(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: 
Profession: 
Education: 
Age: _________(years) 
Height: _________(cm) Weight: _________(kg) 
Your highest weight with your present height: _________(kg) (excluding pregnancy) 
Your lowest weight with your present height: _________(kg) 
Do you smoke? Yes ☐ No ☐
Do you use any medication (excluding oral contraceptives)? Yes ☐ No ☐
If yes, what kind of medication? ________________________________
Your normal amount of training (average) – number of hours per week and what kind of exercise, such as running, swimming, bicycling, strength training, technique training etc.: ________________________________
______________________________________________________________
______________________________________________________________
Comments or further information regarding exercise: ________________________________
______________________________________________________________
______________________________________________________________
1. Injuries

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Have you had absences from your training, or participation in competitions during the last year due to injuries?</td>
<td>No, not at all  Yes, once or twice  Yes, three or four times  Yes, five times or more</td>
</tr>
<tr>
<td>A1: If yes, for how many days absence from training or participation in competition due to injuries have you had in the last year?</td>
<td>1-7 days  8-14 days  15-21 days  22 days or more</td>
</tr>
<tr>
<td>A2: If yes, what kind of injuries have you had in the last year?</td>
<td>Comments or further information regarding injuries:</td>
</tr>
</tbody>
</table>

Comments or further information regarding injuries:
2. Gastrointestinal function

<table>
<thead>
<tr>
<th>A: Do you feel gaseous or bloated in the abdomen, also when you do not have your period?</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes, several times a day</td>
</tr>
<tr>
<td>□ Yes, once or twice a week or more seldom</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B: Do you get cramps or stomach ache which cannot be related to your menstruation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes, several times a day</td>
</tr>
<tr>
<td>□ Yes, once or twice a week or more seldom</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C: How often do you have bowel movements on average?</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Several times a day</td>
</tr>
<tr>
<td>□ Twice a week</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D: How would you describe your normal stool?</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Normal (soft)</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>A: How old were you when you had your first period?</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] 11 years or younger</td>
</tr>
<tr>
<td>[ ] I have never menstruated (If you have answered “I have never menstruated” there are no further questions to answer)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B: Did your first menstruation come naturally (by itself)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Yes</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>C: Do you have normal menstruation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Yes</td>
</tr>
</tbody>
</table>

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

- [ ] 0-4 weeks ago
- [ ] 1-2 months ago
- [ ] 3-4 months ago
- [ ] 5 months ago or more

**C2:** If yes, are your periods regular? (Every 28th to 34th 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?

☐ 2-3 months ago  ☐ 4-5 months ago  ☐ 6 months ago or more

☐ I’m pregnant and therefore do not menstruate

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