



Recipe for Resiliency

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Lawrence Memorial Sports Medicine Symposium



Objectives



“A body's ability to recover is only as good as the nutrition and rest that is provided during a training cycle.”

This presentation is intended to:

- What does resiliency mean regarding health & fitness?
- Discuss nutritional recommendations to ensure the recipe for resilience.
- Avoid common pitfalls that lend to increased injury and illness.



What is Re-sil-ence?

*“The capacity to withstand or to recover quickly from difficult situations.”
Or “the ability of a substance or object to spring back into shape, elasticity.”*

Questions to ask:

- After a heavy training block, does your body spring back?
- Are you able to progress as planned with your physical therapy?
- Do you have injuries that continue to “pop-up”?
- Are you feeling joy for your sport (yes even when it is tough)?
- Do your legs feel fresh?
- Do you feel your endurance grow and your strength build?
- Can you get through a full training cycle with minimal injuries?
- Is your bloodwork generally normal?

Kelly S, Pollock N, Polglass G, Clarsen B. Injury and Illness in Elite Athletics: A Prospective Cohort Study Over Three Seasons. *IJSP.T* 2022;17(3):420-433. [doi:10.26603/001c.32589](https://doi.org/10.26603/001c.32589)



What causes one to lose resiliency?

Low glycogen lends to poor endurance capacity and eventually deconditioning

HPA dysfunction causes a decrease in VO_2 max due to less dilation in blood vessels.

Inability to hit intensity targets causes increased stressors during training.

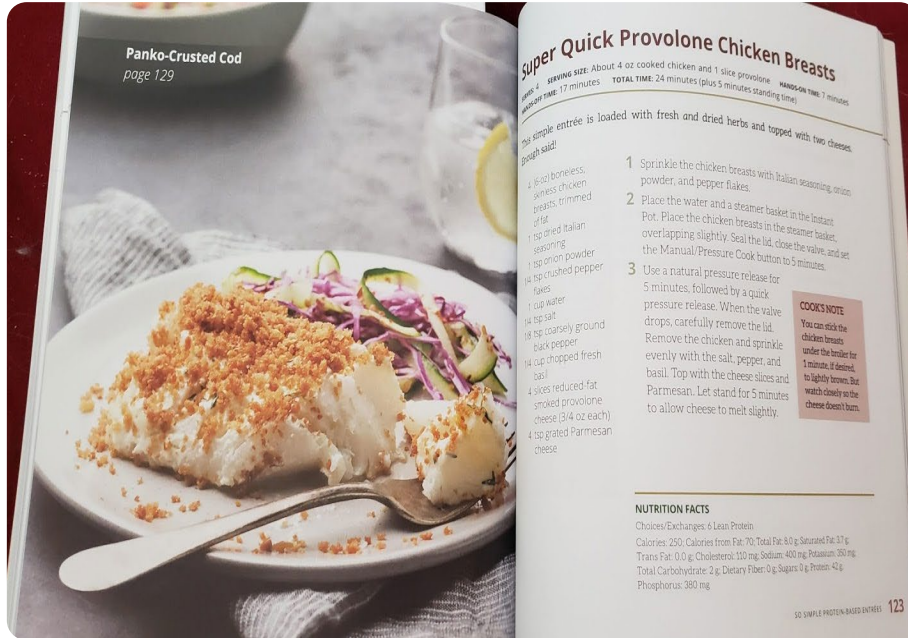
The bone breaks itself down to make up for the lack of nutrition, and bone building stops, leading to a weaker frame that is unable to tolerate the demands of training.

As the body depends on tapping into the savings accounts, there is a chronic release of cortisol, leading to a case of the niggles, stress reactions and more “itises.”

Emotions are a luxury. When there is less fuel to create feelings then the drive to compete starts to diminish. The “give a damn” button gets stuck.

The rate of illness, specifically upper respiratory illness and GI illness, go up, which means additional days off from training.

The Secret Ingredients- 3 Rs



How do we use

REST AND NUTRITION

TO BUILD A RESILIENT BODY?

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UNDERSTANDING THE 3R WINDOW



This means we must manage our nutrition and stress so the body can:

REPAIR tissue

REPLENISH energy

RESTORE muscle fibers and/or mitochondria



Repair

MANAGING THE BODY'S STRESS



During a training cycle, there should be stress on the body that turns on the building blocks in our bodies (anabolism) creating more muscle fibers, stronger connective tissues and sturdier bones.

Stress turns on signals on within the body that alerts our brain what is needed and during the recovery process repairs tissues, replenishes energy and restore more muscle fibers and/or mitochondria. This allows the athlete's body and the skeletal system to be one strong, mean machine.



Secret Sauce: *Repair*

- Focus on incorporation of foods that help utilize recovery process in body.
- Hydration during & after- causes damage to cellular walls and gut integrity
- **Fats** (anti-inflammatory) - use as a vehicle with fruits or vegetables (phytochemicals), EVOO- sauce/spritz
- **Spice it up-** cilantro, turmeric, garlic, oregano
- **Grow it-** tissue growth & healing
 - Collagen- 10-15 grams
 - Creatine phosphate 5gms
 - Casein- 15-25 grams



A Car on E goes nowhere

UNDERSTANDING THE 3R WINDOW

We can't:

- go hard all the time or
- withhold calories and nourishment or
- avoid rest and recovery

and expect to perform at top levels.





Replenish



PERIODIZATION OF NUTRITION

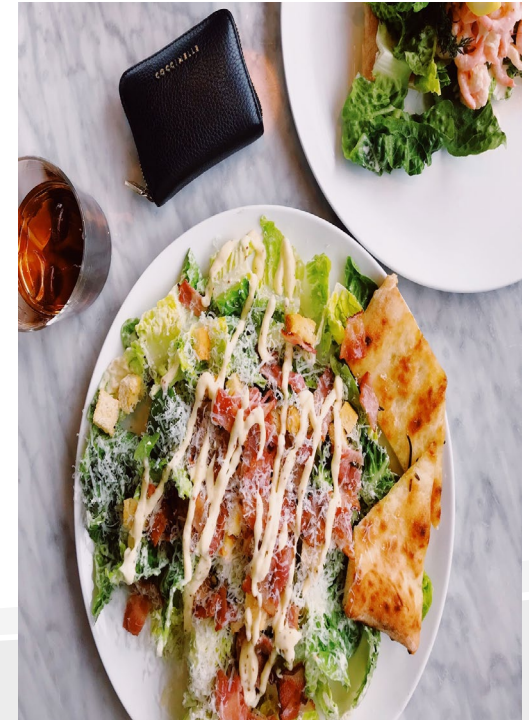
Match the energy needed for the amount of work you are doing.

An oversimplified look is:

How much gas are you going to need to put in the car to arrive at your destination? You wouldn't ask your car to earn its gas before filling up the tank or you might find yourself stranded on the side of the road.

Replenish: When, What and How much

- *Fat focus*- Provides a carrier for fat soluble vitamins & satiety in food choices.
 - 1gm/kg- use to enhance “produce”; Mediterranean focus
- *Protein pace*- Plan consistent sources throughout day
 - Protein needs 1.4 gms/kg- 2.2 gms/kg- decide on how many feedings
- *Carb counts*- Not just our energy source
 - 5gms/kg -10 gms/kg- start with windows of opportunity first; brain is dependent upon for coordination of movement



Replenish: When, What and How much



Start to end- Strategic opportunities for nutrition.

- Breakfast- breaks the fast- decreases cortisol & decreases risk of injuries.
- Bedtime- building blocks when sleeping and keeping glucose stable.
- Hydration throughout day- set a target and track it. May need additional electrolytes throughout day.
- Go with ease- nutrients are nutrients



Restore

STRATEGIC RE-FEEDING PERIODS



I am a fan of the research within the tactical performance (military) where they have been able to strategize re-feeding periods during times of rest or less expenditure.

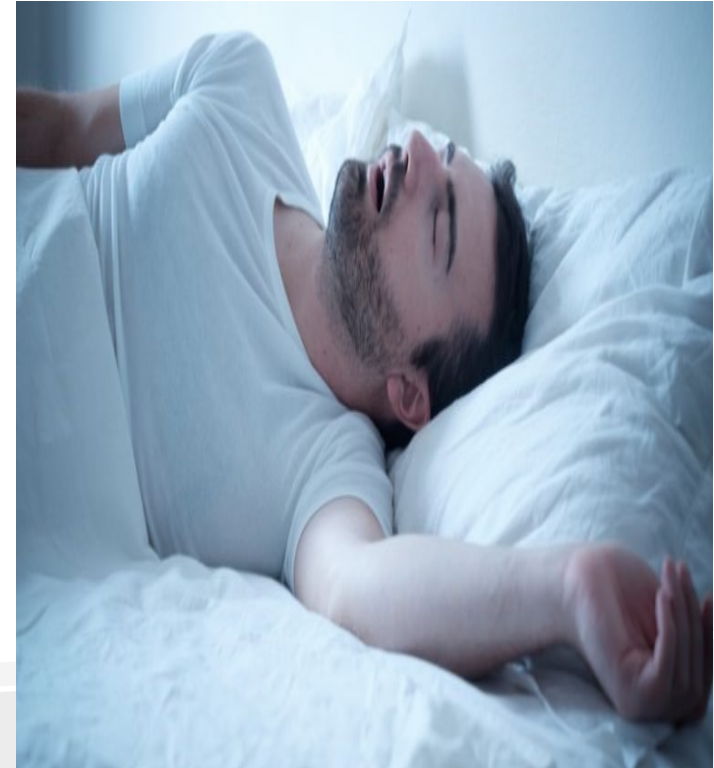
Their research has shown significant reductions in hormonal dysfunction, injuries and metabolism markers. Wouldn't it make sense to take advantage of the days you have less energy expenses to build up that energy account?





Restore: Plug back in

- Periodization means acute and planned periods of decreased training.
- Busyness is an epidemic that interferes with our priorities.
 - Use downtime and lesser expenditure days to restore.
- Coming back to home- an activated CNS lends to disconnection.
- Sleep is a non-negotiable .. Must have 8+ hours for optimal growth hormone secretion & decreased inflammation.
 - 1 ounce tart cherry juice concentrate



Resiliency – 3Rs



- Whether an athlete playing sports every day OR a person trying to recover from chronic pain these principles can help the body recover.
- Setting boundaries how often one can neglect these Rs is important to prevent breakdown.
- The path of least resistance is the one most traveled.



Thank you!

