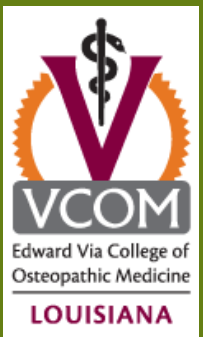
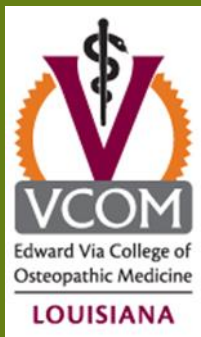


AVOIDING THE SIDELINES: SPORTS INJURY PREVENTION TIPS

STEPHANIE ALDRET, DO, CAQSM
OOA 2020 WINTER CME





- Review the benefits of sport and exercise
- Describe appropriate warm up and cool down
- Discuss stretching
- Recognize specifics of sport
- Relate fuel and hydration



BENEFIT OF SPORT AND EXERCISE

**Food is the
most abused
anxiety drug.
Exercise
is the most
underutilized
antidepressant.**

THE BEST EXERCISES ARE THE ONES
THAT ARE **DONE.**

50 REASONS to exercise

01. Lifts your mood
02. Improves learning abilities
03. Builds self-esteem
04. Keeps your brain fit
05. Keeps your body fit & able
06. Boosts mental health
07. Boosts your immune system
08. Reduces stress
09. Makes you feel happier
10. Has anti-ageing effects
11. Improves skin tone and colour
12. Improves sleeping patterns
13. Helps prevent strokes
14. Improves joint function
15. Improves muscle strength
16. Alleviates anxiety
17. Sharpens memory
18. Helps to control addictions
19. Boosts productivity
20. Boosts creative thinking
21. Improves body image
22. Gives you confidence
23. Helps you keep focused in life
24. Improves eating habits
25. Increases longevity
26. Strengthens your bones
27. Strengthens your heart
28. Improves posture
29. Prevents colds
30. Improves appetite
31. Improves cholesterol levels
32. Lowers risk of (certain) cancers
33. Lowers high blood pressure
34. Lowers risk of diabetes
35. Fights dementia
36. Eases back pain
37. Decreases osteoporosis risk
38. Reduces feelings of depression
39. Prevents muscle loss
40. Increases energy and endurance
41. Increases sports performance
42. Increases pain resistance
43. Improves balance and coordination
44. Improves oxygen supply to cells
45. Improves concentration
46. Helps with self-control
47. Lessens fatigue
48. Increases sex drive & satisfaction
49. Makes life more exciting
50. Improves Quality of Life



WARM UP

- Walk the field of play
- Simple movements
- Sports specific movements



CORE VALUES

*Don't just know them...
Live Them!!!*

#1. Honesty

#2. Use Great Judgment

#3. Compete Everyday

#4. Be Accountable

#5. Project Positive Energy

#6. Find a Way

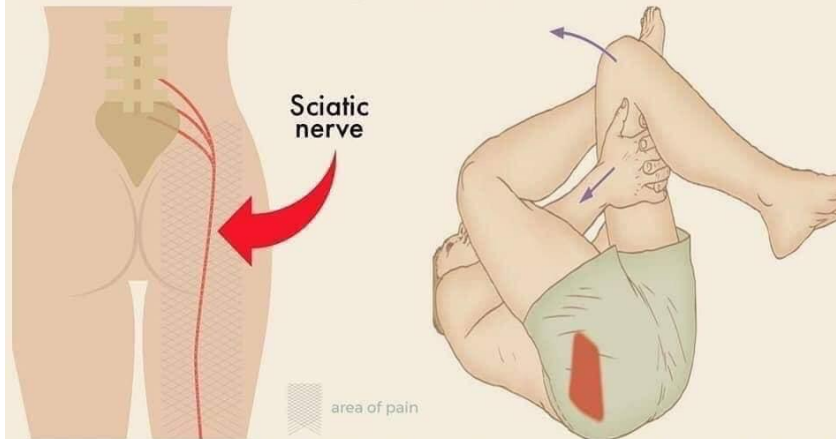
STRETCHES

DID YOU KNOW?
WHEN YOU DO THIS STRETCH DAILY...



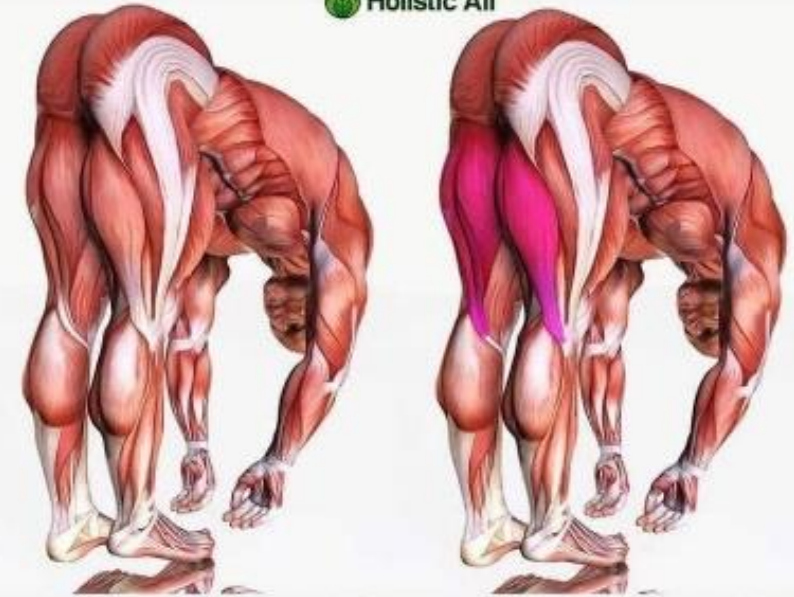
THIS IS THE AREA THAT CAUSES STIFFNESS AND LOWER BACK PAIN FROM LACK OF STRETCHING. THIS AREA MUST BE STRETCHED DAILY, ESPECIALLY IF YOU SIT ALL DAY.

DID YOU KNOW?
DOING THIS STRETCH FOR SEVERAL MINUTES PER DAY...



STRETCHING YOUR PIRIFORMIS MUSCLES CAN LITERALLY REDUCE ANY PAIN ESPECIALLY SCIATICA AND LOWER BACK PAIN, IT ALSO HELPS REDUCE TIGHTNESS IN THE BACK OF YOUR LEGS, BUTTOCKS, HAMSTRINGS, AND PERHAPS YOUR CALF MUSCLES

DID YOU KNOW?

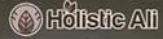


THE STANDING FORWARD BEND STRETCHES THE HIPS, HAMSTRINGS, AND CALVES, STRENGTHENS THE THIGHS AND KNEES, KEEPS YOUR SPINE STRONG AND FLEXIBLE?

STRETCHES

DID YOU KNOW?

DOING THIS GROIN STRETCH FOR A FEW MINUTES PER DAY...



THE BUTTERFLY STRETCH HELPS TO OPEN UP THE HIPS AND THIGHS AND IMPROVES FLEXIBILITY. THIS STRETCH TARGETS THE GROIN AREA, LOOSENING AND LENGTHENING THE INNER THIGH MUSCLES (ADDUCTORS). THE ADDUCTORS ARE OFTEN NEGLECTED IN WORKOUTS BUT THEY PLAY A KEY ROLE IN YOUR STABILITY AND BALANCE.

DID YOU KNOW?

WHEN YOU DO THIS POSE FOR A FEW MINUTES PER DAY..



IT STRENGTHENS AND STRETCHES THE INNER AND BACK LEGS AND THE SPINE, TONES THE ABDOMINAL ORGANS, CALMS THE BRAIN, RELIEVES MILD BACKACHE

DID YOU KNOW?

UTKATA KONASANA HAS MANY HEALTH BENEFITS



IT STRETCHES YOUR HIPS, GROIN AND CHEST, TONES AND STRENGTHENS THE CORE MUSCLES, STRENGTHENS THE QUADRICEPS AND INNER THIGH MUSCLES, RESTORES THE SHOULDERS, ARMS AND UPPER BACK

STRETCHES

DID YOU KNOW?

DOING THIS POSE FOR A FEW MINUTES PER DAY...

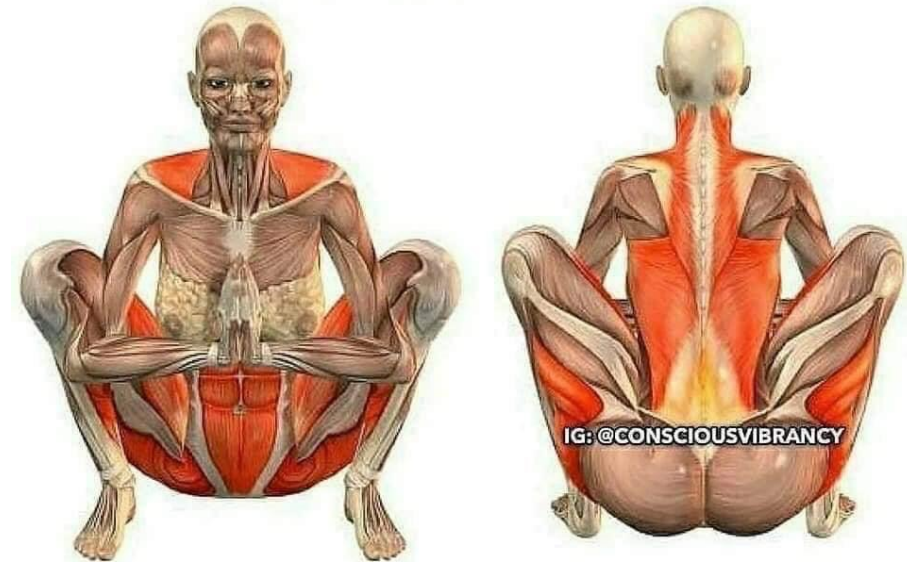


INDUCES RELAXATION, RELIEVES STRESS AND LIFTS MOOD, STRETCHES THE SPINE, SHOULDERS, LOWER BACK, AND HAMSTRINGS, STIMULATES ORGANS INCLUDING INTESTINES, KIDNEYS, LIVER, OVARIES AND UTERUS, HELPS RELIEVE SYMPTOMS OF MENSTRUAL DISCOMFORT.

Source: Dr. Weil

DID YOU KNOW?

The **Malasana Pose** Has Many **Benefits**



IG: @CONSCIOUSVIBRANCY

The malasana pose stretches the thighs, groin, hips, ankles, and torso. It tones the abdominal muscles and improves the function of the colon to help with elimination. This pose also increases circulation and blood flow in the pelvis, which can help regulate sexual energy.

SOURCE: YOGAOUTLET

STRETCHES



STRETCHES

DID YOU KNOW?

DOING THIS POSE FOR A FEW MINUTES PER DAY...

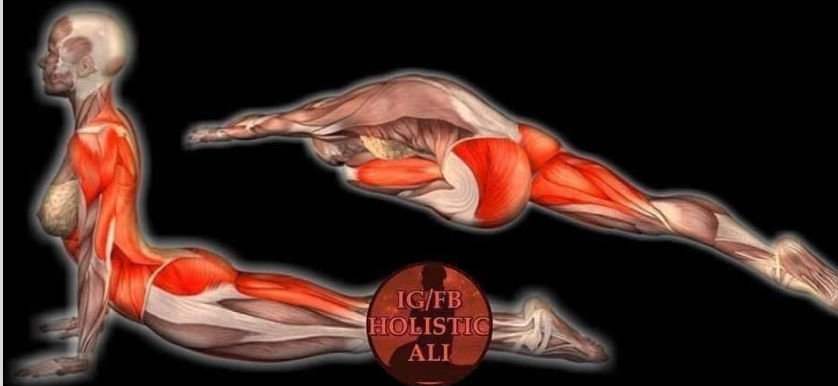
Part :- 2



|| @itsyogasana ||

THE CAT-COW STRETCH IMPROVES POSTURE AND BALANCE, STRENGTHENS AND STRETCHES THE SPINE AND NECK, STRETCHES THE HIPS, ABDOMEN AND BACK, INCREASES COORDINATION.

DID YOU KNOW? DAILY STRETCHING



UC DAVIS Reported that stretching Increases blood flow to the muscle. Increases oxygen levels. Helps improve flexibility, improving range of motion in your joints. Releases tension in both the body and mind.

DID YOU KNOW? UPWARD DOG HAS MANY BENEFITS

Holistic Ali



IT CAN STRENGTHEN THE WRISTS, ARMS, AND BACK AND TONING THE BUTTOCKS. ITS CHEST-OPENING ACTION PROVIDES A GREAT ANTIDOTE TO "OFFICE SLUMP," WHILE FREEING THE LUNGS AND OPENING THE HEART.

COOL DOWN

DID YOU KNOW?

Putting your legs up the wall for a few minutes per day...



This is a powerful and restorative pose that helps with
Sending blood flow to your core, Eases stress, Helps
you sleep, Calms your nerves, Relieves swollen ankles,
Relieves varicose veins, Relieves headaches, and
Improves digestion

DID YOU KNOW?

DOING THE PLOW STRETCH REGULARLY...



The Plow Stretch opens the neck, shoulders,
and back. By compressing the abdomen, it
massages and tones the digestive organs,
which improves detoxification.

DID YOU KNOW?

DOING THIS POSE FOR 5 MINUTES A DAY...



IT'S SUPER CALMING FOR THE MIND, IT'S
GREAT FOR YOUR DIGESTION, IT ELONGATES
THE LOWER BACK, IT OPENS UP THE HIPS.

Running

Appendix 1: Study 1 – Interview Schedule

Warm up by jogging the 3.5-kilometer before stretching



4 of 10 pages
 11 views
 1 page(s)



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Journal of Internal Medicine 255: 441–449



Page 17



1. *2017-2018*
 2. *2018-2019*
 3. *2019-2020*



2000



George B. Stiles

94-11-seconds
(page 10)

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Journal of Internal Medicine 247: 111–117

Answer: 100
After a total input of 24
minutes, the remaining
1, 4, 1, 1
minutes, 100 minutes

Running

Neuroanatomically, I Agree, too



10. *Chrysomelidae*
 11. *Curculionidae*
 12. *Chrysomelidae*



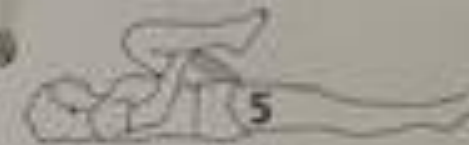
10-15 minutes
page 47



24. *apocynaceae*
mistle-bug
cypress 4.1.1



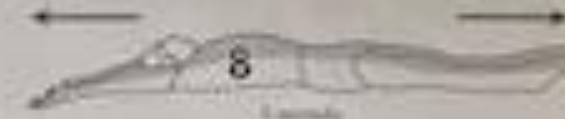
For information
contact
page 10.

[illegible]

1. *Chlorophyll a*
2. *Chlorophyll b*
3. *Chlorophyll c*
4. *Chlorophyll d*



24-18-1999



Stretch

What are your
 top three needs?
 1. 2. 3.
 Address 1 to 3 items

Traveler's Stretches

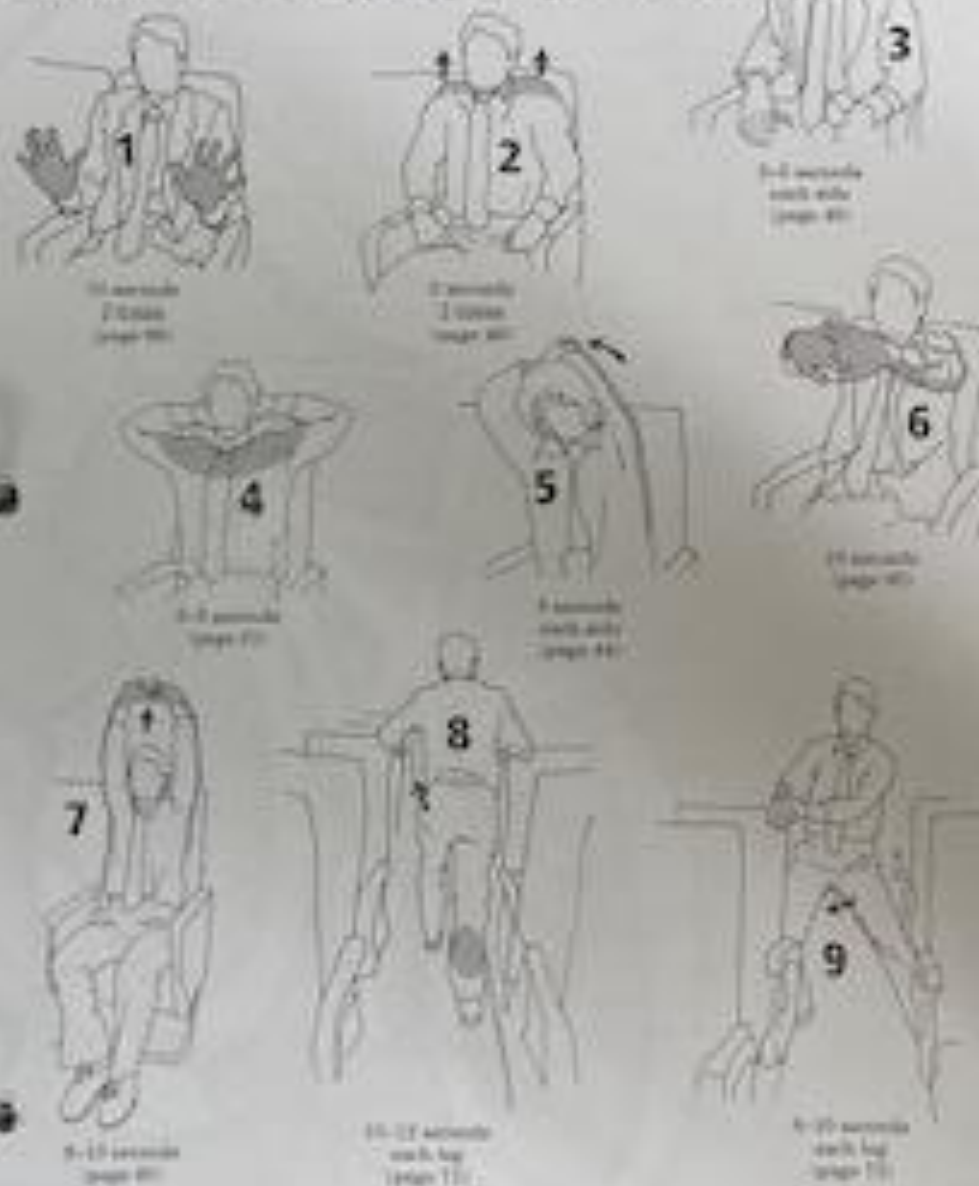
Approximately 2 Minutes

Stretch at various times throughout your journey to help your body feel less stiff and tight.



Airplane Stretches

Turnover this page and take it along on your next flight. Stretching on the plane will reduce stress and stiffness and allow you to arrive in a more relaxed state. Don't be surprised if your fellow passengers follow your example and start stretching too. Especially good to do just before you land.



**Before and After
Football**
Approximately 2 Minutes

Jog around the football field before stretching.



1 Rotate 10-12 times
each direction
(page 66)



2 10 seconds
5 times
(page 66)



3 5 seconds
3 times
(page 66)



4 10-12 seconds
each side
(page 66)



5 5-10 seconds
each side
(page 66)



6 10 seconds
(page 66)



7 10-20 seconds
(page 66)



8 10-20 seconds
each leg
(page 66)



9 20-30 seconds
(page 66)



10 5-8 seconds
(page 66)



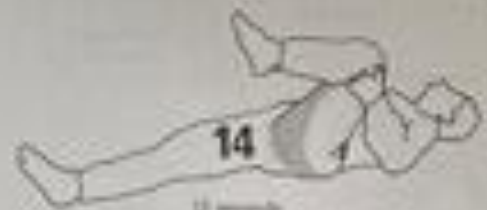
11 20 seconds
(page 66)



12 5-10 seconds
each side
(page 66)



13 10 seconds
each leg
(page 66)



14 10 seconds
each leg
(page 66)



15 10-12 seconds
each leg
(page 66)



16 5-8 seconds
each leg
(page 66)

Start on Side!
Do Side with number
8, 9, 10, 11, 12, 13, 14, 15
Repeat 20 minutes

KNOW THY SPORT

- Risk involved
- Environment
- Season
- Equipment
- Uniform
- Positions
- Technique



RISK INVOLVED

Contact collision	Limited contact	Non-contact
Basketball	Baseball	Archery
Boxing	Bicycling	Badminton
Diving	Cheerleading	Bodybuilding
Field hockey	Canoeing/kayaking (white water)	Bowling
Football	Fencing	Canoeing/kayaking (flat water)
Flag	High jump	Crew/rowing
Tackle	Pole vault	Curling
Ice hockey	Floor hockey	Dancing
Lacrosse	Gymnastics	Discus
Martial arts	Handball	Javelin
Rodeo	Horseback riding	Shot put
Rugby	Racquetball	Golf
Ski jumping	Skating	Orienteering
Soccer	In-line	Power lifting
Team handball	Skiing	Race walking
Water polo	Cross-country	Riflery
Wrestling	Downhill	Rope jumping
	Water	Running
	Softball	Sailing
	Squash	Scuba diving
	Ultimate Frisbee	Strength training
	Volleyball	Swimming
	Windsurfing/surfing	Table tennis
	Weightlifting	Tennis
		Track

Classification of sports by contact.

RISK INVOLVED

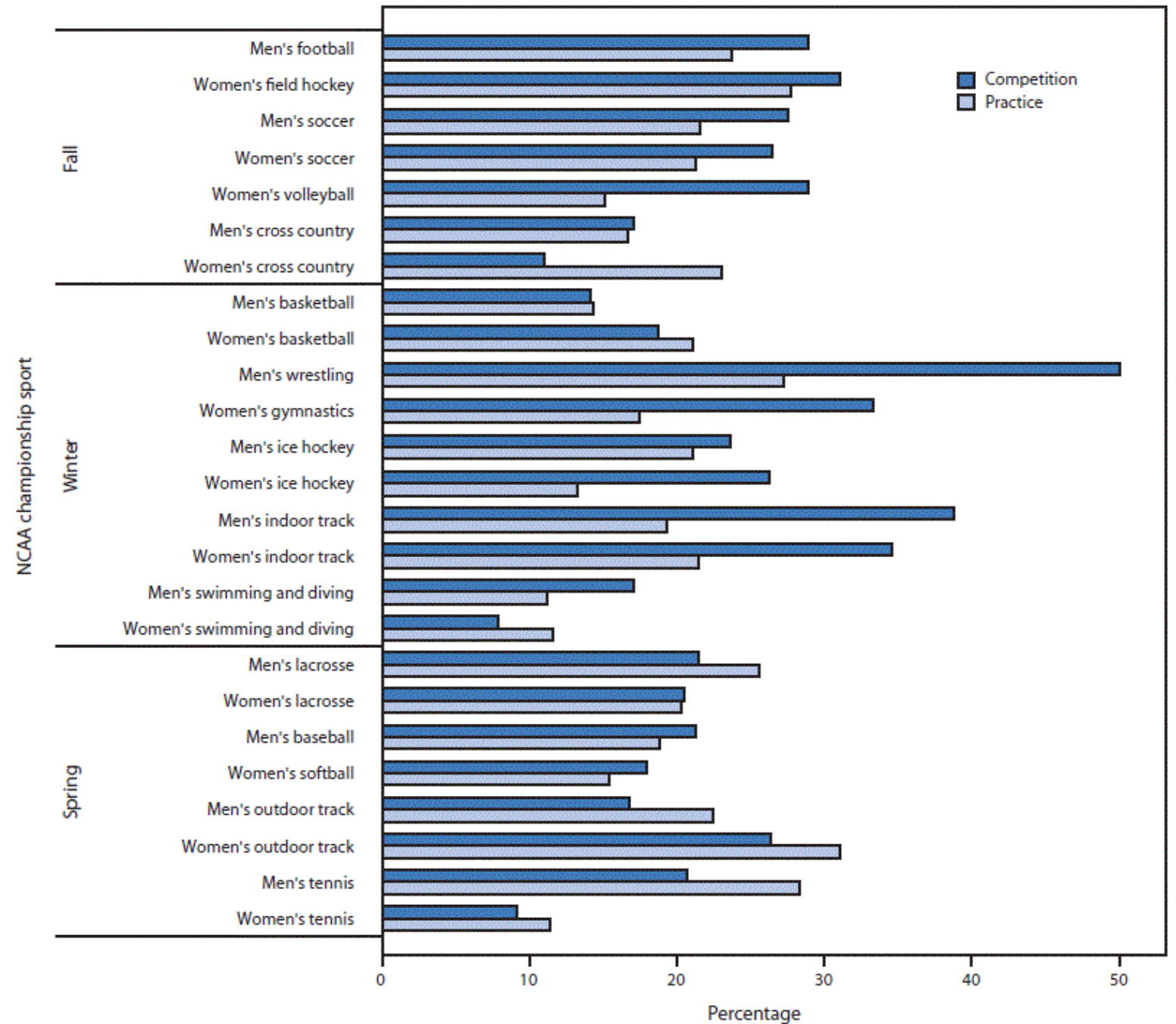
Classification of Sports by Physical Intensity

Increasing static component ↑ III. High (> 50% MVC) II. Moderate (20% to 50% MVC) I. Low (< 20% MVC)	Bobsledding/luge,*† field events (throwing), gymnastics,*† martial arts,* sailing, sport climbing, water skiing,*† weight lifting,*† windsurfing*†	Bodybuilding,*† downhill skiing,*† skateboarding,*† snowboarding,*† wrestling*	Boxing,* canoeing/kayaking, cycling,*† decathlon, rowing, speed skating,*† triathlon*†
	Archery, auto racing,*† diving,*† equestrian,*† motorcycling*†	American football,* field events (jumping), figure skating,* rodeoing,*† rugby,* running (sprint), surfing,*† synchronized swimming†	Basketball,* cross-country skiing (skating technique), ice hockey,* lacrosse,* running (middle distance), swimming, team handball
	Billiards, bowling, cricket, curling, golf, riflery	Baseball/softball,* fencing, table tennis, volleyball	Badminton, cross-country skiing (classic technique), field hockey,* orienteering, race walking, racquetball/squash, running (long distance), soccer,* tennis
	A. Low (< 40% maximal $\dot{V}O_2$)	B. Moderate (40% to 70% maximal $\dot{V}O_2$)	C. High (> 70% maximal $\dot{V}O_2$)
	Increasing dynamic component →		

*—Danger of bodily collision.

†—Increased risk if syncope occurs.

RISK INVOLVED



ENVIRONMENT

SEASON

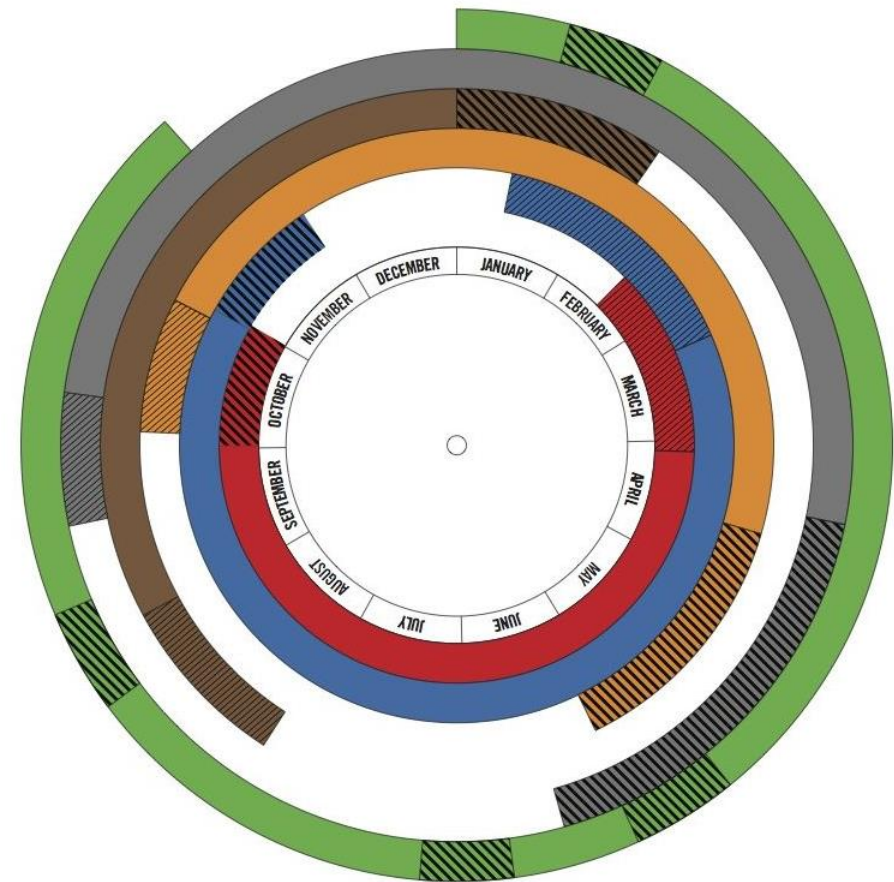
ESTIMATED REGISTRATATION DATES																																								
Sport	January			February			March			April			May			June			July			August			September			October			November			December						
Baseball	Spring Signup												Summer Signup										Fall Signup																	
Basketball											Summer Signup																Winter Signup													
Cheerleading											Cheer Signup																													
Football		7-on-7 Signup										Football Signup																												
Lacrosse	Spring Signup																																							
Volleyball	Spring Signup																																							
Wrestling																					Full Season Signup						Late Season Signup													
ESTIMATED SEASON DATES																																								
Sport	January			February			March			April			May			June			July			August			September			October			November			December						
Baseball							Spring Season							Summer Season								Fall Season																		
Basketball	Winter Season														Summer Season																									
Cheerleading																				Fall Season																				
Football							Spring 7-On-7														Fall Season																			
Lacrosse							Spring Season																																	
Volleyball							Spring Season																																	
Wrestling	Late Season																									Full Season Start			Late Season											

PROFESSIONAL SPORTS

SEASON

WHICH SPORT ARE THEY ARGUING ABOUT?
— MY CHEAT SHEET —

	US:	NON-US:	CANADA
JANUARY	FOOTBALL (o)	FOOTBALL (o)	HOCKEY
FEBRUARY			
MARCH	BASKETBALL		
APRIL			
MAY	BASEBALL		
JUNE	BASKETBALL		
JULY	BASEBALL		
AUGUST			
SEPTEMBER	FOOTBALL (o)		
OCTOBER	BASEBALL		
NOVEMBER	FOOTBALL (o)		
DECEMBER			



EQUIPMENT

10/10/2023

UNIFORM

POSITIONS

TECHNIQUE

EXTRACURRICULARS

HYDRATION

Sport Nutrition Timing and Recommendations						
	BEFORE (1-2 hours prior)	Examples	DURING (90-120 minutes)	Examples	AFTER (within 30 minutes)	Ex
FLUID	Consumption adequate to achieve overall hydration To regulate heat, lubricate muscles, and improve cognitive function	Sports Drink Water Tea Milk Coffee	6-8 fl oz every 20 minutes To prevent dehydration of more than 2% of overall body weight which can effect performance	Sports Drink Water	150% of fluid losses 1 lb = 24 fl oz To cool core temperature replace fluids lost via sweat and dehydration	1 lb of weight lost = 16 cups of fluid Smoothie with peanut butter

Consumption adequate to achieve overall hydration

Urine Color Chart (Refer text for full information)

 Yellowish to Amber	Typically normal urine. It might sometimes mean you are little dehydrated.	 Brown	Senna , some medications and pigments can cause urine appear brown.
 Transparent/clear	Well hydrated. You are drinking enough water.	 Red	Medications, dyes, food, infection, and other medical conditions may cause urine to become red. Red urine is a RED ALERT to consult a GP immediately.
 Yellow	Vitamins, diabetes, hypothyroidism, infection, and other causes. Highly dehydrated urine may also appear yellow.	 Blue	Asparagus, pseudomonas infection, dyes like methylene blue, even, and diagnex, and a number of medications can cause urine appear green or bluish green in color.
 Orange	Beet, carrots, vitamin B, C, meds like warfarin and rifampicin can cause urine color change to orange shade.	 Green	
 Milky white	Medication propofol, bacterial infection, and some pigments can make urine appear cloudy.	 Black	Meds (Chloroquine, primaquine, levodopa), fava beans, rhubarb, proteus infection.
 Pink	Beet, blackberry, rhubarb, medicine propofol, and some pigments like porphyria, haemoglobin, myoglobin.	 Purple	It is not a urine color but color of bag used in purple urine bag syndrome PUBS. In PUB infection occurs due to some bacteria that change enzymes in the body to purple color in urine

FUEL

HOW TO SELECT FOODS FROM THE MAJOR ENERGY GROUPS	
<i>3 steps for selecting meals:</i>	
Step 1	incorporate fruits, vegetables, nuts and seeds into your meal
Step 2	alter your carbohydrate intake relative to your activity
Step 3	select a lean source of protein

Protein and Fat Sources		
Chicken	Beef	Fish
Turkey	Pork	Eggs
Cottage cheese	Milk (cow, soy, coconut, almond)	Tofu
Yogurt	Cheese	Beans
Nuts, Seeds	Quinoa	Edamame
Hummus	Avocados	Olives
Olive Oil	Coconut Oil	Flax Oil

Sport Nutrition Timing and Recommendations						
	BEFORE (1-2 hours prior)	Examples	DURING (90-120 minutes)	Examples	AFTER (within 30 minutes)	Examples
CHO	40g CHO (≥ 200 calories) <i>To provide efficient energy for exercise</i>	Peanut Butter and Jelly Sandwich Almond Butter and Jelly Sandwich Sports Bar Turkey Sandwich Cereal and Milk or Greek yogurt	High Intensity: 30-60g/hr Low Intensity: <30g/hr <i>To maintain blood glucose levels for muscle contractions and brain function</i>	Sports Drink Sports Gels Sports Chews Banana Orange slices	Intense exercise: ~5g per pound of body weight <i>To restore energy sotred in muscles, improve recovery time, and prepare for next session</i>	Peanut Butter and Jelly Sandwich Almond Butter and Jelly Sandwich Tortilla with apple slices, PB, and granola Peanut Butter and Banana smoothie with milk 2 cups chocolate milk Protein Bar Greek yogurt and fruit
PRO	≥10g <i>To prevent muscle breakdown during exercise and prolong the absorption of carbohydrates during exercise for sustained energy</i>		Little or none: (~10-20g for heavy S&C) <i>To prevent muscle breakdown</i>		Low Intensity: ~10g protein High Intensity: 15-20g Protein <i>To prevent muscle breakdown, encourage muscle growth and speed up carb absorption</i>	
FAT	Minimal	--	Minimal	--	Minimal	--
FLUID	Consumption adequate to achieve overall hydration <i>To regulate heat, lubircate muscles, and improved brain function</i>	Sports Drink Water Tea Milk Coffee	6-8 fl oz every 20 minutes <i>To prevent dehydration of more than 2% of overall body weight which can effect performance</i>	Sports Drink Water	150% of fluid losses 1 lb = 24 fl oz <i>To cool core temperature and replace fluids loss via sweat and respiration</i>	1 lb (16 fl oz) lost during exercise = Replenish with 3 cups of fluid rehydration Smoothie with peanut butter

Post Workout Recovery Menu		
Training Type	Nutrition Guidelines	Examples of Recovery Nutrition
EASY TRAINING		
1 easy session per day	<u>Timing is less critical</u>	Water followed by next meal
1 technical/skill-based session per day	Begin recovery with fluids, electrolytes, and a snack but focus on your meal 1-2 hours later to get recovery nutrition completed!	8oz sport drink
Recovery day or off season		Granola bar + water
Weight loss		Fresh fruit + water
		Fruit leather snack + water
		Plain greek yogurt + water



Post Workout Recovery Menu		
Training Type	Nutrition Guidelines	Examples of Recovery Nutrition
MODERATE TRAINING		
1-2 moderate sessions per day	Refuel <u>within 30-60 minutes</u> after training session	Sport Bar + Water
Technical/skill based training	Balanced snack with carbohydrate, protein, fluid, and electrolytes	Recovery Mix + Water
1 moderate to hard training bout with >24 hours of recovery	Eat next meal within 1-2 hours	Granola Bar + Water
	Continue with fueling and hydration throughout the day	Greek Yogurt + Fruit + Water
		Smoothie



Post Workout Recovery Menu				
Training Type	Nutrition Guidelines	Examples of Recovery Nutrition		
HARD TRAINING				
High volume and/or intensity	Refuel <u>immediately</u> after training	45-60kg (110-132 lbs)	70-80kg (154-176 lbs)	90-100+kg (198-220+ lbs)
Training adaptation (e.g. heavy lifting, altitude training)	Ensure minimum 1g/kg/d of carbohydrate, 15-20g protein, fluid, and electrolytes	Sports bar + Fresh Fruit + Water	Sport Bar + PowerAde	Sport Bar + 20oz Sport Drink + Fresh Fruit
Competition or simulated competition days	Eat next meal within 1 hour of initial recovery fuel intake	Granola Bar + Plain Greek Yogurt + Water	Granola Bar + Recovery Mix	Granola Bar + Recovery Mix + Fruit
Repetitive days of hard training	Add a snack 1 hour later	Recovery Mix	Recovery Mix + Fresh Fruit + Granola Bar	Recovery Mix + 1 Fruit + Granola Bar + Sport Drink
2-3 or more sessions per day	Continue with fueling and hydration throughout the day	Sport Drink + Greek yogurt	Greek Fruit Yogurt + Granola Bar + Fresh Fruit + Water	Greek Fruit Yogurt + Granola Bar + Fresh Fruit + Sport Drink
	Have a good plan in place!			



CAFFEINE

- Caffeine is the most widely accepted and commonly consumed drug in the world
- In 2004, WADA removed caffeine from the prohibited substances list and it is now accepted in Olympic sports
- Performance enhancements are seen with most athletes
- Strategies for Using Caffeine
 - Timing -----~1 hour before training or competition
 - Peak levels achieved 60 minutes post consumption
 - For exercise lasting longer than 2 hours, another low dose may be helpful.
 - Amount -----1-3 mg/kg
 - Tolerance is highly individualized
 - Sources ----- Gels, Gums, Cola
 - Coffee is not ideal because of the variability of caffeine content

STEPS TO ENSURE SAFETY WHEN USING CAFFEINE FOR ATHLETIC PERFORMANCE

- Be aware of **how much caffeine** is in your product of choice and your total caffeine consumption for the day
- Understand your **tolerance** to caffeine
 - Responses are very individualized ranging from positive to neutral. Some athletes do not respond while others may experience negative outcomes such as increased heart rate, tremors, and headache. These negative outcomes may cause a direct impairment to performance
- Practice optimal **timing** of consumption
 - Ergogenic benefits, are initiated after 1 hour of consumption and may be sustained for up to 6 hours post-ingestion
- Be **cautious** of unregulated ingredients
 - Sources such as guarana, maca, yerba mate, and bitter orange are often used as stimulants in caffeinated products

SLEEP

Designing a Sleep Intervention for Athletes

Reference: by Bonnar et al., Sports Medicine 2018

Designed by @YLMSSportScience

1 Mode of delivery

An ideal athlete sleep intervention program should aim to address the individual needs of athletes

- To prevent sleep loss during extensive training periods
- and prior to important competitions
- To improve sleep parameters

2 Assessment

Self-report measures of sleep, such as sleep diaries, and, where possible, objective measures such as actigraphy should be used for both assessment and monitoring of sleep pre-, during, and post-intervention

3 Sleep education

Knowledge acquisition on the following topics is essential to the process of making sleep related behavioral change:

- Nature of sleep
- Common sleep issues faced by athletes
- Importance of sleep for optimal performance/recovery
- Methods to improve overall sleep

Content should be sport specific, to increase relevance and therefore engagement and interest for athletes. A work booklet or mobile phone application could be used to complement sleep education provided to athletes

4 Motivation

With respect to athletes, the key to reducing ambivalence to change should be to help them evaluate how the consequences of engaging in sleep interfering behaviors are inconsistent with the goal of achieving success, due to the negative impact of reduced sleep on performance and recovery

5 Behavioral strategies

Programming sleep extension by delaying morning training to allow longer morning sleep, or how to facilitate earlier bedtimes and by napping

Sleeping in on weekends, although allowing extended sleep, should be limited to within 1 h of normal weekday wake-up time

Choose appropriate nap times, or prepare the athlete's body clock for a travel across time zones when it is hard to maintain a regular sleep schedule

Have a good sleep hygiene:

- Optimize the bedroom environment (comfortable temperature, dark and quiet)
- Restrict stimulating activities prior to bed
- Use dim light up to 2 h prior to bedtime

6 Cognitive strategies

Athletes should be assisted in identifying unhelpful worry strategies they may be currently using (e.g. pre-sleep competition worries). Then, they should be provided with a range of alternative such as using thought records to deal with negative automatic thoughts, progressive muscle relaxation, and imagery

7 Travel and Adjustment of Circadian Rhythms

Athletes who are traveling across multiple time zones can minimize the negative effects of circadian rhythm misalignment through non-pharmacological interventions with appropriately timed bright light and sleep hygiene

How does sleep loss influence your performance?



By @YLMSSportScience



1 A reduction in sleep quality and quantity could result in an autonomic nervous system imbalance, simulating symptoms of the overtraining syndrome



2 Growth hormone, which is fundamental to tissue regeneration and growth is released during phases of deep sleep



3 1.7 times greater risk of being injured in athletes who sleep < 8 hours per night



6 When sleep is reduced to less than 7 h in healthy adults, cognitive performance is poorer in tests for alertness, reaction time, memory, and decision making



5 Sleep loss is associated with slower and less accurate cognitive performance



4 Increases in pro-inflammatory cytokines following sleep loss could promote immune system dysfunction



7 Sufficient sleep should be obtained following training sessions, as the perceptual and motor learning processes continue into and throughout subsequent sleep



8 2-hour exposure to light exposure to light from self-luminous electronic displays can suppress melatonin by about 22% and affect sleep

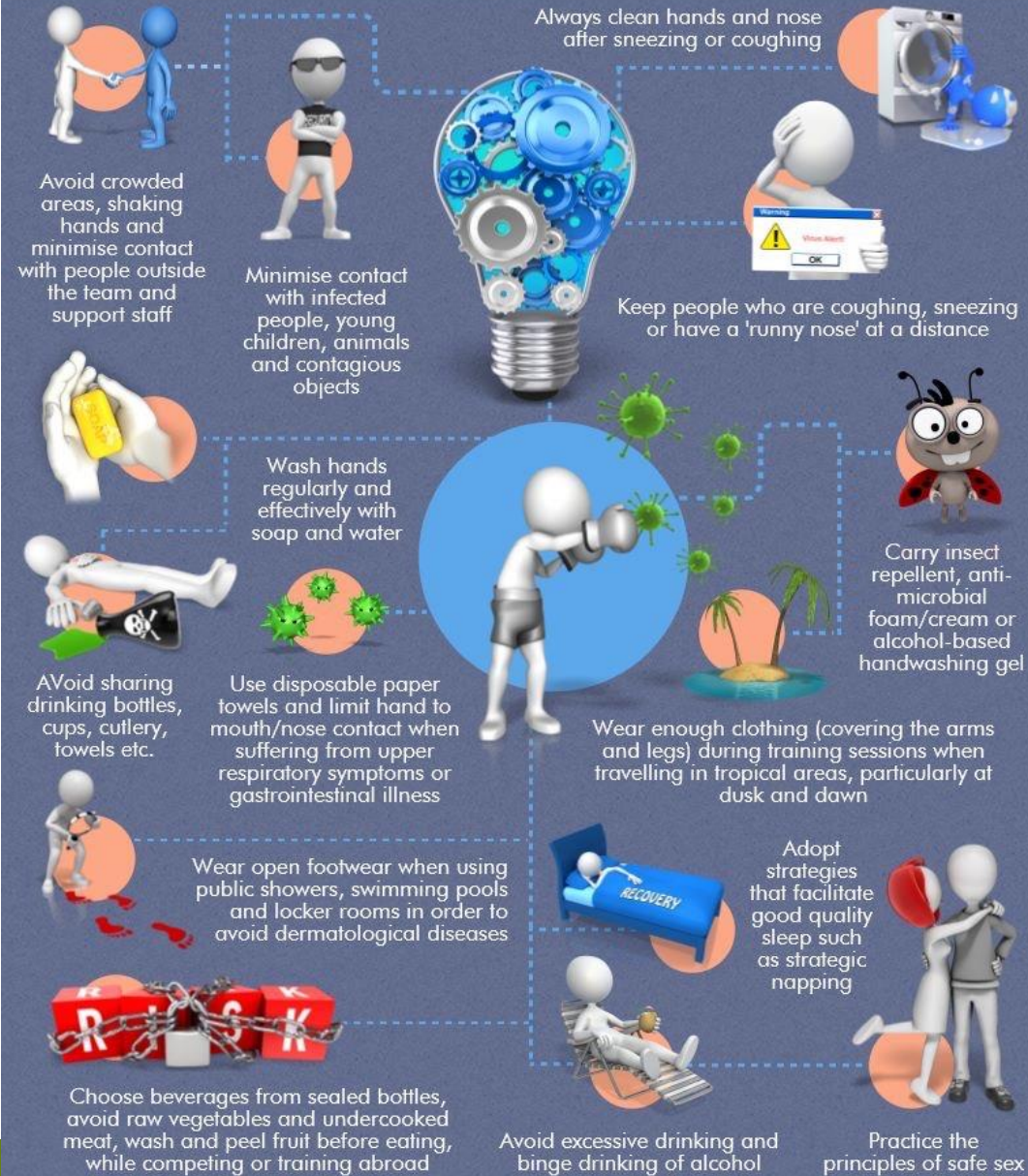
Recent evidence suggests that most athletes sleep far less than either 8h per night

Reference: Le Mour, Skein & Duffield
In Recovery for Performance in Sport, Human Kinetics, 2013

GENERAL GUIDELINES FOR ILLNESS PREVENTION IN ATHLETES

Reference: IOC consensus statement, in BJSM 2016

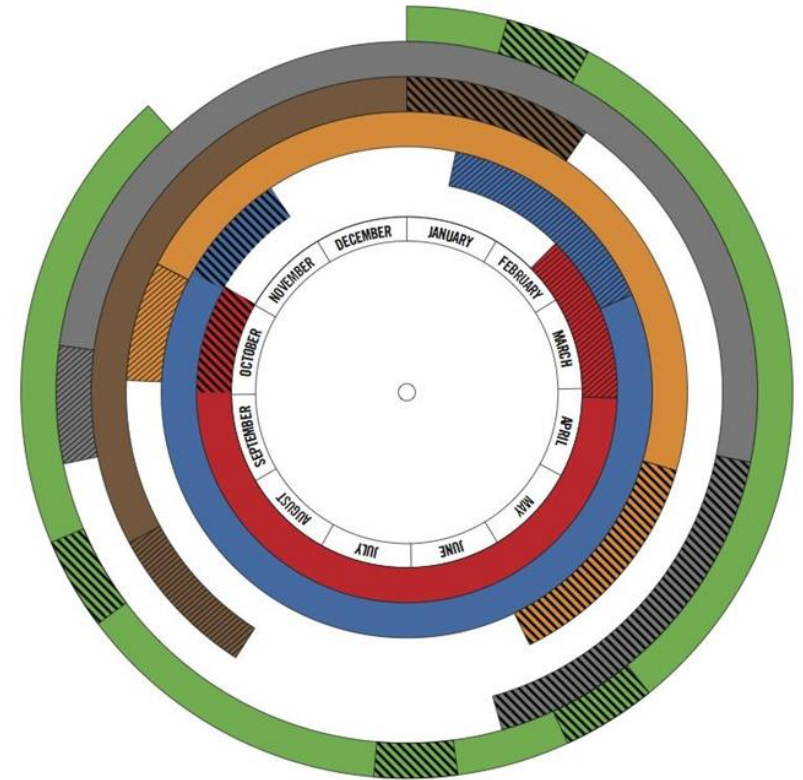
Designed by @YLMsportScience



PROFESSIONAL SPORTS

PERIODIZATION

- Pre-season
- Season
- Post-season
- Off season



DON'T DO DUMB STUFF

COLLABORATION

IN SUMMARY

- Know your sport
- Know your body
- Take care of your body
- Take breaks
- Hydrate
- Eat appropriate fuel
- Have an off season
- Don't do dumb stuff

QUESTIONS

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Text is best