

IFSC RELATIVE ENERGY DEFICIENCY IN SPORT (REDs) HEALTH SCREENING RULES

GUIDANCE FOR NATIONAL FEDERATIONS



INTERNATIONAL FEDERATION OF SPORT CLIMBING

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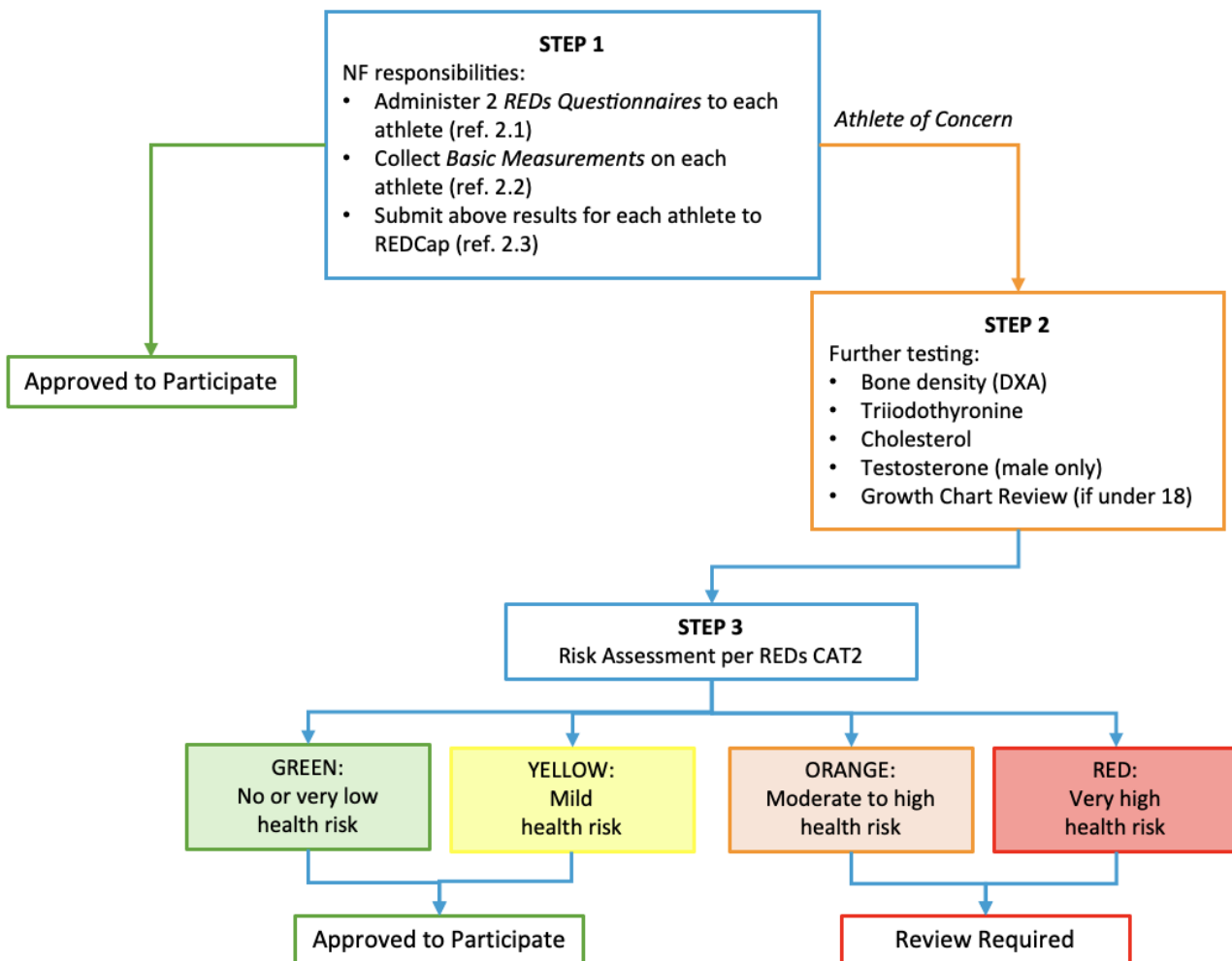
1. INTRODUCTION

Relative Energy Deficiency in Sport (REDs) describes a syndrome of poor health and declining athletic performance than can occur when an athlete does not get enough nutritional fuel to support the energy demands of daily life and training. REDs can cause impairments of reproductive health, bone health, immunity, metabolism, cardiovascular health, and psychological health. Performance effects of REDs include decreased muscle strength, decreased endurance, decreased coordination, decreased concentration, increased risk of injury and impaired judgment. The true incidence of REDs is unknown, but clinical research suggests that REDs often goes unrecognized by athletes, coaches and clinicians.

To enhance REDs awareness, provide REDs education and protect athletes from the short- and long-term physical and mental health effects of REDs, the IFSC has implemented a REDs Screening Rules. This Rules were developed by the IFSC Medical and Anti-doping Commission and is based on the International Olympic Committee’s Consensus Statement on REDs ([here](#)).

Detailed requirements for athletes, National Federations, and the IFSC are included in the IFSC REDs Screening Rules below.

2. NATIONAL FEDERATION RESPONSIBILITIES



STEP 1

2.1. Administer the following REDs Questionnaires to all athletes requesting an IFSC International Athlete Licence:

REDs Questionnaires for Males	Low Energy Availability in Males – Questionnaire LEAM-Q
	Eating Disorder Examination Questionnaire Short Version – EDE-QS
REDs Questionnaires for Females	Low Energy Availability in Females – Questionnaire LEAF-Q
	Eating Disorder Examination Questionnaire Short Version – EDE-QS

2.2. Obtain *Basic Measurements* for all athletes requesting an IFSC International Athlete Licence

- Height, Weight, and BMI (without shoes, in climbing kit or similar, with empty pockets)
- Heart Rate (while lying down or sitting at rest)
- Blood Pressure (while lying down or sitting at rest).

2.3. Submit the final scores of the REDs Questionnaires in 2.1 and all the *Basic Measurements* in 2.2 via the REDCap portal for each athlete requesting an IFSC International Athlete Licence.

STEP 2

2.4. NFs are responsible for identifying *Athletes of Concern*. An *Athlete of Concern* is defined as an athlete with REDs Questionnaire scores resulting in “Review Required” within REDCap; and/or any *Basic Measurements* of concern as per table below and resulting in “Review Required” within REDCap:

BMI	Males	18 years old and older: < 18.5
		15 – 17 years old: < 18
	Females	18 years old and older: < 18
		15 – 17 years old: < 17.5
Heart Rate	Males and Females	18 years and older <40bpm
		under 18 years old < 50bpm
Blood Pressure	Males and Females	< 90/60 mm Hg

2.5. NFs are responsible for undertaking further medical and laboratory evaluations for all *Athletes of Concern*:

Bone Mineral Density /DXA (dual energy X-ray absorptiometry)	Adults and Adolescents aged 15 years or older: BMD Z-score <-1 at the lumbar spine, total hip, or femoral neck or decrease in BMD Z-score from prior testing, using paediatric norms/software for age <20 years.
Total or Free Triiodothyronine (T3)	Threshold value - within or below the lowest 25% (quartile) of the laboratory and age specific reference range.
Total or LDL Cholesterol	Threshold value - Total or LDL cholesterol elevated above the reference range.
Total or Free Testosterone for Males	Threshold value - within or below the lowest 25% (quartile) of the laboratory and age-specific reference range.



Review of Growth Chart if <18 years old	A negative deviation of an adolescent athlete’s previous growth trajectory (Height and/or Weight) is a primary indicator.
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2.6. The IFSC highly recommends that all *Athletes of Concern* are referred for further medical, mental health and nutritional evaluation by qualified eating disorder/REDs professionals.

STEP 3

2.7. Use the REDs CAT2 Calculator (Appendix V) to determine Athlete Eligibility for an *IFSC International Athlete Licence*:

Green or Yellow Zone	No limitations
Orange Zone	Evaluation and treatment by NF Medical Officer prior to IFSC events and throughout the season.
Red Zone	No participation in IFSC events until the athlete has been cleared to participate by NF Medical Officer

2.8. If a National Federation identifies an *Athlete of Concern* and plans to request an *IFSC International Athlete Licence* for that athlete, then the NF Medical Officer shall:

- Submit via REDCap the DXA, T3, total or LDL cholesterol, Testosterone for males, and growth charts review if under 18 years old. The uploaded report should clearly show the patient’s name, date of birth and date of exam.
- Submit via REDCap the calculated REDs CAT2 colour for the *Athlete of Concern*.

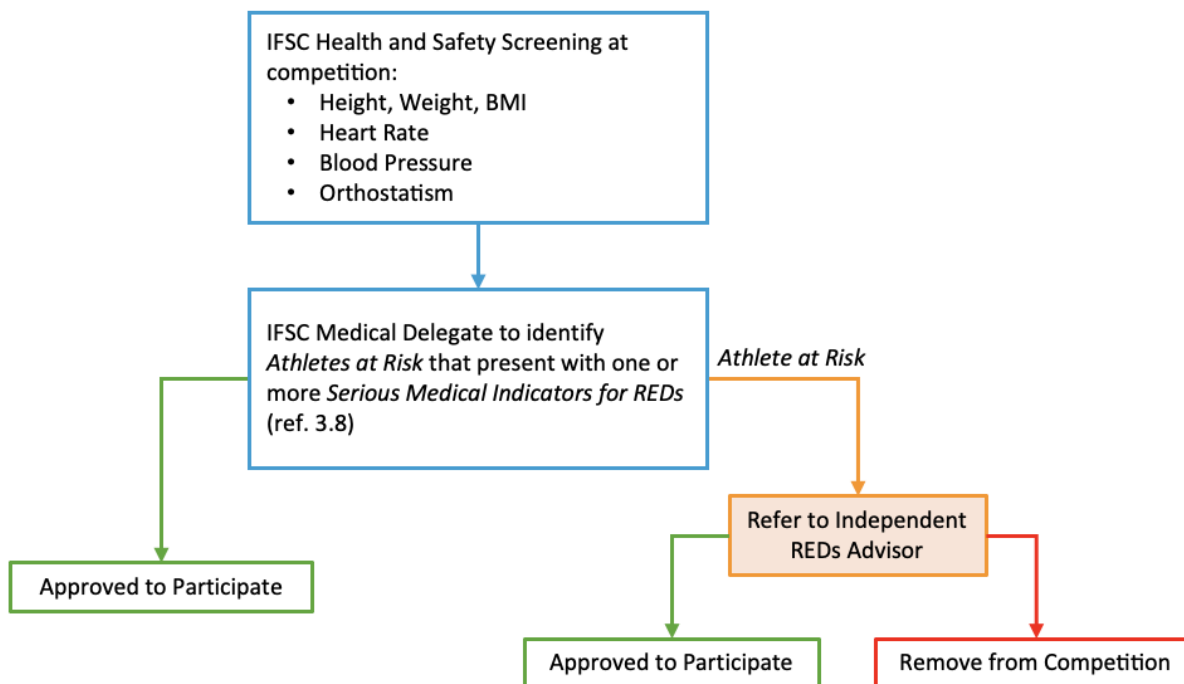
2.9. If a National Federation identifies an *Athlete of Concern* and limits that athlete from requesting an *IFSC International Athlete Licence*:

- The National Federation should seek to obtain further evaluation and treatment for that athlete.
- Return to training/competition decisions should be made by the NF Medical Officer and informed by the [IOC Consensus Statement](#) on REDs and the REDs CAT2 Calculator.
- The National Federation may contact the IFSC Medical and Anti-doping Commission if assistance with further REDs evaluation or return to training/competition decisions are needed.

3. INTERNATIONAL FEDERATION OF SPORT CLIMBING RESPONSIBILITIES

Collect REDs Questionnaire scores and Basic Measurement data for all athletes requesting an IFSC International Athlete Licence

- 3.1. The IFSC is responsible for receiving and confidentially maintaining REDs Questionnaire scores and Basic Measurement data for all athletes requesting an *IFSC International Athlete Licence*.
- 3.2. The IFSC is responsible for receiving and confidentially maintaining additional required data for all identified *Athletes of Concern* that are requesting an *IFSC International Athlete Licence*.



IFSC Health and Safety Screening

- 3.3. The IFSC is responsible for performing random and focused IFSC Health and Safety Screening.
- 3.4. The IFSC Health and Safety Screening is mandatory and failure to comply results in removal from the competition.
- 3.5. Selected athletes for the screening are informed 48 hours in advance via email with NFs contact and Head of Delegation in copy. The IFSC Health and Safety Screening is scheduled in the morning of the day before the IFSC sanctioned event begins. Athletes who are planning to arrive late are required to promptly reply to the email and inform the IFSC Medical Delegate; in such case, screening will be performed on the morning of the day of the competition.
 - Athletes selected for screening will be notified by email 48 hours in advance of the screening.
 - The athlete’s NF contact and Head of Delegation will be copied on this email.
 - The email will contain the location and time for the screening.
 - The screening will be scheduled in the morning of the day before the IFSC sanctioned event begins.
 - Athletes who will arrive later than their scheduled screening time are required to promptly reply to the email and inform the IFSC Medical Delegate; in such cases, screening will be performed on the morning of the day of the competition.
- 3.6. The IFSC shall ensure adequate athlete privacy throughout the screening procedure.
- 3.7. Athletes are required to
 - Arrive at the testing location 10 minutes prior to the scheduled testing time;
 - Bring competition accreditation or passport to the screening;
 - Wear climbing kit or similar attire (shorts and a light top, with empty pockets and without shoes);
 - If preferred, a coach or a member of the medical staff from the National Federation may accompany the athlete throughout the screening procedure;



- For under age 18, the athlete shall be accompanied by a coach or a member of the medical staff from the National Federation throughout the screening procedure;
- Contact the IFSC Medical Delegate as soon as possible in case of an unavoidable delay in the arrival at the screening location (see the competition “Info Sheet” for contact number).

3.8. The following measurements are obtained during the IFSC Health and Safety Screening:

- Height and weight (in climbing kit or similar attire, without shoes, pockets empty)
- Blood Pressure and Heart Rate (after lying down for 5 minutes)
- Blood Pressure and Heart Rate (2 minutes after standing up)

Identify Athletes at Risk

3.9. Identify *Athletes at Risk* that present with one or more of the following *Serious Medical Indicators for REDs* and, therefore, are at high risk for the medical complications associated with REDs and increased risk of REDs associated injury or illness during competition.

- BMI: $\leq 75\%$ median BMI for age and sex (see Appendix II)
- Heart Rate: severe bradycardia (adult HR ≤ 30 bpm; Adolescent: 15 – 17 years old HR ≤ 45 bpm)
- Blood Pressure: severe hypotension $\leq 90/45$ mmHg
- Orthostatic intolerance: a supine to standing systolic Blood Pressure drop >20 mmHg and a diastolic drop >10 mmHg

3.10. If one or more serious medical indicators for REDs are identified during IFSC Health and Safety Screening, the athlete’s case will be referred to an Independent REDs Advisor for further review.

3.11. The Independent REDs Advisor has the need and the right to review all relevant medical information gathered by the National Federation and the IFSC on any *Athlete at Risk*.

3.12. The Independent REDs Advisor is recommended by the IFSC Working Party for REDs Health (a working party of the IFSC Medical and Anti-doping Commission) and appointed by the IFSC Executive Board upon recommendation of the IFSC Medical and Anti-doping Commission.

3.13. The IFSC will exert its duty to protect an athlete by restricting that athlete’s participation at a competition if the Independent REDs Advisor concludes that the athlete is at increased risk of REDs associated injury or illness during competition (see Resources for further details).

3.14. The Independent REDs Advisor will make a participation decision and will notify the IFSC Medical Delegate present at the event. The IFSC Medical Delegate will notify the NF and the athlete as soon as the decision is reached.

3.15. The decision of the Independent REDs Advisor, in consultation with the IFSC Medical Delegate on site, to restrict an athlete from competition will be enforced by IFSC.

3.16. The IFSC Medical and Anti-doping Commission will enter consultation with the National Federation and the Athlete regarding the support and provision in place for the Athlete.



4. RESOURCES

LEAM-Q for Male Athletes: https://images.ifsc-climbing.org/ifsc/image/private/t_q_good/prd/gpoqtdlzargz84ucendh.pdf

LEAF-Q for Female Athletes (2024): https://images.ifsc-climbing.org/ifsc/image/private/t_q_good/prd/cqcaaknudwtx7q14thor.pdf

EDE-QS for Male and Female Athletes: https://images.ifsc-climbing.org/ifsc/image/private/t_q_good/prd/t2fqvkw12hrsizswzq.pdf

IOC Consensus Statement on REDs: <https://bjsm.bmj.com/content/57/17/1073>

IOC REDs CAT2 QR Code Calculator Tool: IOC Relative Energy Deficiency in Sport (REDs) Clinical Assessment Tool Version 2 (IOC REDs CAT2) – BJSM Sep 2023; <https://stillmed.olympics.com/media/Documents/Athletes/Medical-Scientific/Consensus-Statements/REDs/REDs-Scoring-Tool-2.xlsx>





APPENDIX I – Role of the Independent REDs Advisor

The IFSC appoints an Independent REDs Advisor for the IFSC sanctioned events.

The IFSC appoints one IFSC Medical Delegate for the competition. The IFSC Medical Delegate is onsite throughout the competition, oversees the IFSC Health and Safety Screening and coordinates all communication with the Independent REDs Advisor (further duties of the IFSC Medical Delegate are detailed in the IFSC Officials Terms of Reference).

The Independent REDs Advisor is a medical doctor or other qualified health care professional that has clinical experience in sports medicine, diagnosing and treating REDs patients, and ideally, providing health care for sport climbers.

The Independent REDs Advisor cannot be a member of the IFSC Medical and Anti-doping Commission or medical personnel working directly with a National Federation.

The Independent REDs Advisor will not be onsite at the competition.

Whenever possible, The Independent REDs Advisor should reside in or near the general time zone of the competition.

The Independent REDs Advisor shall be available on the day or days that the IFSC Health and Safety Screening is to take place (generally the morning of the day before the first scheduled day of the competition and the morning of the first scheduled day of the competition). Exact times may vary and will be communicated to the Independent REDs Advisor by the IFSC Medical Delegate several days before the testing is scheduled to take place.

Communication between the IFSC Medical Delegate and the Independent REDs Advisor may take place via WhatsApp, email, or cell phone. The exact method of communication should be determined in advance of the competition by the IFSC Medical Delegate and the Independent REDs Advisor.

The primary duty of the Independent REDs Advisor is to determine if an athlete is at high risk for the medical complications associated with REDs and is therefore at increased risk of REDs associated injury or illness during the competition.

On the morning of the day before the first scheduled day of the competition and, if necessary, the morning of the first scheduled day of the competition, the IFSC will conduct random and focused screening for the serious medical indicators of REDs (IFSC Health and Safety Screening).

The IFSC Health and Safety Screening will consist of height, weight, body mass index, heart rate, blood pressure and an evaluation for orthostatic intolerance.

Any athlete found to have one or more serious medical indicators of REDs will be referred by the IFSC Medical Delegate to the Independent REDs Advisor for further consideration.

The name of the athlete will not be shared with the Independent REDs Advisor. The IFSC Medical Delegate will remove all identifying information from any shared documents.

The IFSC Medical Delegate will provide the Independent REDs Advisor with the de-identified results of the athlete's IFSC REDs Health and Safety Screening and any other medical records that the athlete's National Federation has available to disclose (including but not limited to the REDs Questionnaire results, *Basic Measurements* results, laboratory results, DXA results, menstrual history, and bone stress injury history).

If the NF has not and cannot provide the IFSC Medical Delegate with supplemental medical data (as listed above and requested in the IFSC REDs Health Screening Document) and the athlete is found to have one or more serious medical indicators of REDs during IFSC REDs Health and Safety Screening, that athlete will not be allowed to compete.

The Independent REDs Advisor will utilize the RED CAT2 and objective judgement to evaluate the athlete's medical data and to determine the athlete's risk for REDs related injury or illness during the competition.



If, after careful review, the Independent REDs Advisor concludes that an athlete is at high risk for the medical complications of REDs and is at increased risk of REDs associated injury or illness during the competition, the Independent REDs Advisor will inform the IFSC Medical Delegate.

The IFSC Medical Delegate will then consult with one other physician member of the IFSC Medical and Anti-doping Commission and a final decision regarding the safety of the athlete to compete will be made.

This additional physician member of the IFSC Medical and Anti-doping Commission will not be onsite at the competition and will not be given the athlete's name or any other identifying information.

If the Independent REDs Advisor, the IFSC Medical Delegate, and the additional physician member of the IFSC Medical and Anti-doping Commission agree that an athlete is at high risk for the medical complications of REDs and is at risk for REDs related injury or illness during the competition, the IFSC Medical Delegate will inform the athlete and the athlete's National Federation of this decision in a timely manner and in advance of the start of the competition.

The IFSC will not allow an athlete determined by medical experts to be at high risk for REDs related injury or illness to participate in the competition and the athlete will be referred to his or her National Federation for further REDs evaluation and treatment.

If the Independent REDs Advisor, the IFSC Medical Delegate, and the additional physician member of the IFSC Medical and Anti-doping Commission agree that the athlete is not at high risk for the medical complications of REDs and is not at increased risk of REDs associated injury or illness during the competition, the IFSC Medical Delegate will notify the athlete and the athlete's National Federation of this decision in a timely manner and in advance of the start of the competition. In this case, the athlete will be allowed to participate in the competition.

The Independent REDs Advisor, the IFSC Medical Delegate, and the additional physician member of the IFSC Medical and Anti-doping Commission must pledge to confidentially safeguard all personal health information and to maintain complete confidentiality at all times.



APPENDIX II – Calculation of the % Median BMI

1. **% Median BMI** = (athlete's actual BMI divided by the 50% BMI for that athlete's age and sex) X 100
2. **Males 20 years old or older:** less than or equal to the 75% median BMI is a BMI less than or equal to **17.25**
 - 50% BMI for males 20 years old and older: 23
 - (17.25 divided by 23) X 100 = 75%
3. **Females 20 years old or older:** less than or equal to the 75% median BMI is a BMI less than or equal to **16.28**
 - 50% BMI for females 20 years old and older: 21.7
 - (16.28 divided by 21.7) X 100 = 75%

4. **For athletes younger than 20 years old:**

There are no charts that reflect the 75% of the median for every sex, age, height, and weight; it is a specific calculation for each child/adolescent.

- a. Look at the CDC BMI chart (female and male charts below) to identify the 50% BMI for your athlete's sex and age
[CDC 2 to 20 years: Girls; BMI-for-age percentiles](#)
[CDC 2 to 20 years: Boys; BMI-for-age percentiles](#)
For example: the 50% BMI for a 17-year-old female is 20.85
- b. Calculate the athlete BMI: BMI = weight in kg divided by the height in meters squared or use the CDC Child and Teen BMI calculator (<https://www.cdc.gov/bmi/child-teen-calculator/index.html>)
For example: 17-year-old female who weighs 38.5 kg and is 157.5 cm tall has a BMI of 15.5
- c. Calculate the % median BMI: % median BMI= (actual BMI divided by the 50% BMI for the athlete's sex and age) X 100
For example: (Actual BMI is 15.5 divided by the 50% BMI of 20.85) x 100 = 74.3%
- d. A person with a BMI less than or equal to 75% median BMI for age and sex often requires inpatient medical treatment. A BMI of 15.5 in this athlete is well below the REDs Health Certificate Basic Measurement cut-off of 17.5 and this athlete should have undergone a full medical evaluation for REDs.



GLOSSARY

Athlete at Risk: an athlete presenting with one or more of the *Serious Medical Indicators for REDs* and, therefore, are at risk for the medical complications associated with REDs and increased risk of REDs associated injury or illness during competition.

Athlete of Concern: an athlete with REDs Questionnaire results, Basic Measurement results and/or other medical, laboratory or mental health findings that are concerning for REDs/eating disorders.

Basic Measurement(s): - Height, Weight, Body Mass Index, Heart Rate and Blood Pressure; required measurements for all athletes requesting an *IFSC International Athlete Licence*.

BMI – Body Mass Index: is a simple index of weight-to-height that is commonly used to classify "underweight", "overweight" and "obesity". It is defined as weight in kilograms divided by height in meters squared (kg/m²).

BMD – Bone Mineral Density Z-Score: a score which compares a person's bone density with the average bone density of those of the same age, sex, and body size.

DXA – Dual Energy X-Ray Absorptiometry: a means of measuring bone mineral density (BMD) using spectral imaging

EDE-QS – Eating Disorder Examination – Questionnaire Short Version: a 12-item self-reported questionnaire that is designed to assess the range, frequency, and severity of behaviours associated with eating disorders.

IFSC International Athlete Licence: as per IFSC Rules.

LEAF-Q – Low Energy Availability Female – Questionnaire: a questionnaire-based screening tool to assist in identifying female athletes at risk of low energy availability

LEAM-Q - Low Energy Availability Male – Questionnaire: a questionnaire-based screening tool to assist in identifying male athletes at risk of low energy availability

LEA – Low Energy Availability: any mismatch between dietary energy intake and energy expended in exercise that leaves the body's total energy needs unmet/ inadequate energy to support the functions required by the body to maintain optimal health and performance

National Federation Medical Officer or NF Medical Officer: The NF Medical Officer is one individual, preferably a physician, who is responsible for the health of athletes and is responsible for collecting and submitting REDs Health Certificate data. When an athlete requires further evaluation, treatment or clearance for REDs, a physician must take responsibility.

REDCap: Research Electronic Data Capture, a secure web application for building and managing online surveys and databases compliant with 21 CFR Part 11, FISMA, HIPAA, and GDPR

REDs – Relative Energy Deficiency: A syndrome of impaired physiological and/or psychological functioning experienced by female and male athletes that is caused by exposure to problematic (prolonged and/or severe) LEA. The detrimental outcomes include, but are not limited to, decreases in energy metabolism, reproductive function, musculoskeletal health, immunity, glycogen synthesis and cardiovascular and haematological health, which can all individually and synergistically lead to impaired well-being, increased injury risk and decreased sports performance

REDs CAT2: a clinical assessment tool used for the evaluation of athletes suspected of having problematic low energy availability (LEA) / Relative Energy Deficiency in Sport (REDs). This tool should be used to determine the appropriate level of sports participation/eligibility for these athletes.

REDs CAT2 Calculator: IOC REDs CAT2 Calculator: an online / QR code tool to assist with the scoring of the IOC REDs CAT2

REDs CAT Primary Indicators: Outcome parameters most consistently resulting from problematic LEA leading to REDs signs and/or symptoms identified in the scientific literature and/or with the greatest measurement validity (ie, sensitivity, specificity) and/or



indicative of increased severity and risk of REDs. Accordingly, these indicators hold the most evidence and impact in the overall IOC REDs CAT2 Severity/Risk Assessment and Stratification Tool.

REDs CAT Secondary Indicators: Outcome parameters with some scientific evidence, resulting from problematic LEA leading to REDs signs and/or symptoms identified in the scientific literature and/or with lower measurement validity (i.e., sensitivity, specificity) and/or have shown less severity and risk of REDs. Accordingly, these indicators hold a secondary level of evidence and impact in the overall IOC REDs CAT2 Severity/Risk Assessment and Stratification Tool.