



(Supplemental Digital Content 1)

The LEAF-Q

A questionnaire for female athletes

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The low energy availability in females questionnaire (LEAF –Q), focuses on physiological symptoms of insufficient energy intake. The following pages contain questions regarding injuries, gastrointestinal and reproductive function. We appreciate you taking the time to fill out the LEAF-Q and the reply will be treated as confidential.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

E-mail: \_\_\_\_\_

Cell phone: \_\_\_\_\_

Sport: \_\_\_\_\_

• How old were you when you began to specialize in your sport?: \_\_\_\_\_ age

• What level of athlete are you?

Club

National team

Professional

Other

• Are you a full-time athlete? Yes  No

• If not, what occupation do you have beside your sport?

Full time job

Part time job

Student

Other

• What is your maximal oxygen consumption ( $Vo_2max$ )?

\_\_\_\_\_ ml/kg/min or

\_\_\_\_\_ l/min

I do not know/I have never measured it

- Your best results at World Championship, Olympic Games or World Cup?

1<sup>st</sup> to 3<sup>rd</sup> place

4<sup>th</sup> to 6<sup>th</sup> place

7<sup>th</sup> to 10<sup>th</sup> place

11<sup>th</sup> place or lower

I have never competed at this level

I don't remember

- Your normal amount of training in the preparation or basic period (not competition) on **average per month**:

\_\_\_\_\_ hours/month

- Age: \_\_\_\_\_(years)

- Height: \_\_\_\_\_(cm)

- Present weight: \_\_\_\_\_(kg)

- Your highest weight with your present height: \_\_\_\_\_ (kg)

- Your lowest weight with your present height: \_\_\_\_\_ (kg)

- What is your preferred body weight during competition? \_\_\_\_\_ (kg)

- What is your body fat percentage (if it has been measured)? \_\_\_\_\_ (%)

- Chronic illness (e.g. diabetes, Crohn's Disease)?

Yes  No

If yes, which one (s)?

- 
- Food allergy or intolerance (e.g. nut allergy, celiac disease, lactose intolerance)?

Yes  No

If yes, which one (s)?

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**1. Injuries**

Mark the response that most accurately describes your situation

**A:** Have you had absences from your training, or participation in competitions during the last year due to injuries?

- No, not at all    Yes, once or twice    Yes, three or four times    Yes, five times or more

**A1:** If yes, for how many days absence from training or participation in competition due to injuries have you had in the last year?

- 1-7 days    8-14 days    15-21 days    22 days or more

**A2.1:** If yes, have you had a bone stress injury?   Yes    No

If yes, specify how many \_\_\_\_\_

Specify the location(s): femoral neck    total hip    sacrum    pelvis    other site(s)

**A2.2:** If yes, have you had other types over load injuries?   Yes    No

If yes, specify how many and location? \_\_\_\_\_

**A2.3:** If yes, have you had an acute injury?   Yes    No

If yes, specify how many and location? \_\_\_\_\_

**2. Gastro intestinal function**

**A:** Do you feel gaseous or bloated in the abdomen, also when you do not have your period?

- Yes, several times a day    Yes, several times a week  
 Yes, once or twice a week or more seldom    Rarely or never

**B:** Do you get cramps or stomach ache which cannot be related to your menstruation?

- Yes, several times a day    Yes, several times a week  
 Yes, once or twice a week or more seldom    Rarely or never

**C:** How often do you have bowel movements on average?

- Several times a day    Once a day    Every second day  
 Twice a week    Once a week or more rarely

**D:** How would you describe your normal stool?

- Normal (soft)    Diarrhoea-like (watery)    Hard and dry

Comments regarding gastrointestinal function: \_\_\_\_\_

### 3. Menstrual function and use of contraceptives

#### 3.1 Contraceptives

Mark the response that most accurately describes your situation

A: Do you use oral contraceptives?

- Yes  No

A1: If yes, why do you use oral contraceptives?

- Contraception  Reduction of menstruation pains  Reduction of bleeding
- To regulate the menstrual cycle in relation to performances etc..
- Otherwise menstruation stops
- Other \_\_\_\_\_
- \_\_\_\_\_

A2: If no, have you used oral contraceptives earlier?

- Yes  No

A2:1 If yes, when and for how long? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

B: Do you use any other kind of hormonal contraceptives? (e.g. hormonal implant or coil)

- Yes  No

B1: If yes, what kind?

- Hormonal patches  Hormonal ring  Hormonal coil  Hormonal implant  Other
- \_\_\_\_\_

**3.2 Menstrual function**

Mark the response that most accurately describes your situation

**A:** How old were when you had your first period?

- 11 years or younger     12-14 years     15 years or older     I don't remember
- I have never menstruated (If you have answered "I have never menstruated" there are no further questions to answer)
- 

**B:** Did your first menstruation come naturally (by itself)?

- Yes                       No                       I don't remember

**B1:** If no, what kind of treatment was used to start your menstrual cycle?

- Hormonal treatment                       Weight gain
- Reduced amount of exercise               Other
- 

**C:** Do you have normal menstruation?

- Yes                       No (**go to question C6**)               I don't know (**go to question C6**)

**C1:** If yes, when was your last period?

- 0-4 weeks ago     1-2 months ago     3-4 months ago     5-6 months ago     more than 6 months ago
- 12 months ago or more

**C2:** If yes, are your periods regular? (Every 28<sup>th</sup> to 34<sup>th</sup> day)

- Yes, most of the time                       No, mostly not

**C3:** If yes, for how many days do you normally bleed?

- 1-2 days     3-4 days     5-6 days     7-8 days     9 days or more

**C4:** If yes, have you ever had problems with heavy menstrual bleeding?

- Yes                       No

**C5:** If yes, how many periods have you had during the last year?

- 12 or more     9-11     6-8     3-5     0-2
-

**3.2 Menstrual function**

Mark the response that most accurately describes your situation

**C6:** If no or “I don’t remember”, when did you have your last period?

- 1-2 months ago       3-4 months ago       5-6 months ago
- more than 6 months ago       12 months ago or more
- I’m pregnant and therefore do not

**D:** Have your periods ever stopped for 3 consecutive months or longer (besides pregnancy)?

- No, never       Yes, it has happened before       Yes, that’s the situation now

**E:** Do you experience that your menstruation changes when you increase your exercise intensity, frequency or duration?

- Yes       No

**E1:** If yes, how? (Check one or more options)

- I bleed less       I bleed fewer days       My menstruations stops
- I bleed more       I bleed more days