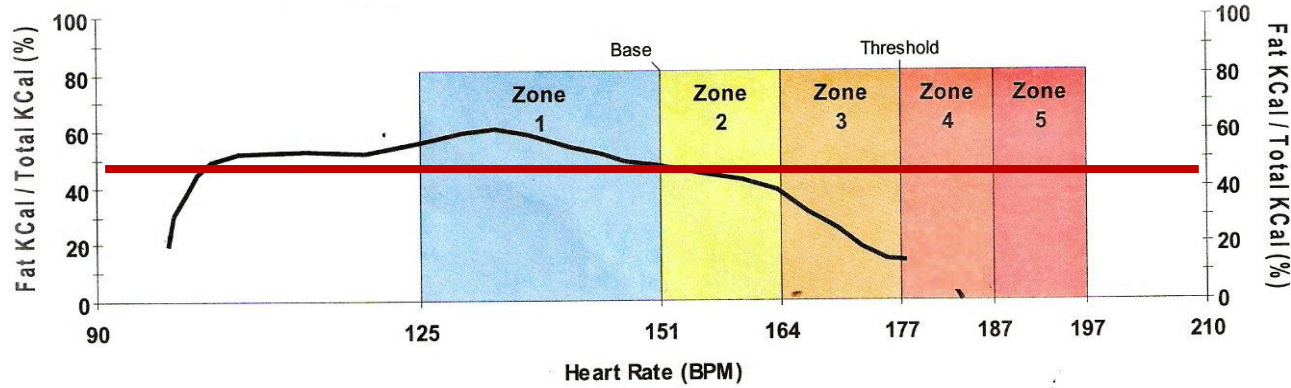
The Fat Factor (KCal/Min)

Total	9.3	11.8	14.1	16.7	
Fat	5.1	5.1	3.2	0.7	0.0
Fat %	55	43	23	4	



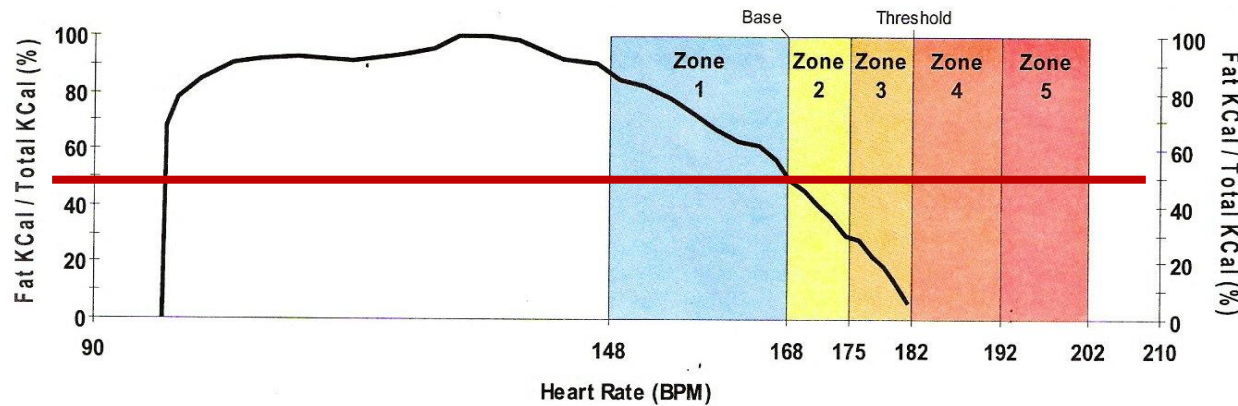
Total	13.5	16.8	18.9		
Fat	9.4	6.8	2.1	0.0	0.0
Fat %	69	40	11		

What does this mean?



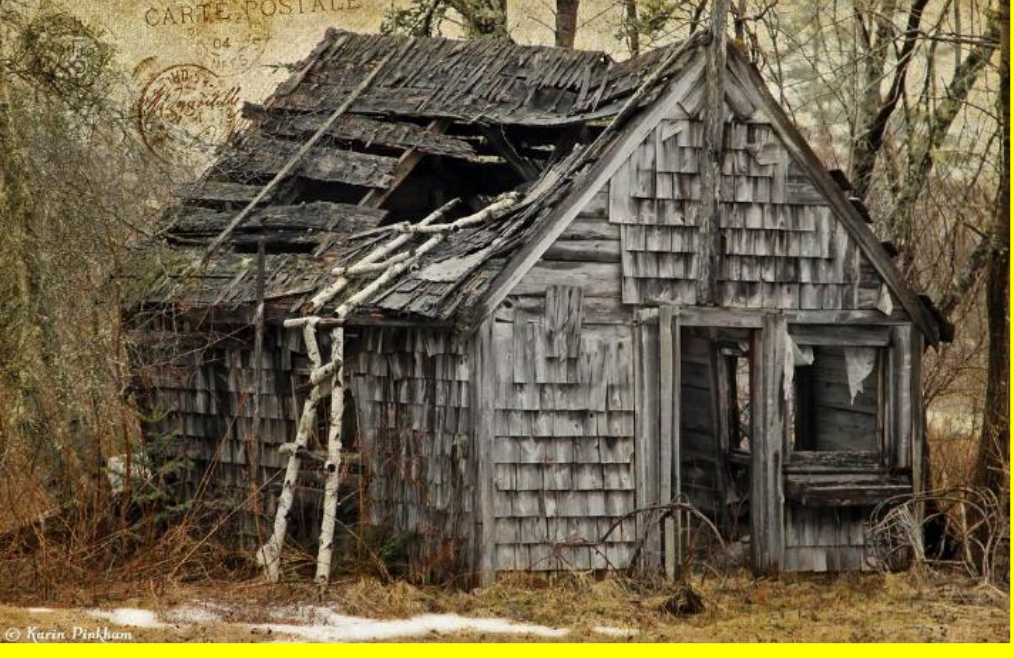
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**VT 151 vs 168
AT 177 vs 182**



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**You can go faster for longer
= better conditioning thru science**



An iceberg floating in the ocean. The tip of the iceberg, which is above the water line, is labeled '20% Zone 3+'. The much larger part of the iceberg, which is submerged below the water line, is labeled '80% Zone 1&2'.

20%
Zone 3+

80%
Zone 1&2

- Load vs Intensity Management
- Minimal vs Maximal Effective Dose
- Carry Less Fatigue Between Sessions
- Increase Quality of Intense Sessions

T'Challa - Punisher



- ▼ Go for time or apply zone methodology (80/20 week). If you have time add low impact zone 1
- or
- Individualized Zone Training Plan x 30-60 min...80/20 goal each week

COMBAT CONDITIONING x5-6 sessions

80/20 Rule is applied to all conditioning activities including Punisher/Mardio

-80% weekly volume (time) x Zone 1 or 2 to fully develop Aerobic Base

-20% weekly volume x Zone 3+, build endurance at or above AT thru intervals and develop tolerance to lactate

-Lift Days: If you have time post workout add low impact zone 1 (increase time in zone)

-Non-Lift Days: Endurance Work 2x/week x minimum 1 hour, follow zone methodology

--Bike Option: 1-3 hours (10 min easy, Main Set, remaining time zone 2/3)--Main Set Day 1: 2x20(4), Day 2: 5x5(3)



PREPARE SOLDIERS FOR THE COMBAT MISSION

- **Combine Tactical and Physical Training on one modality**
- **Develop Leg Strength, Speed, Power & Endurance at the same time**
- **Increase Movement Efficiency**
- **Drive Intensity by Incline rather than Speed and Mileage**
- **Decrease Injuries on an intense but low impact setting**





Zone 1: Aerobic Base

Objective: Encourage blood flow, trains the ability to utilize fat as a fuel

What's Happening: This is almost a pure aerobic state, which you can maintain almost indefinitely and experience no rise in blood lactate

Feeling: Comfortable to talk and breathe through nose

Info: Training base / aerobic base, develops endurance



Zone 2: Aerobic Development

Objective: Build aerobic efficiency and maximize fat burning at a higher caloric rate

What's Happening: A small rise in blood lactate occurs, yet the body can process it without buildup

Feeling: You can still hold a conversation and may have the urge to go faster

Info: Before developing your lactate tolerance or increasing your AT, you need to fully develop your aerobic base. As you become more efficient and fit you will be able to train at a faster pace.



Zone 3: Aerobic Endurance

Objective: Increase endurance and Lactic Acid tolerance

What's Happening: As intensity increases, not all lactate produced in the cells can be shuttled back into the metabolic cycle. Lactate levels in the blood rise and, with time, fatigue sets in

Feeling: Breathing becomes evident, but not too difficult, conversation is restricted to short sentences

Info: **Building endurance at your AT through intervals helps raise your AT and develops your body's tolerance of lactate. This training adaptation allows your body to burn fat more efficiently. *Make sure recover between intervals (lower HR to zone 1)**



Zone 4: Anaerobic Endurance

Objective: Increase athletic ability by improving lactate tolerance, endurance and Lactic Acid tolerance. You're pushing AT/VO₂ Max, challenging the heart to work longer and increasing cardiac output/stroke volume

What's Happening: Your body switches into primarily using glycogen or carbohydrate to fuel its need for energy and your blood lactate levels dramatically increase

Feeling: Breathing becomes heavy, difficult and uncomfortable. You may also experience "muscle burn" because of lactate buildup

Info: **sprint intervals w zone 1 or zone 2 for recovery.**



Zone 5: Speed and Power

Objective: Improve neurological response, mechanics, speed and power

What's Happening: Your body is burning the last remaining fuel (glycogen) in your muscles and can not sustain this maximum effort for more than a few seconds without succumbing to exhaustion

Feeling: Extremely difficult and uncomfortable. You'll feel breathless and may hear pounding in your chest

Info: Sprints and very intense short intervals. Spending more than 5-10% of your time here increases risk of injury. This should only be done every 3rd or 4th workout



CONDITIONING

Makes you better at
EVERY PHYSICAL ACTIVITY

Questions:
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CARDIO only makes you good at cardio