

REDS

(RELATIVE ENERGY DEFICIT
IN SPORT)

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CHILDREN'S MERCY SPORTS MEDICINE CONFERENCE

The background image shows a cross-country race taking place on a dirt path through a wooded area. In the foreground, several female runners in yellow and black athletic gear are visible. Some are standing and talking, while one is sitting on the ground. In the middle ground, a group of spectators, including men and women, are watching the race. In the background, more runners are competing, and a crowd of spectators is visible on the right side. The scene is set outdoors with many trees and green foliage.

OBJECTIVES

- Participants will understand nutritional patterns that increase risk of REDs development.
- Participants will be able to understand how REDs can impact injury risk, healing and performance outcomes.
- Participants will understand concepts used to correct energy deficits and prevention moving forward.

DEFINITIONS

Energy
Balance

Energy
Availability

Within Day
Energy
Availability

Eating
Disorder

Disordered
Eating

Overtraining

Acute REDs

Chronic
REDs

CHO
availability

What is Energy Availability?

Weight (lbs):	X	<-- Enter numbers here Savings account deposits withdrawals
Body fat %:	X	
Kcal intake:	X	
Kcal burned during exercise:	X	
Energy Availability (kcal/kg/FFM):	#VALUE!	Should be between 40-45!
Kcal needed for 30 kcal/kg/FFM	#VALUE!	Each athlete is unique in how much volatility can happen before dysfunction.
Kcal needed for 45 kcal/kg/FFM	#VALUE!	





HOW DO WE ASSESS FOR ENERGY AVAILABILITY/REDS?

- Verbal report of intake versus expenditure (debt:income)
- Body composition
- Actual Body metabolic rate: Predicted body metabolic rate (.9)
- Use of risk questionnaire REDs consensus statement 2023

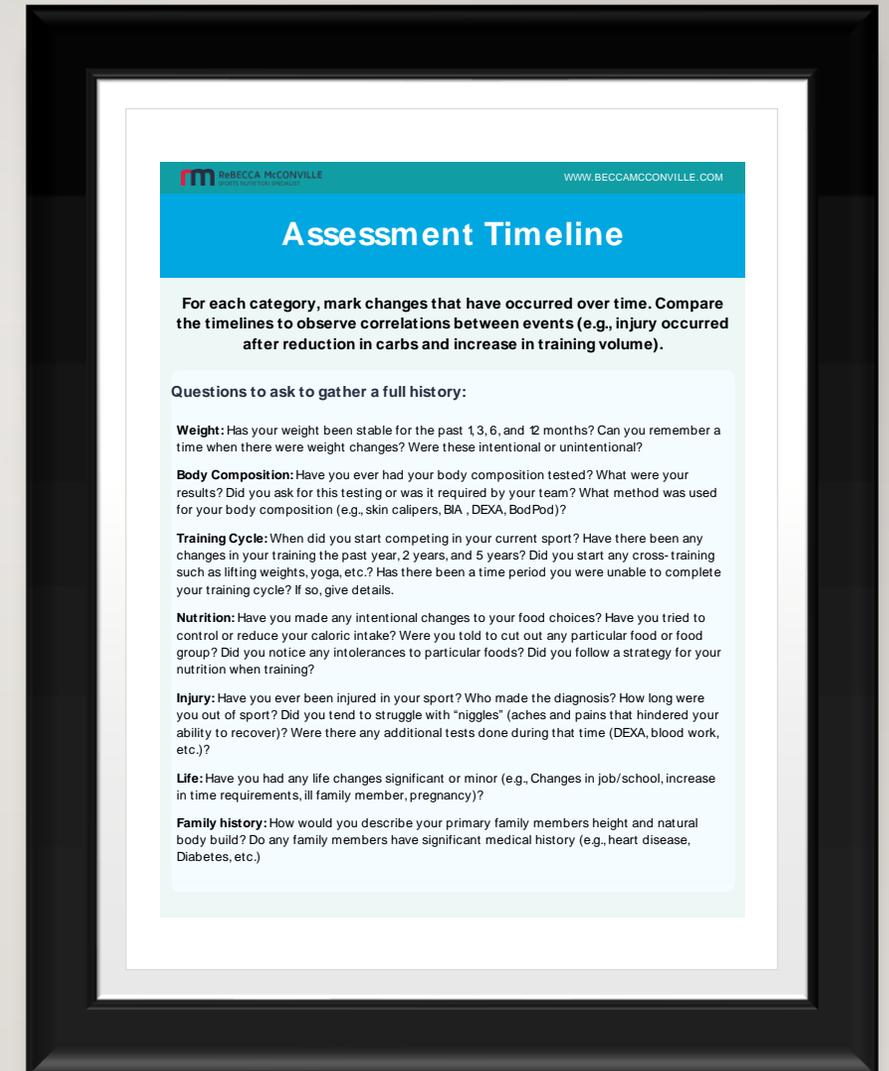
ICO REDS CAT2 SEVERITY/RISK STRATIFICATION CALCULATOR

ICO REDs CAT2 Severity/Risk Stratification Calculator

Calculator based on: Stellingwerff, T., M. Mountjoy, W. T. McCluskey, K. E. Ackerman, E. Verhagen and I. A. Heikura (2023). "Review of the scientific rationale, development and validation of the International Olympic Committee Relative Energy Deficiency in Sport Clinical Assessment Tool: V.2 (IOC REDs CAT2)-by a subgroup of the IOC consensus on REDs." Br J Sports Med 57(17):1109-1118.
<https://bjsm.bmj.com/content/57/17/1109>

Biological Sex		REDS Severity / Risk Status
Female		
Severe primary indicators (scores as double points)	<p>Primary amenorrhea (Females: primary amenorrhea is indicated when there has been a failure to menstruate by age 15 in the presence of normal secondary sexual development (two SD above the mean of 13 years), or within 5 years after breast development if that occurs before age 10; or prolonged secondary amenorrhea (absence of 12 or more consecutive menstrual cycles) due to FHA</p>	
Primary indicators (scores as single point)	<p>Secondary amenorrhea (Females: absence of 3–11 consecutive menstrual cycles) caused by FHA</p>	
	<p>Subclinically or clinically low total or free T3 (within or below the lowest 25% (quartile) of the reference range)</p>	
	<p>History of ≥ 1 high-risk (femoral neck, sacrum, pelvis) or ≥ 2 low-risk BSI (all other BSI locations) within the previous 2 years or absence of ≥ 6 months from training due to BSI in the previous 2 years</p>	
	<p>Pre-menopausal females and males <50 years old: BMD Z-score* <-1 at the lumbar spine, total hip, or femoral neck or decrease in BMD Z-score from prior testing Children/adolescents: BMD Z-score* <-1 at the lumbar spine or TBLH or decrease in BMD Z-score from prior testing (can occur from bone loss or inadequate bone accrual).</p>	
	<p>A negative deviation of a paediatric or adolescent athlete's previous growth trajectory (height and/or weight)</p>	
	<p>An elevated score for the EDE-Q global (>2.30 in females; >1.68 in males) and/or</p>	

REDS IS A DIAGNOSIS OF EXCLUSION



REDS: Relative Energy Deficiency in Sport



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COMMON CHARACTERISTICS WITHIN REDS

- Grazing throughout day and not having meals
- Fiber consumption < 35-40 grams per day
- Protein intake > 1.8 gms/kg body weight
- Increase in time of training and intensity without a subsequent increase in nutrition
- Avoidance of fueling before, during and after training.
- Certain medications especially ADHD or those that suppress appetite
- Keeping self to a calorie goal that does not meet needs

**ARE WE DEALING
WITH REDS OR AN
EATING DISORDER?**



HEALTHY THOUGHTS AND BEHAVIOUR

DISORDERED EATING THOUGHTS AND BEHAVIOUR

EATING DISORDERED THOUGHTS AND BEHAVIOUR

Parallel
Wellness

HOW DO WE GET OUT OF THE HOLE?



Debt: Income ratio = risk

Your body & brain is the bank..

Deposits coming in, withdrawals going out

How much is in the savings account?

How often are we depending on the savings account?

What interest is left to make up?



PREVENTION OF REDS

- FITT principle (Frequency, Intensity, Time, Type)
- Weekly or monthly head to toe check-ins
- Using Jack Raglin's recovery questionnaire
- Promoting a fuel first culture (athletes of all shapes & sizes)
- Take the rest periods for recharge

looking on Pinterest for some high calorie and low ish portions. But only weight loss websites pop up. Do you know any good websites? Is the feed zone one that has high calorie snacks for before bed?

THE REALITY.. GOOGLE , PINTEREST & PEERS



“I FINALLY LEARNED I HAVE TO
EAT A CRAP TON OF FOOD”

RESEARCH CITED

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ANY QUESTIONS?

Thank you!!