

# ACL Injury Prevention

ACLIP

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# Users

- Athletes
- Coaches
- Therapists
- Trainers

# Environment

- Athletic Facilities (College, High School, ex.)
- Therapeutic Office
- Doctor's Office
- Homes
- Used before
  - Training regimens
  - Physical Instruction
  - Activities putting you at risk of ACL damage

# Use Scenario 1 - Nominal Use Case

Mary Johnson is a college basketball player worried about injury. In track in high school she suffered a bad knee hit during a pole vault event. Johnson does strength training to prevent injury, but is always looking for more resources.

Her basketball coach requires her to use various tools in order to practice safely off campus. She wants to push herself without pushing her luck.



# Step 1 - Landing Page

Mary opens the web page either on her computer or phone and views the landing page. She reads the information describing the apps purpose. She clicks on the “Start Form” button to begin the evaluation process.

## ACL Injury Prevention Questionnaire

Project information: This is an evaluation of training regimine safety practices for individual training usage.

This assessment can provide:

- Suggestions for improving practice routines
- Evaluation of weak points of routines

**\*This assessment is NOT a substitute for doctor diagnosis or evaluation, and is not approved by medical professionals.**

[Begin Questionnaire](#)

## Step 2 - Questionnaire

Mary carefully goes through the form answering each question as precisely as possible. She wonders if she is answering certain questions right. Once all of the questions have an answer, she clicks the submit button to get the results.

### ACL Injury Prevention Questionnaire

Does your program/training include?

	No	Yes
Walking lunges	<input type="radio"/>	<input type="radio"/>
Hamstring exercises (e.g. Nordic lunge)	<input type="radio"/>	<input type="radio"/>
Calf raises	<input type="radio"/>	<input type="radio"/>

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Total number of landing stabilization exercises per session (e.g drop landings, jump and hold)

0	1	2	3	5+
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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What is the age of athletes you work with?

<input type="radio"/> High School	<input type="radio"/> College/Professional
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When do you perform the program?

<input type="radio"/> Pre-Season Only	<input type="radio"/> In Season or Both In/Pre
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Implementer (e.g., Coach) trained on ACL prevention programming?

<input type="radio"/> No	<input type="radio"/> Yes
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# Step 3 - Results

Mary is given a score based on the answers she gave. The scale given tells her how much at risk she is of injuring her ACL. Some information is given to give suggestions on what she could do to reduce her risk and where she is lacking in exercise. There is also some information on what she is doing correctly and gives some suggestions on what else she could do to continue to reduce her risk.

## ACL Injury Prevention Questionnaire

Your Score is **14 / 15**

What this means for you: You're doing great! Your responses indicated that your routine is well-rounded, meaning you have little risk of ACL injury.

Suggested improvements:

Question 1

Implementing walking lunges into your routine can help support joint health and improve strength and stability.

Question 2 (expand)

Question 3 (expand)

Question 4 (expand)

Question 5 (expand)

Question 6 (expand)

Question 7 (expand)

Email Results

Exit Survey

# Error Handling

In the previous use scenario, if Mary were to not answer all of the questions in the form she would be unable to submit. The question(s) that she skipped would be highlighted and she would be instructed to fill out the rest of the questions before continuing.

### ACL Injury Prevention Questionnaire

Does your program/training include?

	No	Yes
Walking lunges	<input type="radio"/>	<input type="radio"/>
Hamstring exercises (e.g. Nordic lunge)	<input type="radio"/>	<input checked="" type="radio"/>
Calf raises	<input type="radio"/>	<input checked="" type="radio"/>

Total number of landing stabilization exercises per session (e.g drop landings, jump and hold)

0	1	2	3	5+
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is the age of athletes you work with?

High School  College/Professional

When do you perform the program?

Pre-Season Only  In Season or Both In/Pre

Implementer (e.g., Coach) trained on ACL prevention programming?

No  Yes

**All questions must be answered to submit form** [Submit >](#)

# Usability Goals

**Effective:** Assessment is effective in reducing the risk of ACL injury of the users.

**Learnable:** The application is easy to learn to use.

**Helpful:** The application is helpful in assessing someone's risk of ACL injury.

**Informative:** The assessment provides valuable information on how to prevent ACL injury.

**Motivating:** After the results, the user will be motivated to improve their training to protect against injury.



# Usability Concerns

**Out of Date Information:** Must make sure that all information provided is the most recent.

**Understandable Information:** Some of the information may be difficult to understand for non-professional users.

**Disclaimer:** Users understand that this is for supplemental learning, not in place of medical professionals.

**Intuitive Questions:** Sometimes questionnaires do not provide intuitive or comprehensive questions that can confuse or frustrate the user.