

Building a Hockey Strength Program

University of Minnesota Assistant Strength and Conditioning Coach

**Tad Johnson, CSCS, M.Ed.
tmjohnson3808@gmail.com**

Simple Guidelines

- **The only “bad” program is one that does not change**
- **The success of the program depends on constant change**
 - **Daily, Weekly, Monthly, and Yearly**
- **New stimuli must be given to the athlete at various times during the year**
 - **This is not to be mistaken for simply returning to previous stimuli**
 - **You must come up with new ways of stimulating and stressing your athletes in order to spur change for the better**
- **Use everything that is available**

Key Factors For Successful Programming

- **High Volume**
- **High Intensity**
- **High Frequency**
- **Some Overtraining**
- **Always High Expectations**

Organizing Training

- **Training session and days**
 - A single workout or practice session
 - For most, this is the same as the training day
 - For advanced athletes, several sessions may comprise a day
- **Training week**
 - A series of several training days together – Train 5 to 6 Days
- **Training month**
 - A series of several training weeks
 - Often organized towards a common goal
 - i.e. Work Capacity, Speed, Strength
- **Training year**
 - A collection of training months with different or similar goals that work towards the overall performance goal for the year

Weekly Lifting Sessions

- **3 days a week**
 - Total body workouts each day
 - Includes upper and lower body
 - Extra days includes other sports
- **4 day split**
 - 2 days of lower body, 2 days of upper body
 - Wednesday - extra day – other sports
- **5 days a week**
 - 3 days of lower body, 2 days of upper body
 - Saturday includes other sports

Weekly Lifting Sessions

- **It is helpful to vary training loads from day to day and week to week**
- **Rule of 60% for In-Season**
 - **The number of reps used during the in-season should be about 60% of the number of reps used on the out-of-season workout**

Organizing Weekly Training

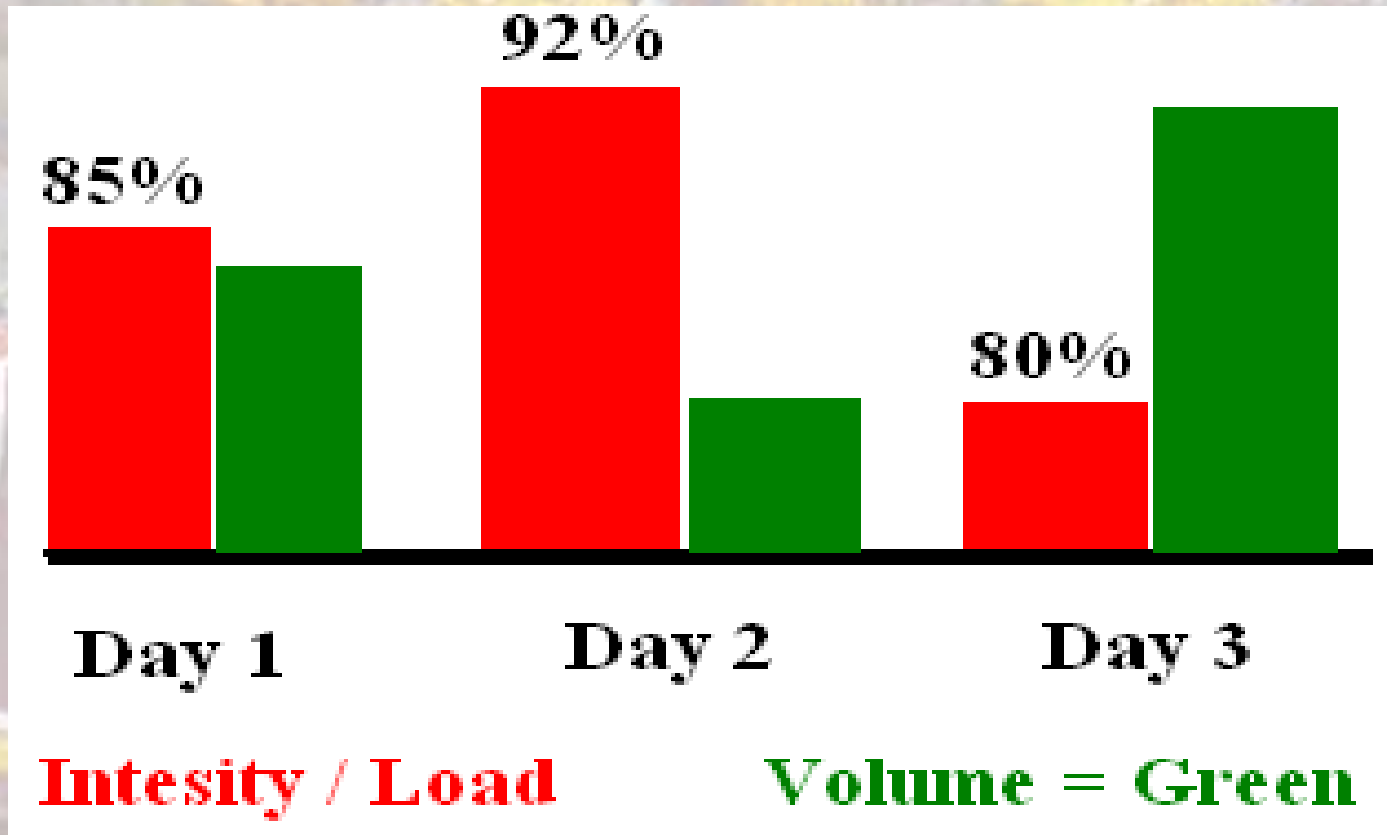
- **Working Various Motor Task**



Figure 20: Increase in power in the vertical jump in place after 6 weeks of training with various weights: 1) 50% of maximum. 2) 90% of maximum and 3) combination of 90% and 50% of maximum.

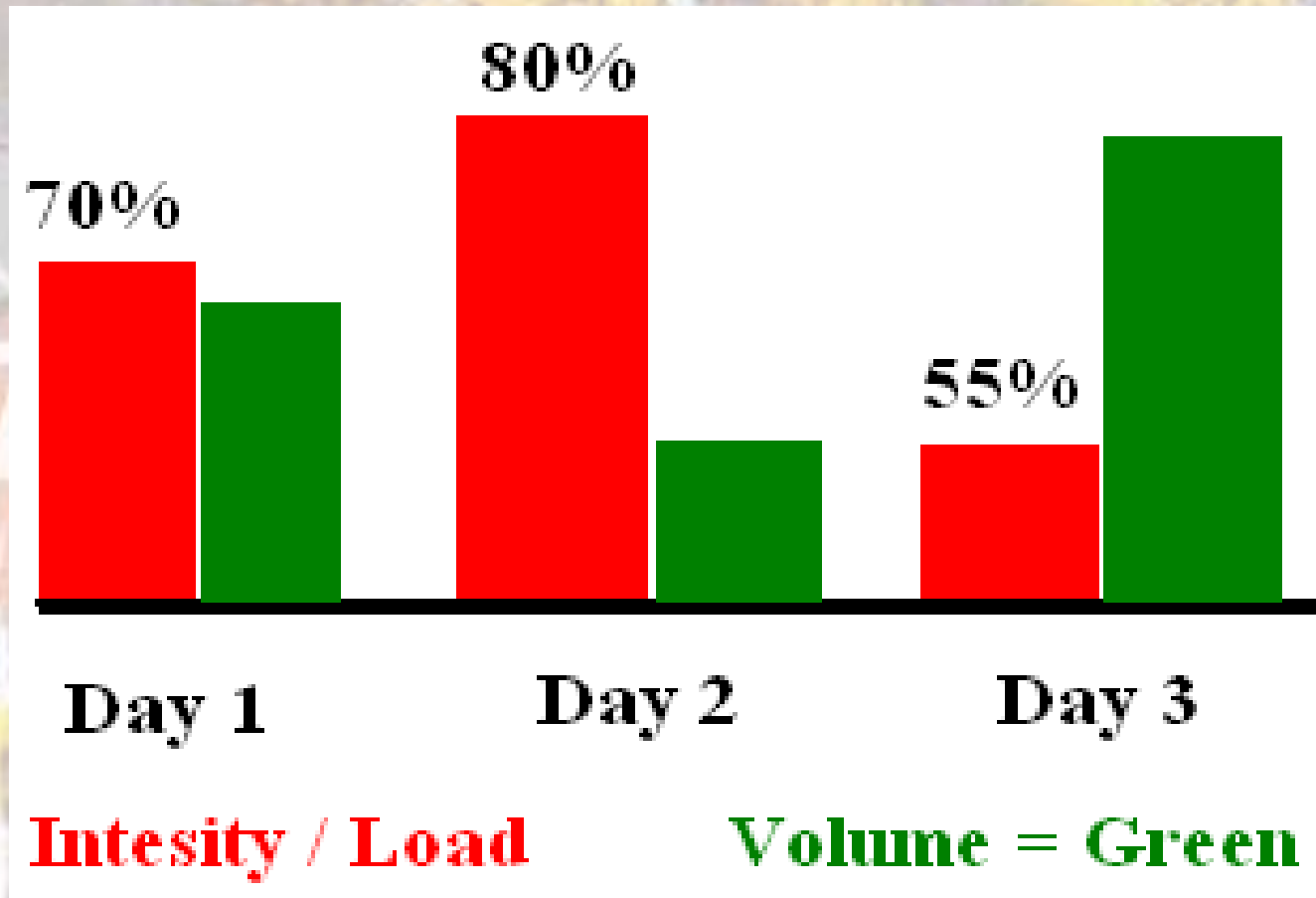
High Force at Low Velocity

>80% Loading for Undulating Weekly Model



High Force at High Velocity

<80% Loading for Undulating Weekly Model



Organizing Monthly Training

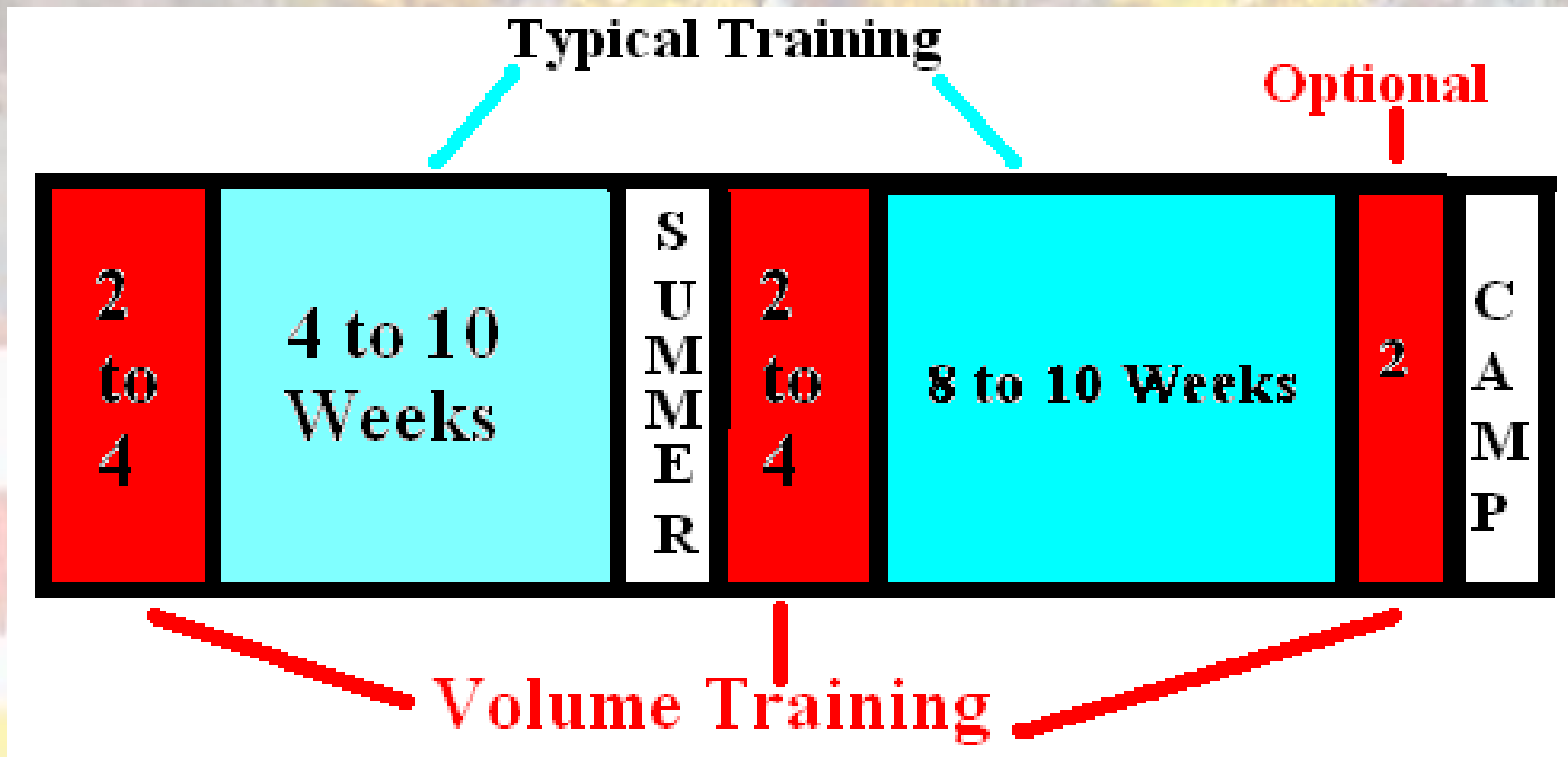
- **Combining four weeks of training towards one goal (such as improving strength or increasing speed) is convenient and effective**
- **Basic Design**
 - **3-6 weeks hard training**
 - **1 week lighter training (download week)**
 - **50-60%**
 - **Allows for effective training and a recovery week before the next month of training**
 - **During the light week, the athlete's bodies can catch up to the training, rebuild, and adapt to a higher state**

Organizing Yearly Training

- **Several months of training towards a specific goal makes training more effective**
 - **What do you athletes need?**
 - **Speed?**
 - **Strength?**
 - **Work capacity?**
- **Goal would be to apply more stress over a long period of time**
- **The type of stress that you want to apply in the beginning is volume based**

Organizing Yearly Training

- Off-Season Training Plan-
- Volume Plan



Organizing The Training Session

- **Start with a dynamic warm-up**
- **Perform the most valuable exercises or those that require coordination first**
- **Three keys to follow**
 - **Do main sport exercises before assistance exercises**
 - **Dynamic, power-type drills before slow exercises**
 - **Cleans before squats**
 - **Exercise larger muscle groups before smaller ones**

Training Session Example:

Lifting day

- 1) Complete a proper dynamic warm prior to any activity
- 2) Choose from a list of [Dynamic Warm Ups](#) or from the [dynamic warm-up builder](#)
- 3) Choose a type of [Agility Drill](#)
- 4) Complete a [Strength Program](#) , [Adaptability Program](#), [Super Endurance](#) Workout or [build your own](#).
- 5) Choose a [Hockey specific Prehab](#) workout
- 6) Complete a [Core Training Session](#) and/or a Stretching Workout
- 7) Speed or Conditioning Training – [Coaching Tool](#)

Training Session Example: Off day or conditioning

- 1) Complete a proper dynamic warm prior to any activity
- 2) Choose from a list of Dynamic Warm Ups
- 3) Choose an Agility Drill to complete
- 4) Complete a Game Speed Conditioning Plan or General Conditioning
- 5) Complete a Core Training Session and/or a Stretching Workout

Training Day: Getting Started

- **Dynamic Warm Up**
 - **Most effective way of preparing for training, practice and competition**
- **What it does**
 - **Increase blood flow**
 - **Increase body and muscular temperature**
 - **Improve kinesthetic awareness – moving the arms and legs across the midline**
 - **Injury prevention – superior to static stretching**

Different Types of Warm Ups

- **Dynamic Running – [First](#)**
- **Dynamic Walking – [Second](#)**
- **Dynamic Still – [Third](#)**
- **Various types of warm ups provided on XLATHLETE.com**

Cone Agility Drills

- **Develop speed and ability to change direction**
- **Examples**
- **Helpful coaching points**
- **Do your drills in a competitive atmosphere**
 - **Run the drills fast and accurately**
 - **Take as few steps as possible**
 - **Stay low – keep your center of gravity (hips) low to allow for effective and easy changes in direction**
- **Single Leg Isometric Deadlift**

Ladder Drills

- **Common misconception: ladder drills train speed**
 - **Ladder drills** do not make an athlete faster
 - There is not enough intensity and force to stimulate changes in neuromuscular velocity output
- **What they do:**
 - Learn skill or pattern – stay in good position.
 - Develop footwork awareness
 - Train the body to quickly adapt to uncertain or unknown situations (throw/catch balls simultaneously)
 - Include math problems to **challenge the brain**

Prehab Exercise

- 2 sets of 2 to 3 Exercises Paired

- Examples

- Balance Single Leg Squat (knees, quads, ACL)

- Piston Squat – With Band (knees, quads, ACL)

- TKE (quads, prevention of tendonitis)

- 4 Way Ankle Kicks (hips, glutes, groin)

- 3 Way Ham Press (hamstrings)

- Cuban Press Figure 8 (rotator cuff)

Sports Specific Prehab

A background image showing several ice hockey players in maroon and gold uniforms on an ice rink. The players are wearing helmets and holding hockey sticks. The scene is slightly blurred, suggesting motion or a focus on the text overlay.

- Groin
- Pool Workouts
- Shoulder Circuits
- Knee Prehab
- YWTL Circuit

Core Training

- **An important aspect of training often left out**
 - **Rotational Movements** for stabilization in running
- **Developing the ability to absorb and resist force with the core musculature**
 - **When making contact with an opponent, the core must quickly tighten and absorb force, or the body will crumble**
- **Ways of training the core to absorb force**
 - **Oscillatory Box Push Up** and **Clap Push Ups**

Guidelines with Percentages and Reps

- **55% - 74% - Reps of 5 to 3 – With Variables**
- **75 % - 4 to 2 – Out-of-season – In-season**
- **80 % - 4 to 1 – Out-of-season – In-season**
- **85 % - 3 to 1 – Out-of-season – In-season**
- **92 % - 2 to 1 – Out-of-season – In-season**
- **Rule Number One (Speed/ Quality)**
- **Cluster Training-Set of 3 Reps (1+1+1) 10 Sec**

Off Season Building Of Athletes

- **Play other sports!**
 - Improve ability to see plays develop and make plays
 - Improve running and jumping abilities
 - Improve hand-eye coordination
 - Condition the athletes
- **Examples**
 - Basketball, [Russian Basketball](#), Tennis, Racquetball, Volleyball, Table Tennis, Soccer, Trash Ball, Football

Human Performance: Current Practices

- **Two ways to get better**
 - Increase strength
 - Increase speed
- **Rate of Force Development**
 - A very important factor in explosive sports
 - The ability to develop force quickly
 - The development of maximum strength takes time
 - This is often much more time than the athlete has

Specific Conditioning

- **Metabolic Game Speed Conditioning** – [Preview](#)
 - Decrease injuries
 - Very specific to speed sports
- **Interval Training** – **Key to increasing fitness levels**
 - Intensity is key
 - Use speed or conditioning
- **Try to match conditioning with training**

Important Coaching Concepts

- **Stop over coaching in the weight room**
- **Sound technique**
- **Keep it simple and on point**
- **Weight room experiment**
 - **Using a power measuring device (Tendo)**
 - **Loss of speed and force output happen when too many coaching cues are given**

Plyometrics

- **An excellent way to improve explosiveness and reactive strength**
- **Trains two qualities in the neuromuscular system**
 - **Makes the stretch-reflex more effective (creates a more powerful contraction) and inhibits the Golgi Tendon Organ reflex, which can limit explosive performance**
 - **Trains the elastic properties of muscles and tendons to properly prepare the athlete for explosive sport performance**

Plyometrics

- **Often overdosed in training**
 - This is because **plyometric exercise is not fatiguing in the traditional sense (such as distance running) but primarily in a neural sense**
 - The muscles and nerves can easily become **overtrained and performance can suffer**
- **It is best to do only a few jumps per plyometric session and only include plyometrics during the most appropriate time of year (near peaking for example)**

Plyometrics

The background of the slide is a photograph of several hockey players on an ice rink. They are wearing maroon jerseys with yellow accents and white numbers. The players' names and numbers are visible on their backs, including 'CURRY' with number 3, 'ANDERSON' with number 2, and 'ANDERSON' with number 1. The scene is slightly blurred, suggesting motion or a candid moment during a game or practice.

- **Best to perform plyometrics early in a workout when fresh**
- **Here are some examples of basic plyometrics**
 - **Plyometrics**

Loading Methods

Use Various Methods on Day 1- Sub Max

Triphasic, Clustering, Contrast, Complex, Bands , Chains, Weight Releasers, Tendo Training , Bio-Feedback.

Use Max Effort Method on Day 2

Use Various Methods on Day 3 – High Volume

Triphasic, Body building Methods, Strongman, Clustering, Contrast, Complex, Bands , Chains, Weight Releasers, Tendo Training , Bio-Feedback, Trx, p90x, Cross Fit

Tri-Phasic Undulating Block Method – Squat Example

Block 1

Weeks

1 & 2

Eccentric

Eccentric

Squat

6:0:0:0

Block 2

Weeks

3 & 4

Isometric

Isometric

Squat

0:3:0:0

Block 3

Weeks

5 & 6

Concentric

Explosive

Squat

0:0:0:0

[Back Squat Ecc](#)

[Back Squat Iso](#)

[Back Squat](#)

French Contrast Training

- E1 Back Squat – 3 to 5 reps
- E2 Hurdle Hop – 3 to 5 Reps
- E3 Squat Jump With Weight 3 to 5 Reps
- E4 Power Step up – 3 to 5 reps
- **Example: Back Squat - 6 Week Model**
 - 2 weeks **eccentric tempo** in first block
 - 2 weeks **iso-hold** in second block
 - 2 weeks **dynamic action** in third block
- **800m versus 100m**
 - Tempo is based on athlete's needs

Clustering

- **3 sets of 3 reps or 3 sets of 1+1+1**
- **Allows for more quality reps at an intense load**
- **Usually performed on the high intensity low volume day**

[View Full Cluster Article](#)

Complex Training

A background image showing several ice hockey players on an ice rink. They are wearing maroon jerseys with yellow accents and numbers. The players are in various positions, some holding hockey sticks. The scene is slightly blurred, suggesting motion or a candid moment during a game or practice.

- **The use of plyometrics in between sets of strength training**
- **3 sets of 3 reps paired with 3 sets of 3 plyometrics**
- **Speed load should be under 80 percent**

Complex Training

- **Set 1** - 2 Reps Back Squat p/w 3 Box Jumps
- **Set 2** - 2 Reps Back Squat p/w 3 Box Jumps
- **Set 3** - 2 Reps Back Squat p/w 3 Box Jumps

Contrast Training

- **Used during heavy loading phases – Drop off around 15 to 20 percent**
- **Set 1 – 2 reps @ 90%**
- **Set 2 - 2 reps @ 70%**
- **Set 3 – 2 reps @ 90%**
- **Set 4 - 2 reps @ 70%**
- **Set 5 – 2 reps @ 90%**
- **Set 6 - 2 reps @ 70%**
 - Rest 2 min between sets

Restoration and Recovery

- **Post workout recovery is often overlooked when designing programs**
- **It is important to jump start the healing processes of the body**
- **There are three basic types of recovery**
 - **Mechanical (exercises and cool down)**
 - **Biochemical (nutrition)**
 - **Psychological**

Restoration and Recovery

- **Mechanical recovery helps in a few basic ways**
 - **Rid the body of metabolic waste**
 - **Increase circulation to help get nutrients to areas in need of repair**
 - **Help decompress tissues and the spine after loading**

Restoration and Recovery

- Here are a few examples of mechanical recovery
 - Exercises
 - Bike Recovery



Chocolate Milk For Recovery

- 1. Recovery is most important factor in training**
- 2. Get boosters involved in buying process**
- 3. Administration feels very comfortable about milk**
- 4. The cost is as effective as the product**
- 5. Carbohydrate to Protein ratio is idea for post workout recovery**

Nutrition For Recovery

- As training volume increases, food intake needs to increase
- Consume healthy, natural foods
 - Grass fed, free range meats and dairy products
 - In-season fruits and vegetables
 - Healthy fats from oils and mixed nuts
- Stay away from empty calories

Nutrition For Recovery

- Stay hydrated
 - Water is anabolic
 - After training/practice/games replenish with electrolytes
- Lose body fat
 - Don't eat 2-3 hours prior to bed
 - Especially carbs close to bedtime
 - Stay away from sugary drinks and food

Recovery

A photograph of ice hockey players in maroon and yellow uniforms huddled together on the ice. The players are wearing helmets and holding hockey sticks. The background shows a crowd of spectators in a stadium. The image is slightly faded to allow text to be overlaid.

- Sleep
 - Rest is the best recovery method there is, without enough rest your body can not repair itself.

Questions?

- Thank you for your interest!
- Please feel free to visit:

www.xlathlete.com

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