



WEIGHT MANAGEMENT *IN COMBAT SPORTS*

NUTRITIONAL PERIODISATION TO MAKE THE
WEIGHT AND OPTIMISE BODY COMPOSITION

DR KEVIN CAILLAUD *PhD*

HOD EXERCISE PHYSIOLOGY & NUTRITION

INSPIRE INSTITUTE OF SPORT

MAKING THE WEIGHT: *A DANGEROUS PROCESS*

Article Title: Case Study: Fatal Exertional Rhabdomyolysis Possibly Related to Drastic Weight Cutting

Authors: Kadhiresan R. Murugappan¹, Michael N. Cocchi², Somnath Bose¹, Sara E. Neves¹, Charles H. Cook³, Todd Sarge¹, Shahzad Shaefi¹, and Akiva Leibowitz¹

Affiliations: ¹Department of Anesthesia, Critical Care, and Pain Medicine at Beth Israel Deaconess Medical Center (BIDMC). ²Department of Emergency Medicine and Department of Anesthesia, Critical Care, and Pain Medicine at BIDMC. ³Department of Acute Care Surgery, Trauma, and Surgical Critical Care at BIDMC.

Running Head: Exertional Rhabdomyolysis and Weight Cutting

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MAKING THE WEIGHT:

A DANGEROUS PROCESS

- <https://youtu.be/iGMUKC0t5R4>

ABOUT THE TOPIC

What do you need to make it happen?

“Multidisciplinary work in HP sport is essential and needed if we are to reach solutions based on a new understanding of complex situations. This disciplinary overlap should be seen as a strength and not a barrier [...]”

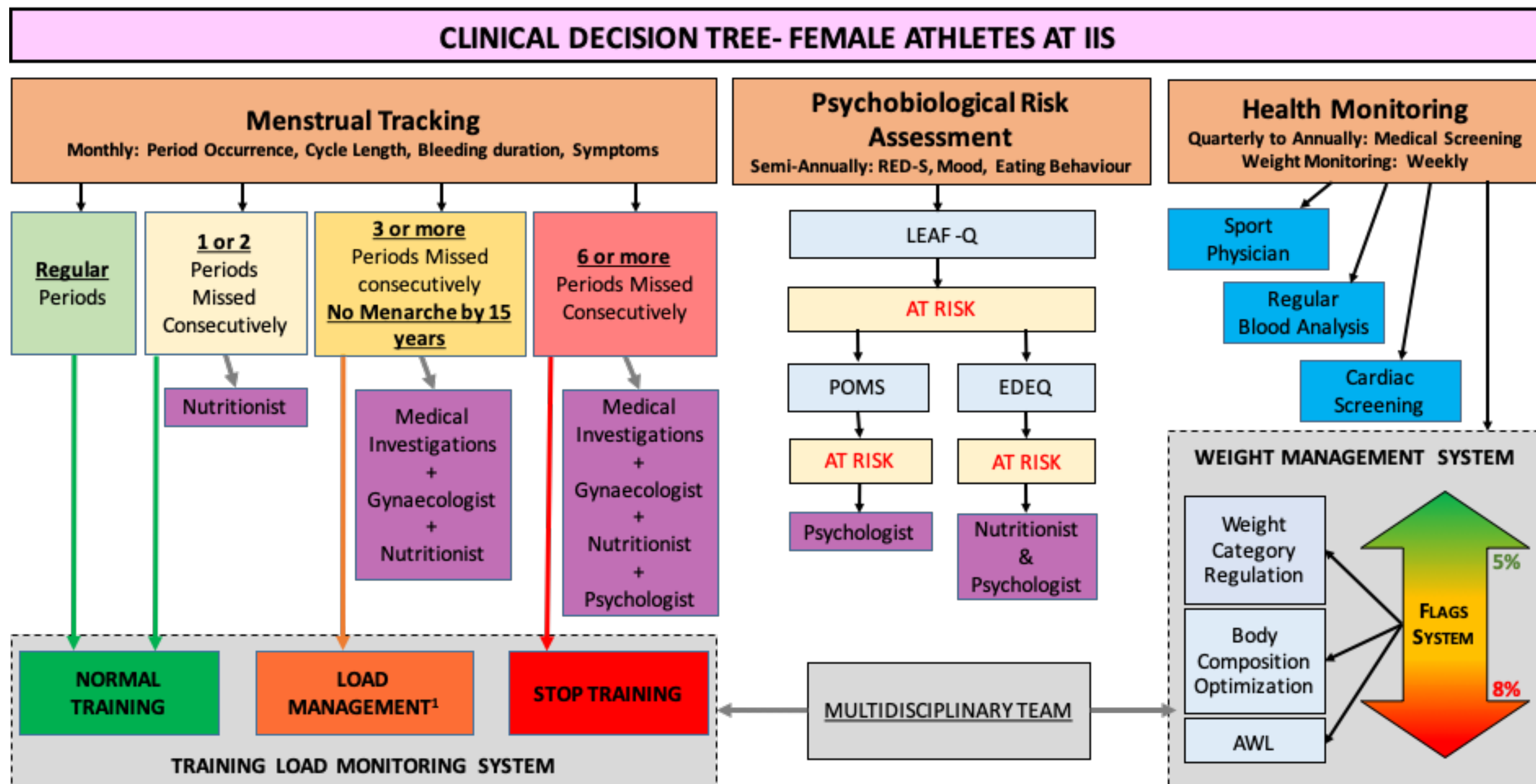
Sotiriadou & De Bosscher, *ESMQ* 2017

What is critical in high performance?

- Make sure to identify the GOAL(S). This goal isn't a technic it's the RATIONAL behind what your are going to do.
- PRIORITIZE! You can't work on everything at the same time effectively.
- Put in place a REGULAR but SIMPLE monitoring tool for HEALTH and PERFORMANCE

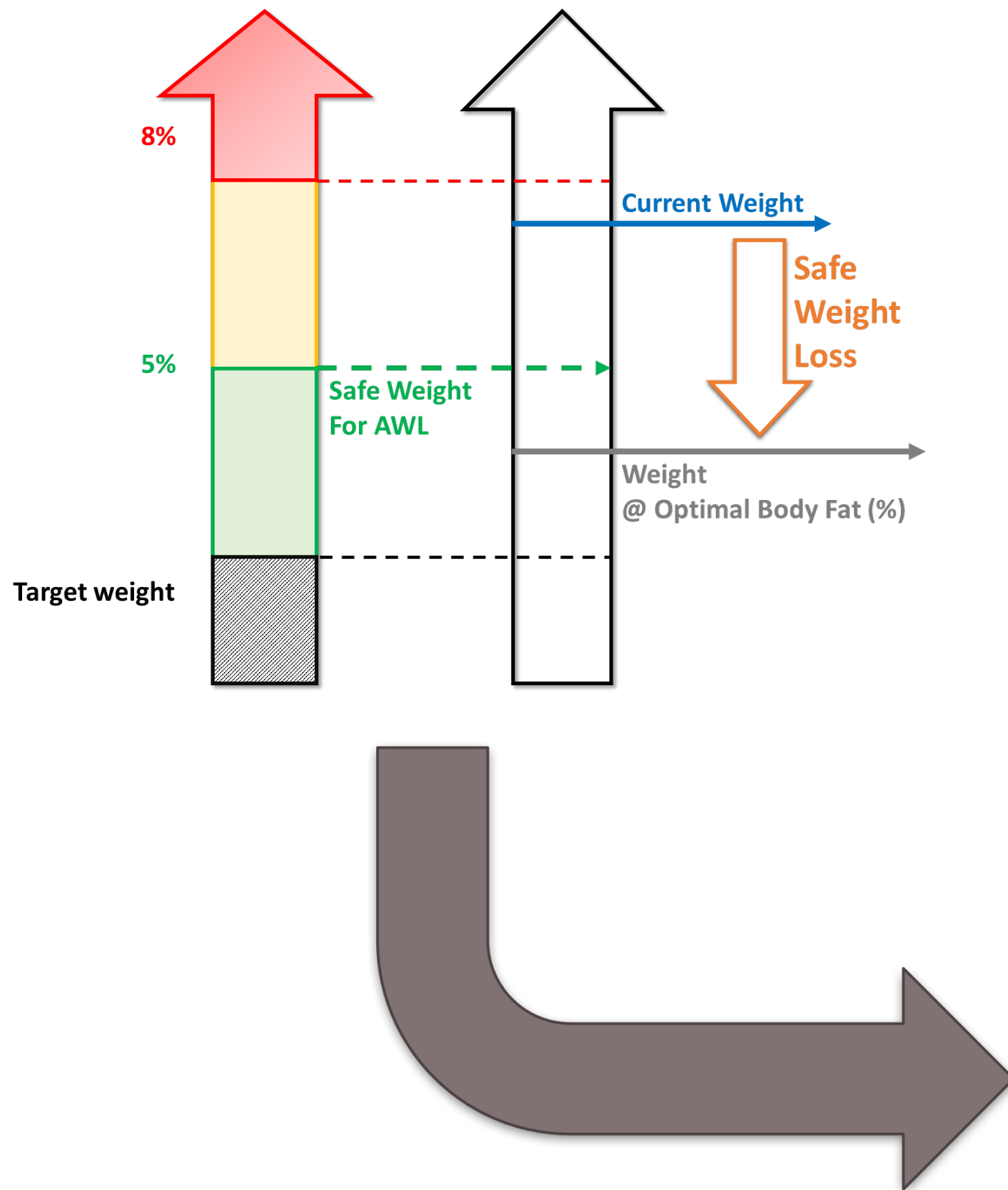
Monitoring the process

WEIGHT MANAGEMENT AS PART OF A BIGGER PICTURE

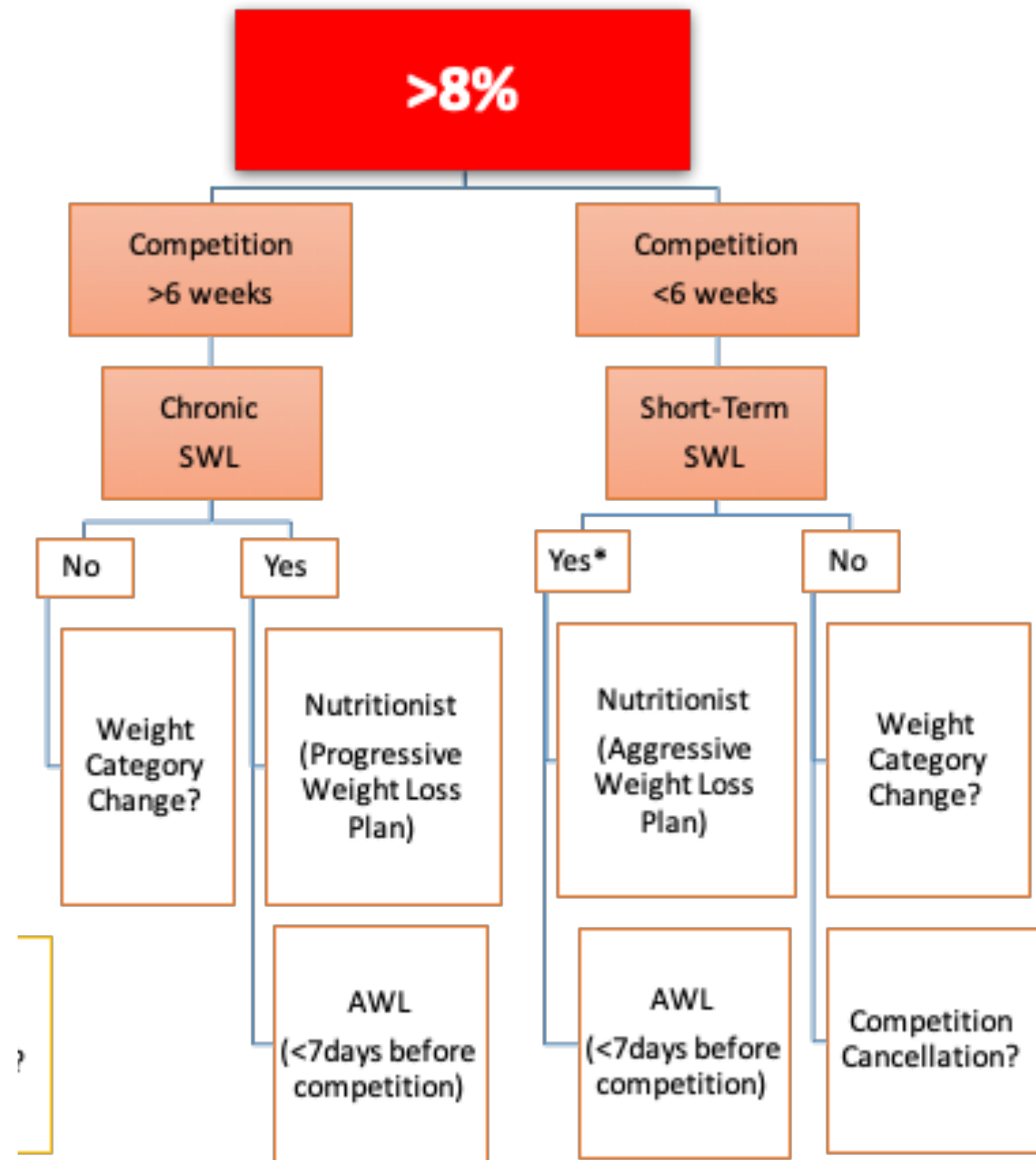


ASSESSMENT → DECISION

EVALUATION

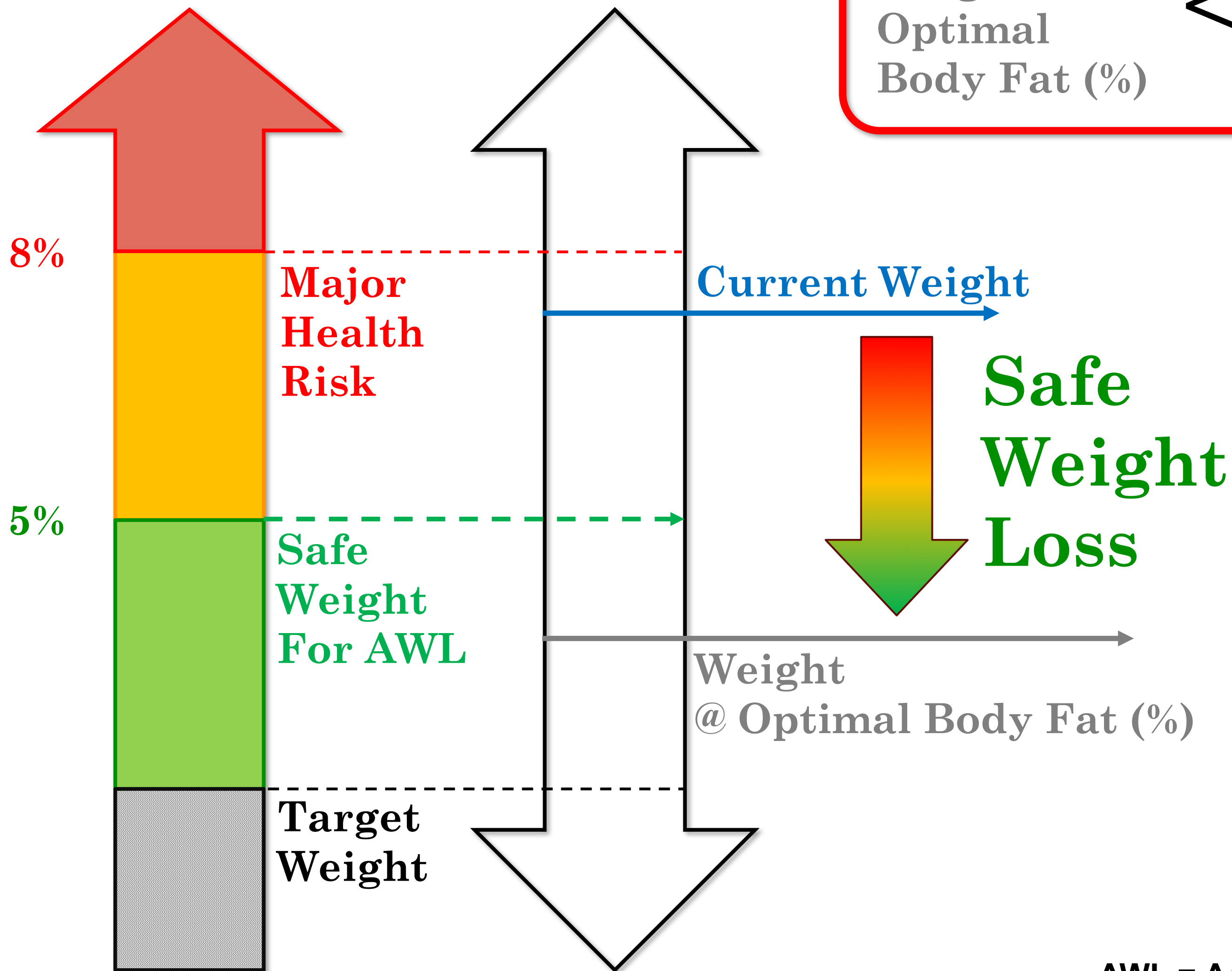


DECISION



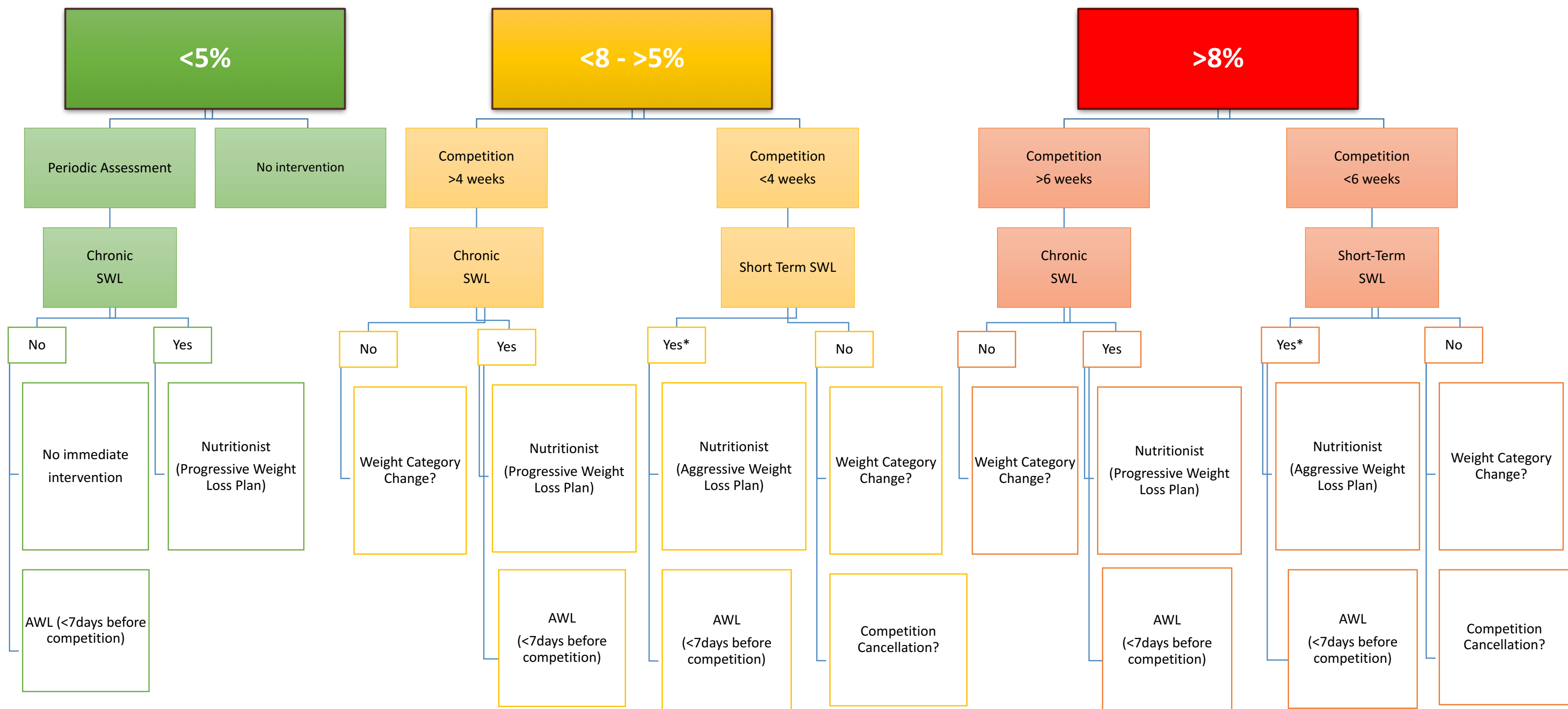
SAFE WEIGHT LOSS

Weight @ Optimal Body Fat (%) < Safe Weight For AWL



AWL = Acute Weight Loss
(Acute Fat Free Mass Reduction)

ORGANISING THE DECISION

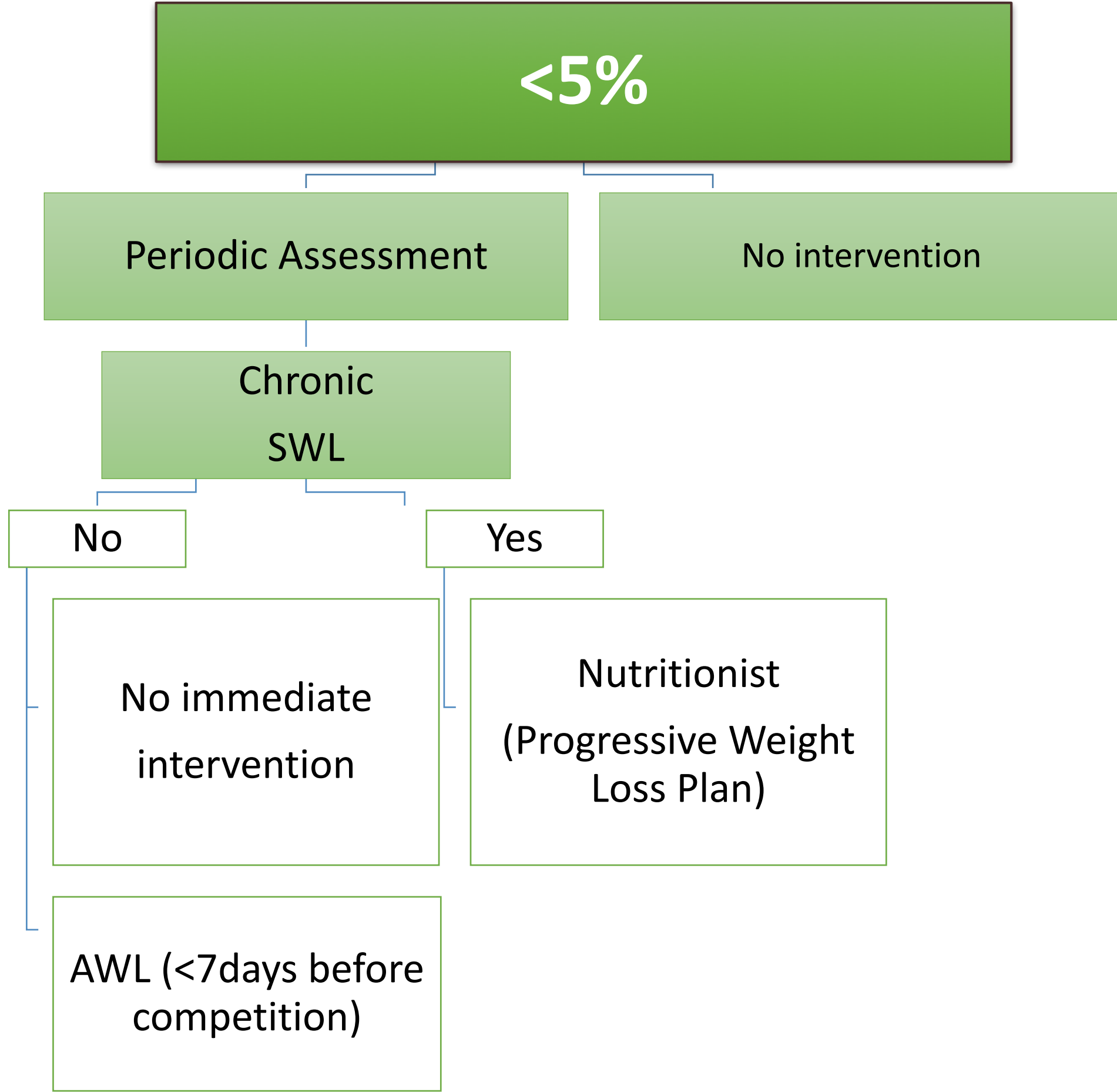


SWL = Safe Weight Loss
(Fat Mass Reduction Possible and Safe)

AWL = Acute Weight Loss
(Acute Fat Free Mass Reduction)

*** = Clinical Factors to be considered**
(Female Health, Overtraining, Deficiencies etc.)

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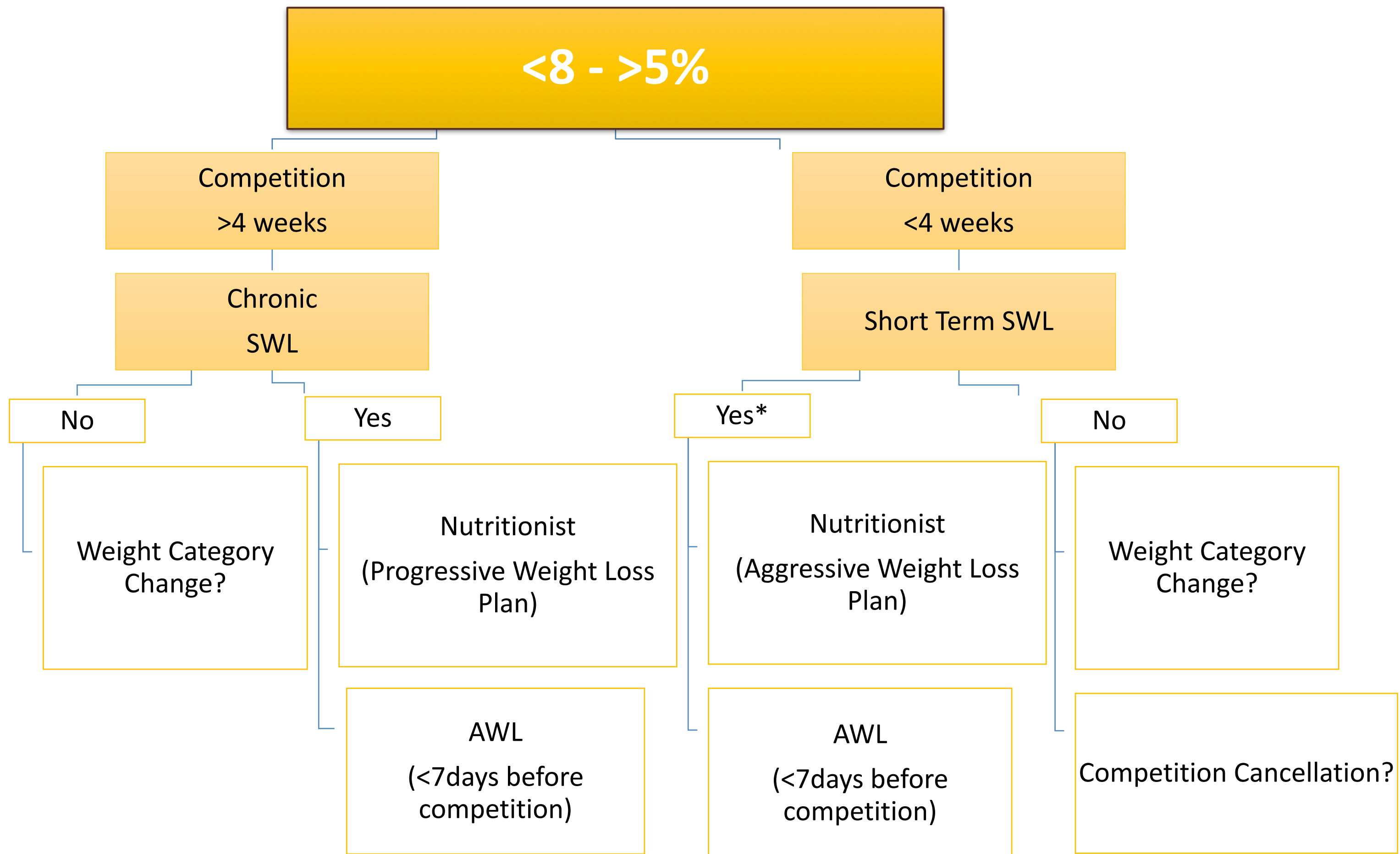


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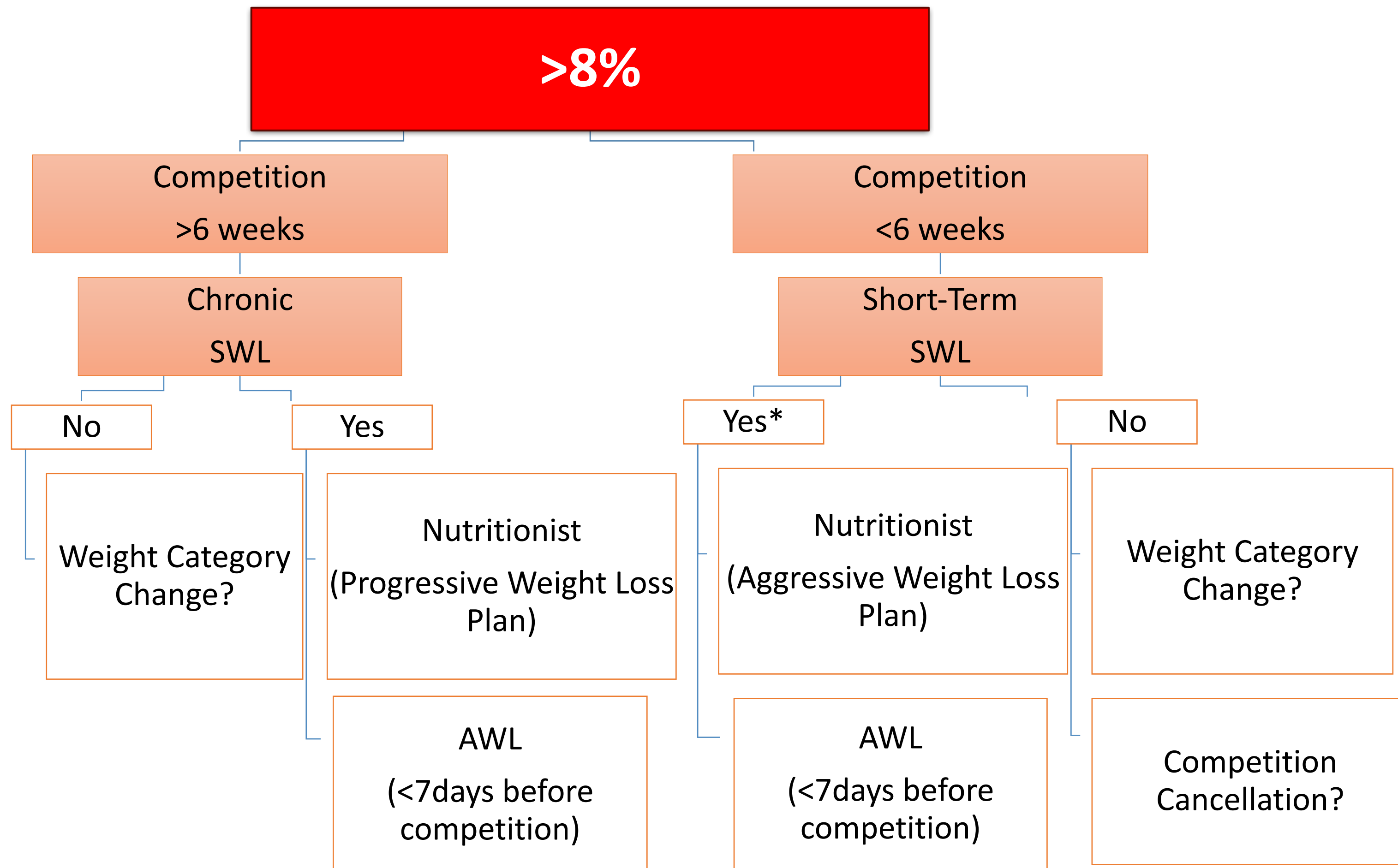


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1ST PRIORITY

SUMMARY

WEIGHT EVOLUTION

BOXING

% WEIGHT DIFFERENCE

Red

>= 8% and <= - 8%

Amber

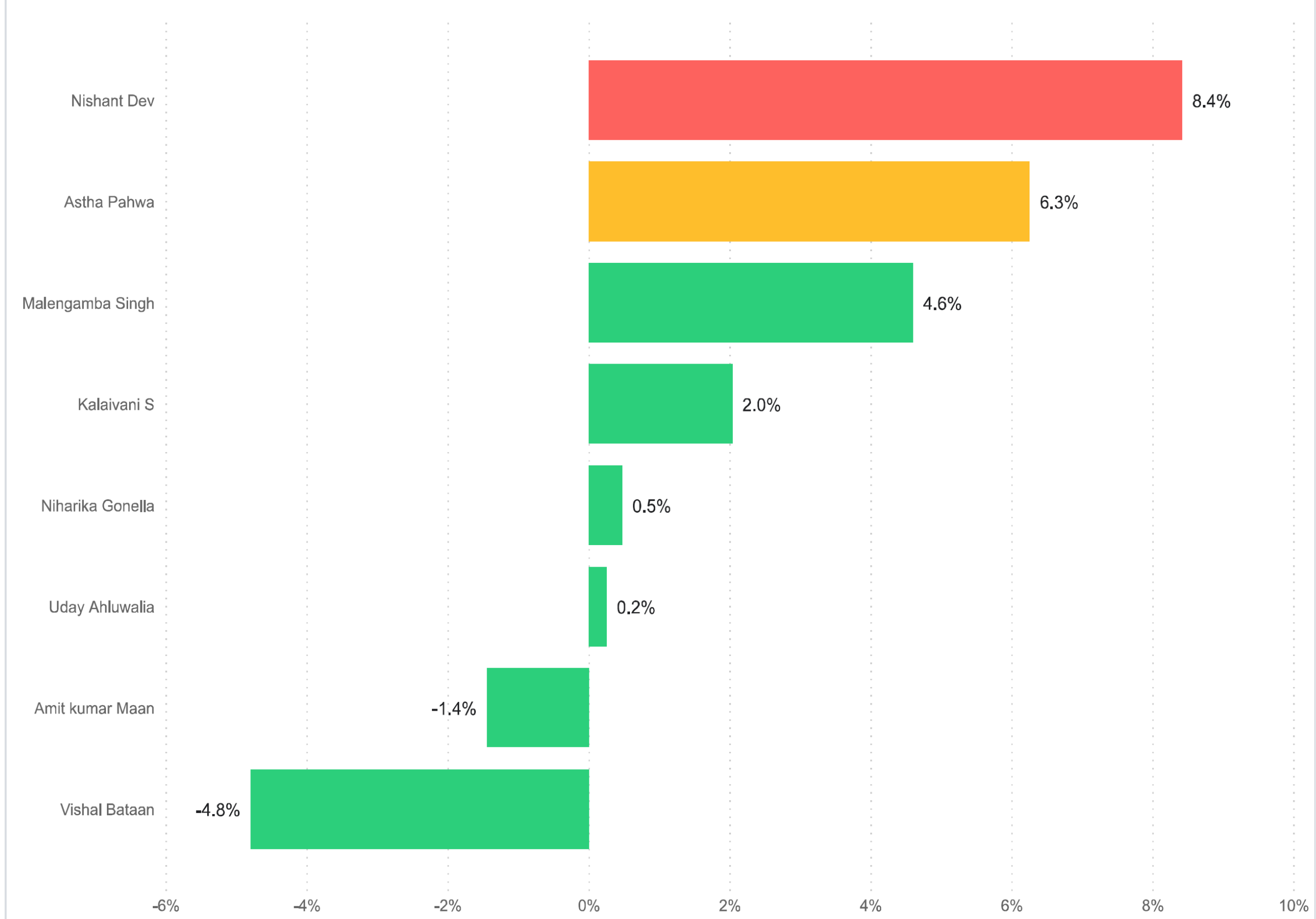
>5% and <8%
<-5% and >-8%

Green

>=-5% and <=5%

% Weight Diff = [(Session Weight - Target Weight) / Target Weight] * 100

LATEST % WEIGHT DIFFERENCE



Weight Periodisation

What can be periodised?

TRAINING

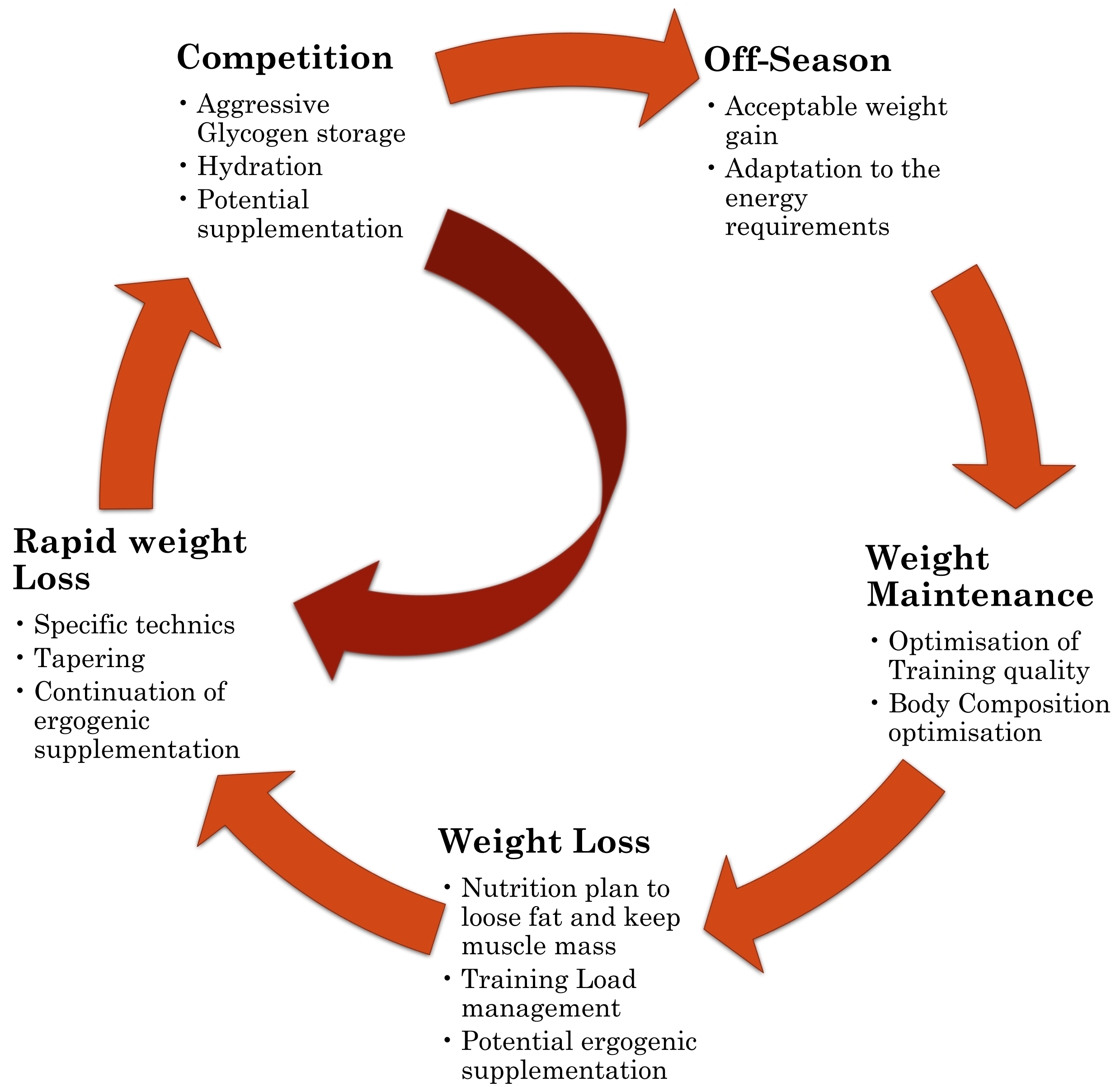
RECOVERY

NUTRITION

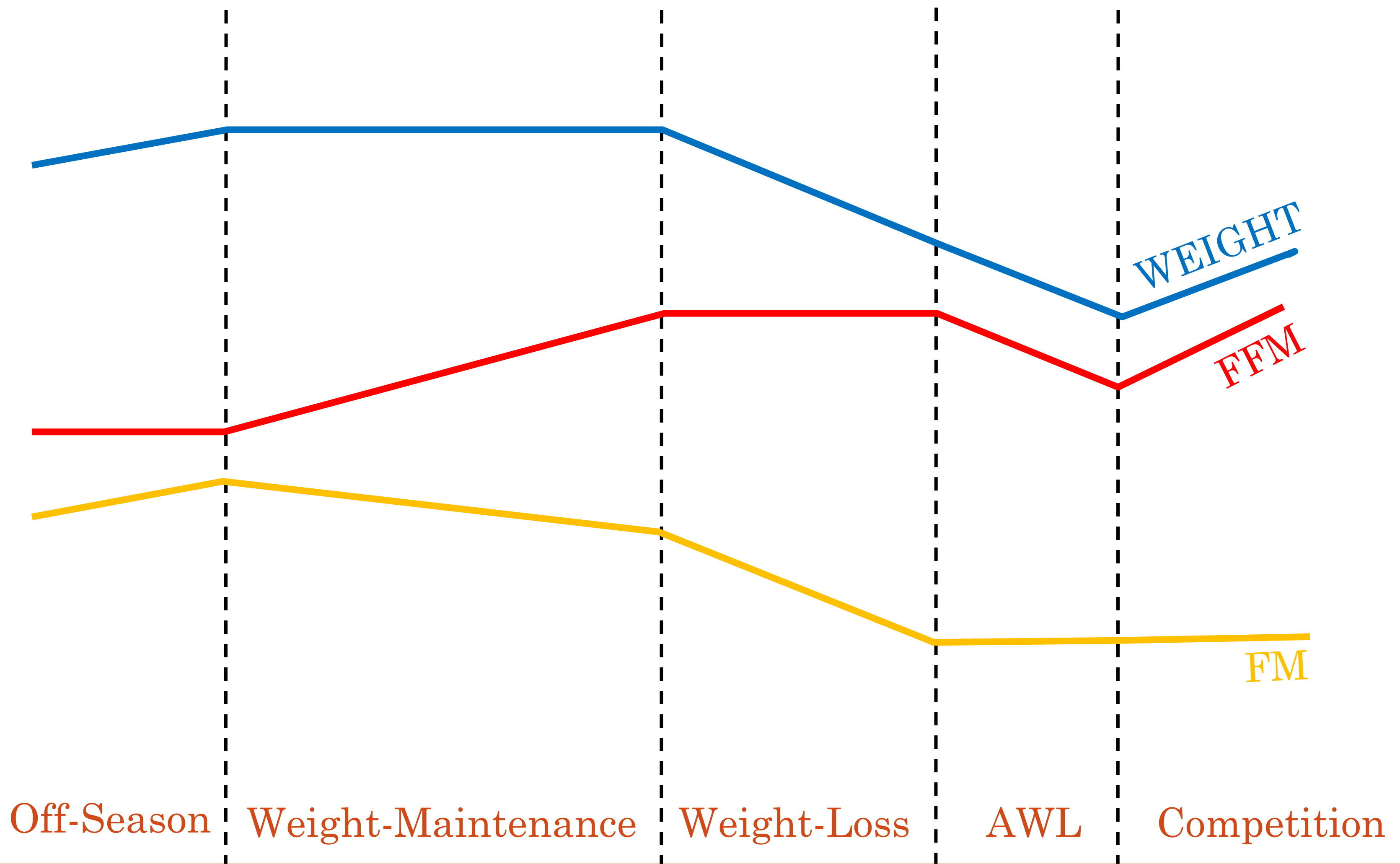
PSYCHOLOGICAL SKILLS

TECHNICAL SKILLS

WEIGHT PERIODISATION



WEIGHT PERIODISATION



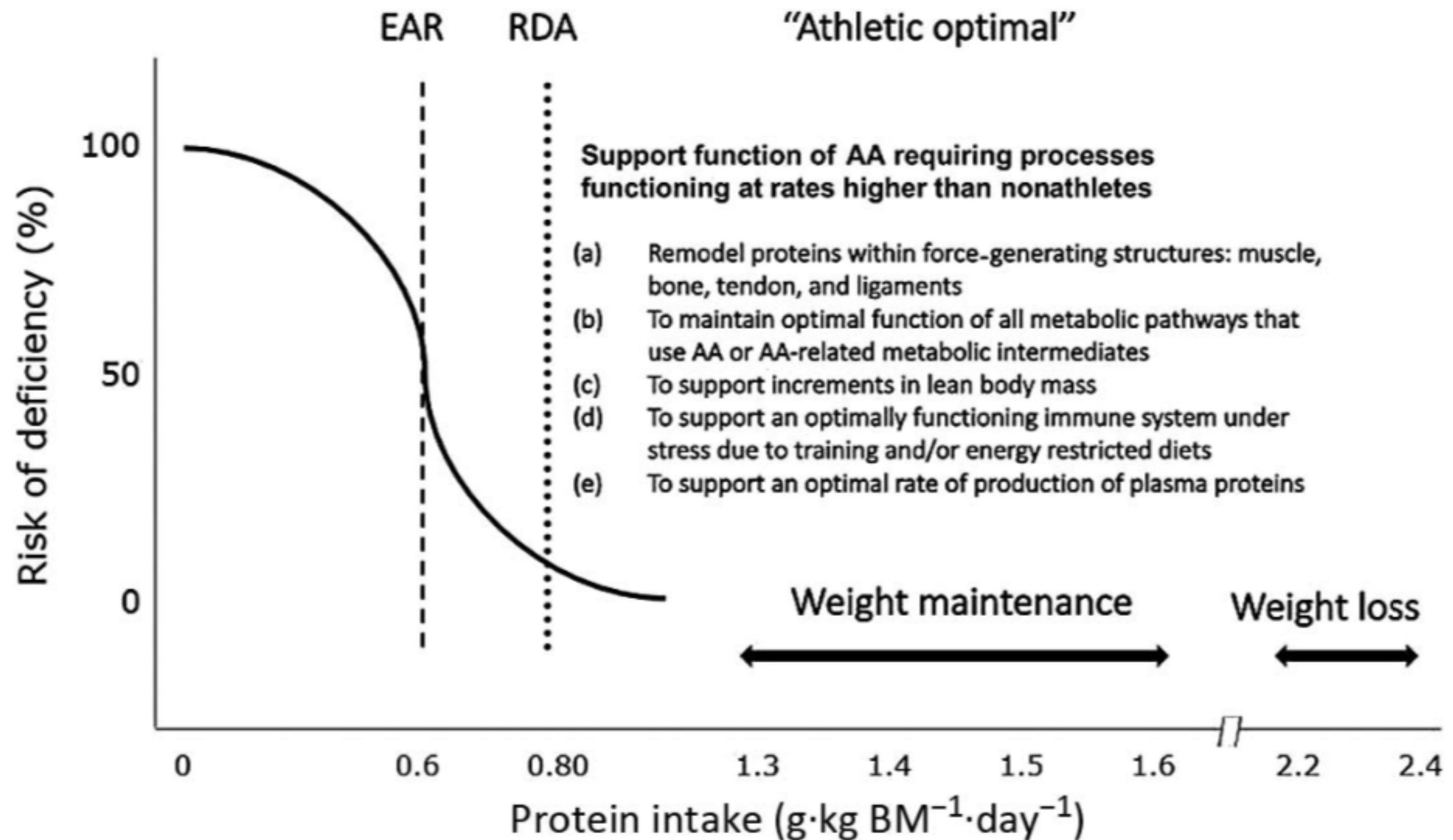
Off-Season | Weight-Maintenance | Weight-Loss | AWL | Competition



Weight Maintenance

- Regular Assessment and choice of body composition goals.
- Slow and progressive decrease in Fat, progressive increase (if necessary) in fat free mass
- Optimisation of training quality and nutritional periodisation according to training goals

WEIGHT LOSS PLAN



WEIGHT LOSS PLAN

- Create a caloric deficit
- The higher the caloric deficit, the higher the protein intake should be
- Multivitamin and Fish Oil supplements could be use to compensate for potential deficit
- Pre-Sleep protein snack (ex. 20-60g of whey) to help in recovery and sleep quality.

WEIGHT LOSS PLAN

<u>DRINKS</u> 1,5L to 3-4L depending on the T° and type of Training			
<u>PRE-TRAINING SNACK</u>		<u>BREAKFAST</u>	
Fruits	1 banana	Carbohydrates Protein Dairy products Fruits	1 slice bread with PB 3 boiled eggs with yellow or 2 spoons of omelet 1 glass of MILK 1 serving of fruit (papaya)
<u>LUNCH</u>		<u>BEFORE BED SACK: 30min before</u>	
Vegetables	Low fat Big serving	2 glasses of milk	
Protein	3-4 small pieces of low fat Chicken or Paneer		
<u>DINER</u>		<u>AFTERNOON SNACK: after training</u>	
Vegetables	Low fat Big serving	Protein	2 glasses of curd
Protein	3-4 small pieces of low fat Chicken or Paneer		

Acute Weight Loss Strategy

1. Low Carbohydrate – Low Calories – High Protein

2. Low Residues

3. Dehydration



RAPID WEIGHT LOSS STRATEGIES

LOW GLYCOGEN STORES

IMPLEMENTATION	RISK HEALTH & PERFORMANCE	RECOVERY
<ul style="list-style-type: none"> - Suppress most of the food rich in carbohydrate: fruits, grains, bread, cereals, juice etc. 	<ul style="list-style-type: none"> - Fatigue ++ - Ability to repeat high intensity effort is severely impaired if not replaced - Decrease of glycolytic capacity - Hunger, craving for sweets - Sleep disturbances 	<ul style="list-style-type: none"> - Utilize carbohydrate mouth rinse prior to and in between successive bouts. - Provide high -carbohydrate availability on day of competition - ≥ 1 g/CHO/kg in morning meal (3–4 h pre-competition)

RAPID WEIGHT LOSS STRATEGIES

LOW RESIDUE DIET

IMPLEMENTATION	RISK HEALTH & PERFORMANCE	RECOVERY
<ul style="list-style-type: none"> - Reduce food intake. - Reduce vegetables, fruits, nuts and whole grains especially. - Increase protein to decrease hunger 	<ul style="list-style-type: none"> - Fatigue - Constipation - Hunger 	<ul style="list-style-type: none"> - Be mindful of fiber intake following low residue diet, reintroduce slowly food rich in fibers and in small quantities.

RAPID WEIGHT LOSS STRATEGIES



DEHYDRATION

IMPLEMENTATION	RISK HEALTH & PERFORMANCE	RECOVERY
- Fluid restriction	- Thirst increase	-Fatigue ++ -Decrease overall performance and especially endurance.
- Active sweating	- Fatigue due to exercise	-There is an important risk of hyperthermia and heat illness (fatal risk).
- Passive sweating	- Plasma water more affected	

Recovery from AWL

1. Refuel +++ = CARBOHYDRATE
2. Rehydrate +++ = WATER + ELECTROLYTES
3. Proteins aren't really necessary
4. Fatty foods and junk foods can be detrimental to your performance

Recovery from AWL

POSSIBLE STRATEGY To be adapted to each one and tested in advance	
<p><u>BEFORE WEIGHT-IN</u></p> <p>No Drinks No Food</p>	<p><u>IMMEDIATELY AFTER WEIGHT-IN</u></p> <p>1L of sport drink (in 30min) 2-3 banana 2-3 slice of bread 1-2 cup of black coffee</p>
<p><u>1h30 AFTER WEIGHT-IN</u></p> <p>0.5L of sport drink (in 30min) 1-2 banana 1-2 slice of bread 1-2 cup of black coffee</p>	<p><u>WAITING FOR THE 1ST BOUT</u></p> <p>Only sport drink 15min before each bout avoid drink and continue only mouth rinse</p>
<p><u>BETWEEN BOUTS</u></p> <p>Only sport drink 15min before each bout avoid drink and continue only mouth rinse If >1h possibility to take some solid very digest food (fruit bar)</p>	<p><u>AFTER THE LAST BOUT</u></p> <p>2 serving of whey (40-50g) 0.5L of fruit juice 1-2 Bananas</p>

DO & DON'T

• DO

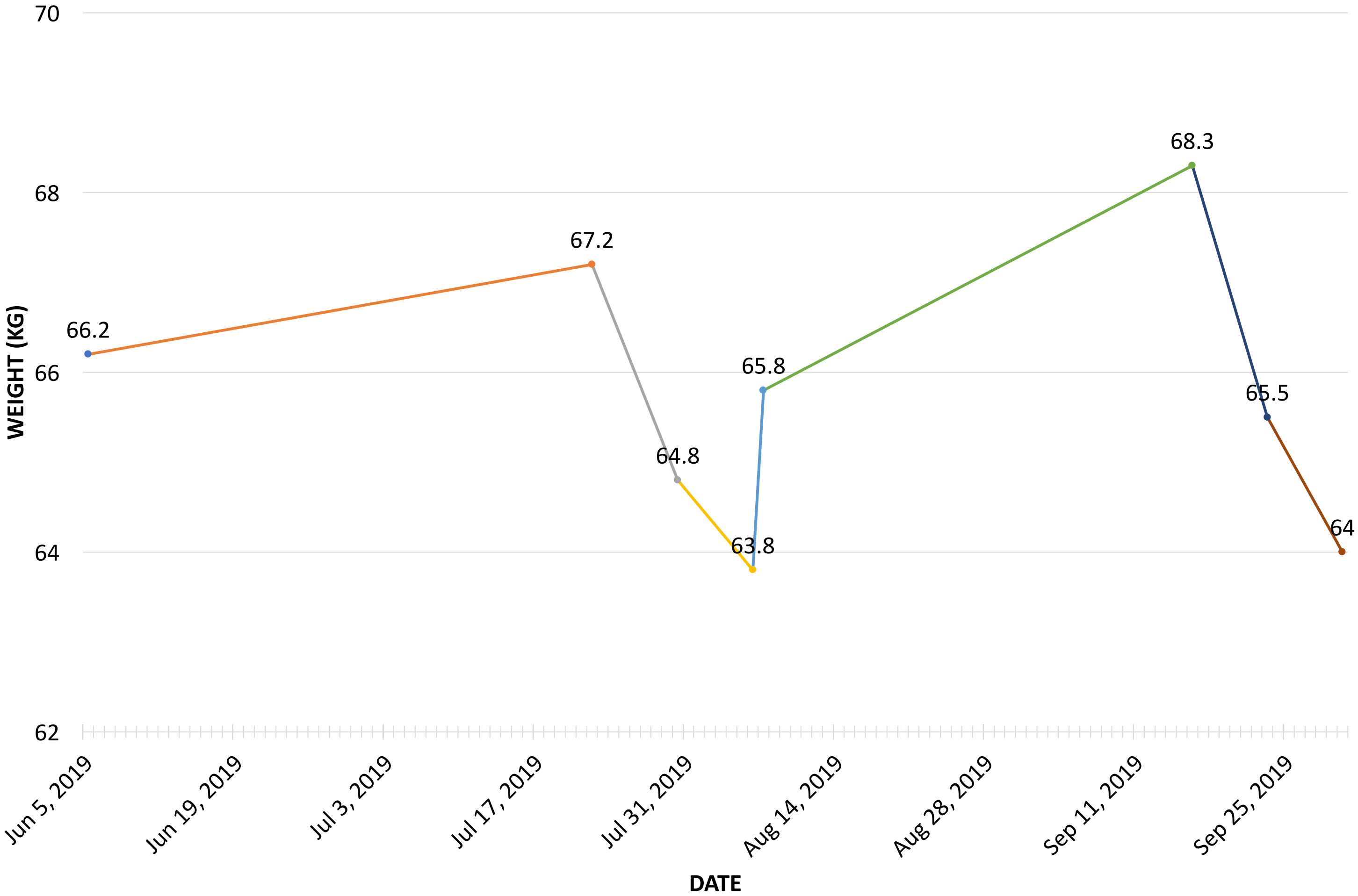
- Eat according to your needs (4 to 6 meals a day)
- Adapt hydration according to weight loss during practice
- Manage your weight over time

• DON'T

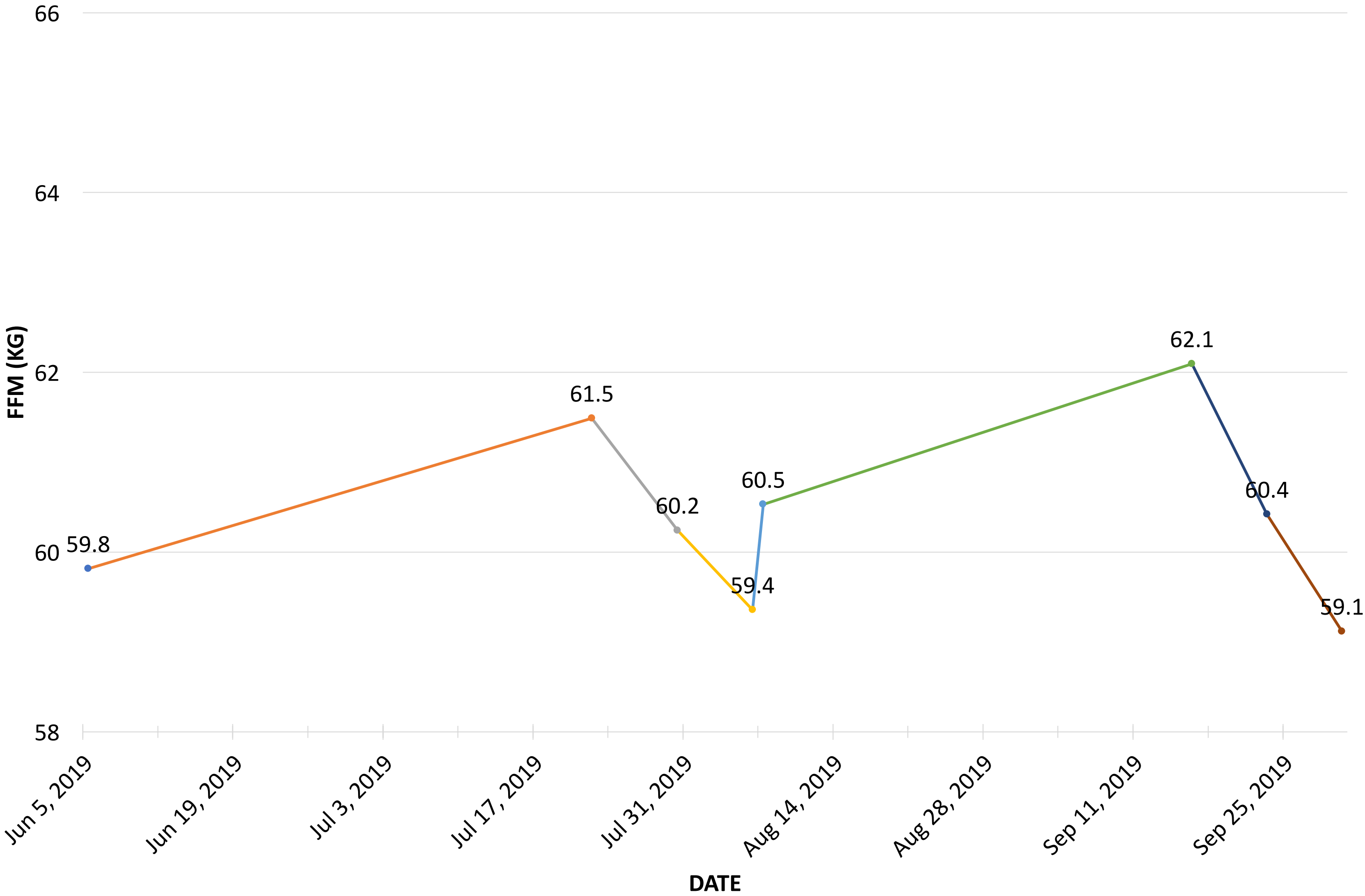
- Check the weight after practice if you didn't before
- Skip meals
- Increase sweating voluntarily

Practical Examples

Case Study: IIS Boxer

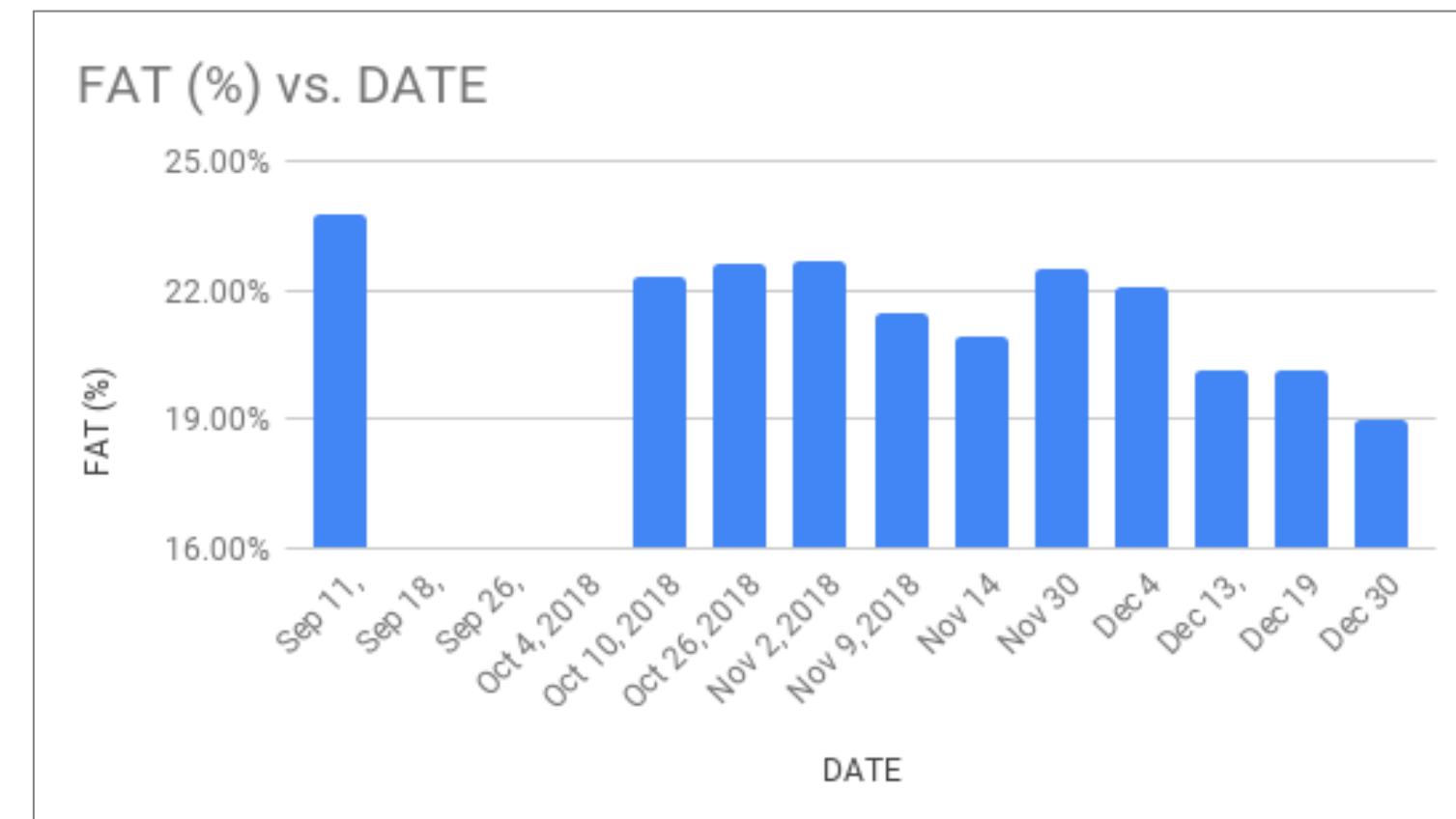
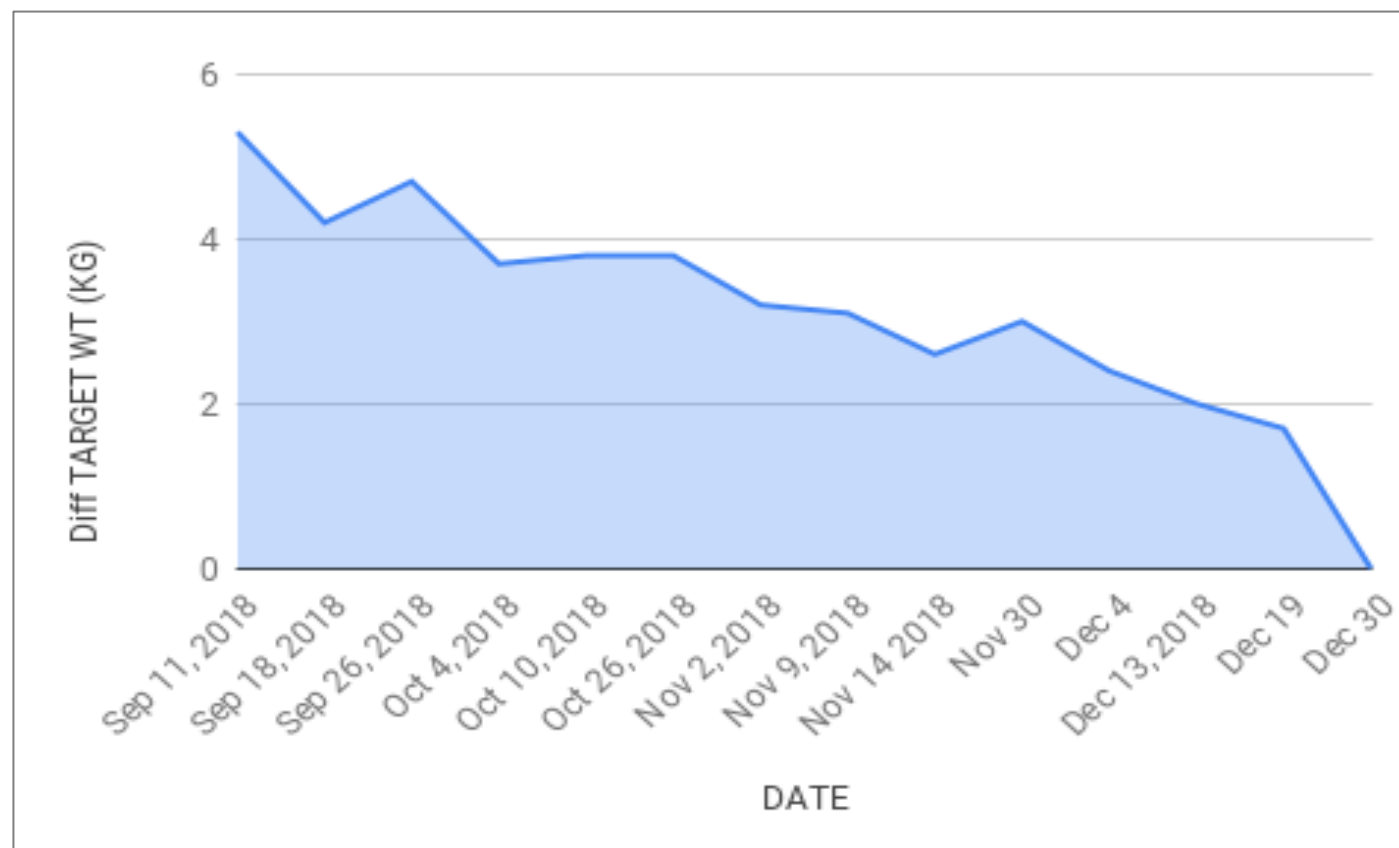
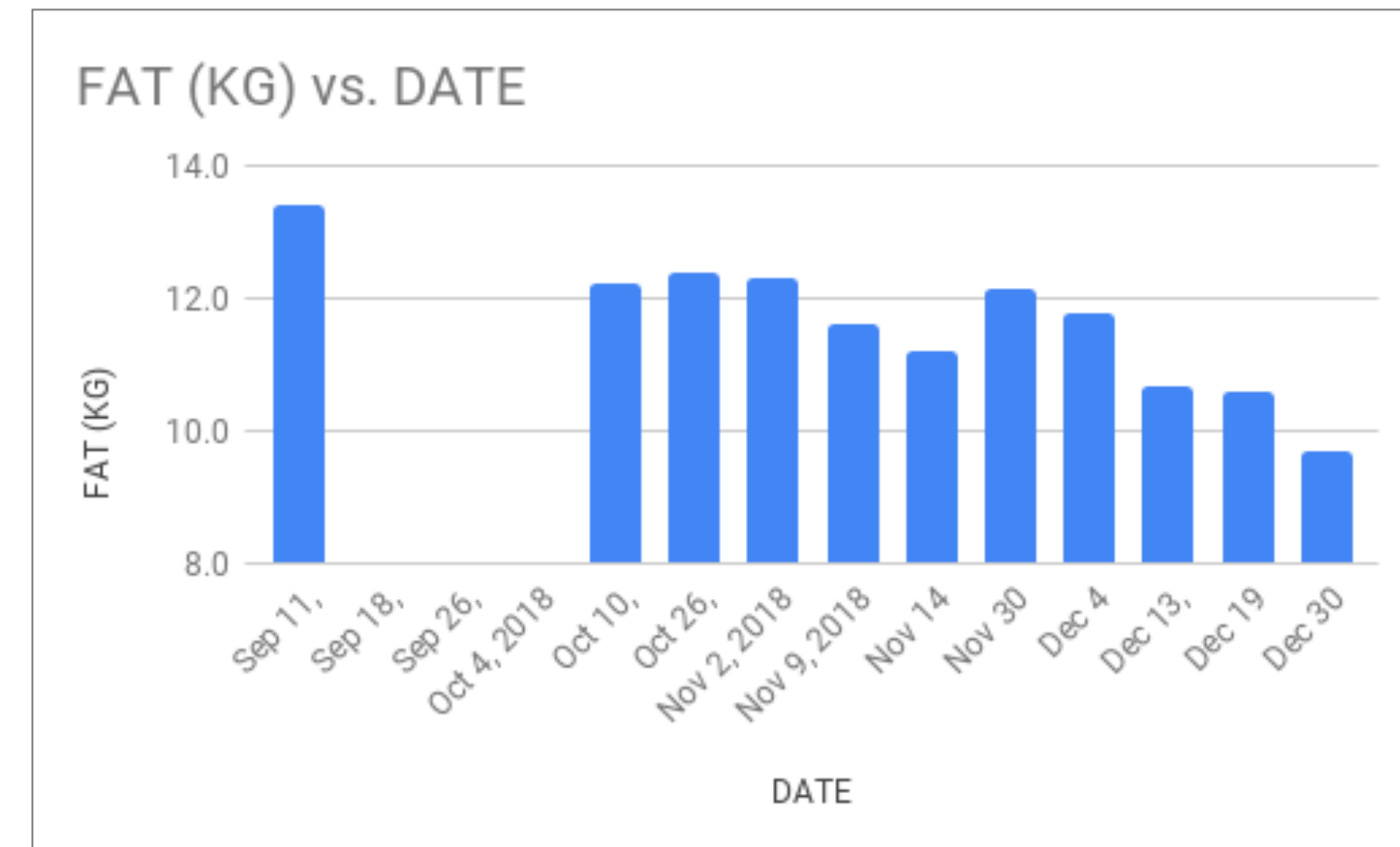
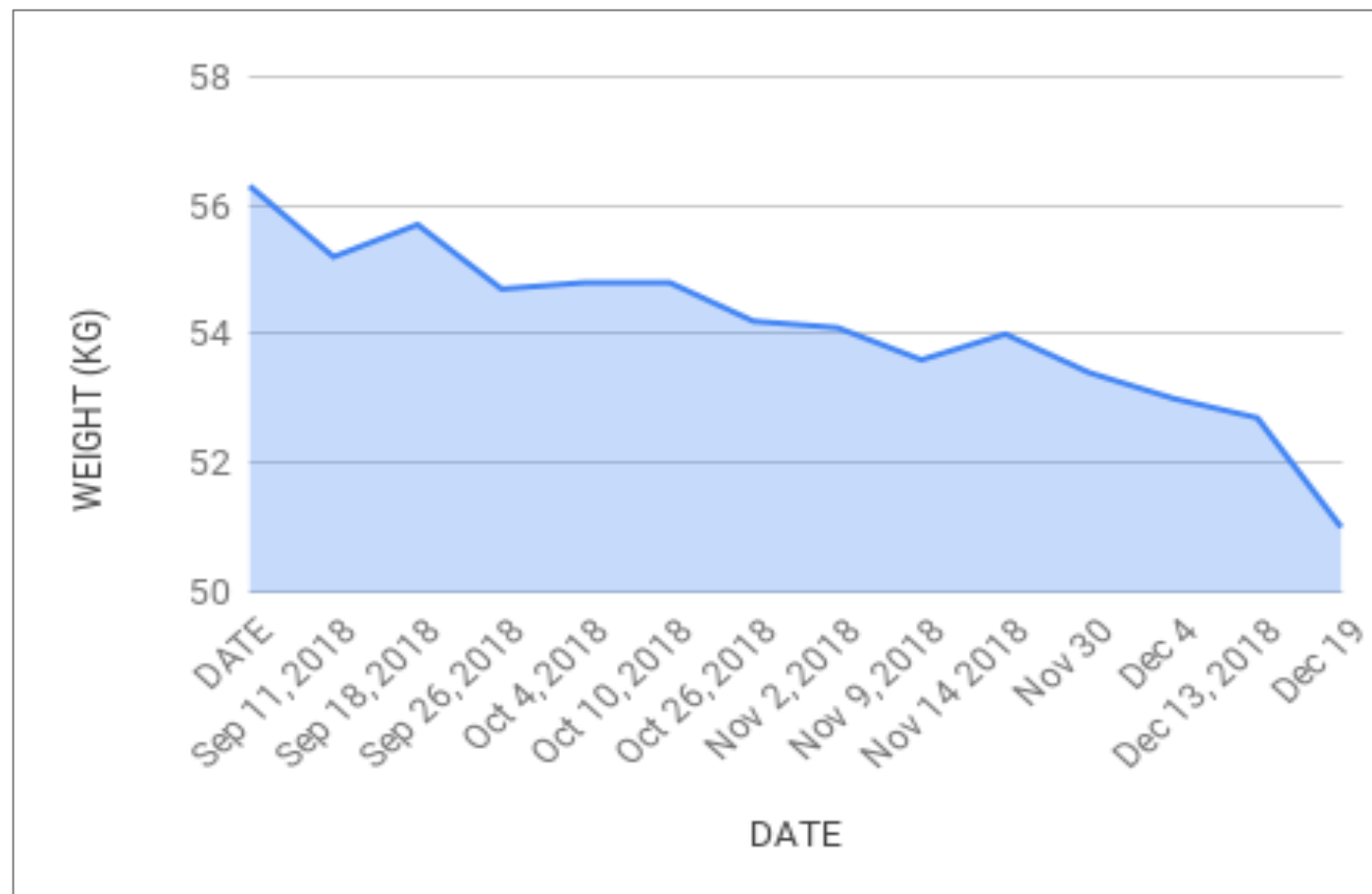


Case Study: IIS Boxer



Nikhath Zareen

Making the weight, Nationals 2018



Thanks

