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Title: **Survey of physicians' and physiotherapists' ankle muscle strength assessment practices for safe return to sports after lateral ankle sprain: A short report**

Authors: Aude Aguilaniu PT, François Delvaux PT PhD, Cédric Schwartz PhD, Géraldine Martens PT PhD, Bénédicte Forthomme PT PhD, Jean-François Kaux MD PhD, Jean-Louis Croisier PT PhD

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## **TITLE**

Survey of physicians' and physiotherapists' ankle muscle strength assessment practices for safe return to sports after lateral ankle sprain: A short report

## **ABSTRACT**

**Background and purpose** : Ankle muscle strength is an important criterion to consider and assess for return to play (RTP) after lateral ankle sprain (LAS). This study therefore focuses on the reported ankle muscle strength consideration for RTP by physicians and physiotherapists, both clinicians involved in RTP decisions, and how they assess it in daily practice. The primary aim is to compare reported clinical practice on ankle muscle strength evaluation between physicians and physiotherapists. Our secondary aims are: to assess the prevalence of use of qualitative versus quantitative assessment and; to determine if there are any differences in how clinicians with or without a Sports Medicine or Physiotherapy Education approach this assessment.

**Methods**: A survey on RTP criteria after LAS was completed by 109 physicians in a previous study. A number of 103 physiotherapists completed the same survey. A comparison between clinicians' answers was realized and additional questions on ankle muscle strength were analysed.

**Results**: Physiotherapists consider ankle strength for RTP more than physicians ( $p < 0.001$ ). A large majority of physicians (93%) and physiotherapists (92%) reported assessing ankle strength manually and less than 10% use a dynamometer. Physicians and physiotherapists with Sports

Medicine or Physiotherapy Education selected more quantitative assessment than those without ( $p < 0.001$ ).

Discussion: Despite being recognized as an important criterion, ankle muscle strength is not always part of the RTP criteria after LAS in daily practice. The dynamometers are scarcely used by physicians and physiotherapists, whereas it could accurately quantify ankle strength deficits. Sports Medicine or Physiotherapy Education increases the use of quantitative ankle strength assessments by clinicians.

**Key words:** *ankle injury, dynamometers, sports medicine, surveys and questionnaires*

## INTRODUCTION

Lateral ankle sprain (LAS) is the most common musculoskeletal injury and up to 40% of patients with a history of LAS are prone to develop long-term disabilities such as chronic ankle instability (CAI) (Doherty et al., 2016). Moreover, LAS could be associated with persistent symptoms such as weakness, pain, perceived instability and early osteoarthritis (Owoeye et al., 2022). After LAS or in a CAI condition, an ankle muscle weakness could persist and contribute to a poor ankle function as well as a higher re-injury risk (Doherty et al., 2016). In this context, muscle strength assessments are a necessary part of the overall management not only in prevention or rehabilitation but also to decide for a safe return-to-play (RTP) (Liu, Delaney, & Kaminski, 2022; Smith et al., 2021).

In a previous study, we reported that only 38% of physicians considered ankle muscle strength for RTP after LAS, and only 7% of them used a quantitative method for its assessment (Aguilaniu et al., 2022). However, RTP is a collaborative decision where physiotherapists are also often involved. We hypothesise that physiotherapists consider and assess ankle muscle strength for RTP after LAS more than physicians. In this previous study, ankle strength consideration for RTP and the quantitative method used were analysed (Aguilaniu et al., 2022). However, the muscle groups, the contraction mode and the detail of the methods are also important parameters that should be considered when ankle strength is assessed.

Likewise, this short report extends our investigation on self-reported practices regarding ankle muscle strength assessment after LAS for RTP decision-making by including physiotherapists in our study population and incorporating additional questions about ankle muscle strength. The main purpose is to compare the reported clinical practice between physicians and physiotherapists. The secondary aim is to analyse whether one of these groups use a quantitative (versus qualitative) assessment of ankle strength more frequently. Finally, we investigated the consideration of strength for clinicians with or without Sports Medicine or Physiotherapy Education, respectively.

## **MATERIALS AND METHODS**

A survey accepted by the local ethics committee (CE2018/218) was developed and distributed as described in a previous study (Aguilaniu et al., 2022). The first question consisted of setting the criteria for a RTP decision : “In your daily practice, which parameters do you consider in determining

whether a patient is able to return to competitive sport after a conservatively treated lateral ankle sprain?”. This was a closed-ended question where physicians and physiotherapists were invited to select a maximum of five items among the nine suggested : pain, swelling, ankle range of motion, ankle muscle strength, functional ankle instability, proprioception, ability to engage in functional tasks, mechanical ankle instability, and other criteria”. RTP was defined as return to competition but not necessarily performance as in Smith et al. (2021). Indeed, physicians and physiotherapists respondents do not systematically treat athletes who are required to perform. Only physicians and physiotherapists who selected ankle muscle strength were analysed in this short report.

A number of 109 physicians who filled the entire survey and their specialisation were included. When physicians selected ankle muscle strength criterion to decide a RTP after LAS, they could extend on the quantitative methods they used (Aguilaniu et al., 2022). The same survey was sent to French-speaking physiotherapists by e-mail. A number of 117 respondents visited the first page of the survey but 14 were excluded because they did not fill the entire survey. Therefore, a number of 103 physiotherapists answered on RTP criteria used in clinical practice after LAS from March 2019 to June 2019. We compared the results already published on physicians with results collected from physiotherapists. We also analysed additional questions on ankle muscle strength assessment in both populations: the ankle muscle groups assessed; the methods used; the contraction mode and; the bilateral difference tolerated for RTP. The last part focused on respondents' demographics including years of practice, years of experience and their

speciality. Questions analysed in this short report are reported in the appendix A.

Statistical analyses were performed using R Statistical Software.4.0.4.(2021). We calculated the frequency distribution of the answers (from physicians vs. physiotherapists) using percentages. Then, their respective selections were analysed using a Chi-squared test. Results were considered significant when  $p < 0.05$ .

## **RESULTS**

Table 1 shows the characteristics of the participants. Physiotherapists (60%) considered the ankle muscle strength criterion significantly more than physicians (38%) before allowing RTP after LAS ( $p < 0.001$ ). However, only 9% of the physiotherapists selected quantitative ankle strength measures. As shown in figure 1, this result is similar for physicians ( $\chi^2 = 0.447$ ,  $p = 0.504$ ). Participants with Sports Medicine or Physiotherapy Education selected quantitative assessment significantly more than clinicians without Sports Medicine or Physiotherapy Education (5.3% vs 30.4%,  $p < 0.001$ ). The participants' age and their years of experience did not impact their consideration of strength and their use of quantitative assessment. Details are available in the appendix B.

Table 2 shows the comparison between physiotherapists and physicians for the ankle muscle strength consideration. First, few physicians and physiotherapists use quantitative instruments (isokinetic dynamometer, hand-held dynamometer (HHD) or Myolux®) (from 2% to 10%), as compared to manual assessment (from 92% to 93%). Second, both physiotherapists and physicians selected evertors in high proportions, followed by dorsiflexors,

invertors and plantarflexors (from 71% to 97%). Third, physicians selected the isometric mode more than physiotherapists ( $p<0.05$ ) whereas physiotherapists selected the concentric mode ( $p=0.001$ ) and the eccentric mode ( $p<0.001$ ) more than physicians. Finally, physicians and physiotherapists mainly considered bilateral difference values to determine whether a patient is able to RTP.

## **DISCUSSION**

Although physiotherapists consider ankle muscle strength more than physicians to decide for RTP after LAS, the ankle muscle strength consideration is still low in both populations (38% and 60%). When these clinicians were surveyed in 2019, no clear recommendations were available in the literature. The PAASS framework that recommends considering ankle muscle strength was published in 2021 (Smith et al., 2021). Thus, the consideration of ankle muscle strength by clinicians in daily practice will probably increase in the future, with the transfer of research knowledge into daily practice.

Then, a large majority of physicians and physiotherapists do not report to use quantitative ankle strength assessment in daily practice (less than 10% use dynamometers). Currently, a large majority of clinicians (from 92% to 93%) manually assess ankle muscle strength even though isokinetic dynamometer is considered as “gold standard” to assess muscle strength (Cho, Park, Choi, & SooHoo, 2018; Liu et al., 2022). HHD is a reliable alternative to the isokinetic dynamometer (Burns, Redmond, Ouvrier, & Crosbie, 2005), and guidelines recommend using it in daily practice (Delahunt et al., 2018). Clinicians with Sports Medicine or Physiotherapy Education use

quantitative ankle strength assessments significantly more than those without ( $p < 0.001$ ). Sports Medicine or Physiotherapy Education could improve the knowledge on the available quantitative ankle strength assessment to make a RTP decision after LAS.

In our study, a higher proportion of physicians assess isometric contraction whereas a higher proportion of physiotherapists assess concentric and eccentric contraction. Isometric, concentric and eccentric contractions can be assessed with an isokinetic dynamometer whereas only the isometric mode can be assessed with a HHD. Although ankle muscle strength is usually assessed in concentric mode in the literature (Fousekis, Tsepis, & Vagenas, 2012; Khalaj, Vicenzino, Heales, & Smith, 2020), no clear recommendations seem to emerge on the contraction modes for assessing ankle muscle strength in daily practice. It would probably depend on the goal of the patient, the injury stage and the available tool. Nevertheless, dynamometers could be implemented in clinical routine in order to obtain quantitative measures (Delahunt et al., 2018; Liu et al., 2022), and subsequently improve the accuracy of the RTP decision after a LAS.

Physicians and physiotherapists examine evertors, invertors, dorsiflexors and plantarflexors in high proportions. Invertors and evertors are of particular importance since patients with CAI usually present residual weakness in these muscular groups (invertors and evertors) (Khalaj et al., 2020). Although physiotherapists selected plantarflexors in higher proportion than physicians, plantarflexors and dorsiflexors are still selected in high proportions by both clinicians (more than 71%). Assessment of these muscle groups is required because left/right asymmetry of plantarflexors or



dorsiflexors exceeding 15% could increase the risk of LAS re-injury (Fousekis et al., 2012). In contrast, no study seems to be available regarding an optimal bilateral difference for evertors and invertors strength. Future studies that determine an optimal bilateral difference would be of great interest for clinicians that already reported using bilateral differences as weakness indicators in daily practice.

A limitation should be considered before generalizing the results. Only French-speaking physicians and physiotherapists were surveyed. However, three countries were included (France, Belgium and Switzerland) which probably reveals a practice diversity.

## **CONCLUSION**

Few physiotherapists and physicians consider ankle muscle strength and use a quantitative assessment for RTP decisioning after LAS. This aspect is not a standalone criterion but is embedded in the holistic assessment of RTP. Recent recommendations and Sports Medicine or Physiotherapy Education enhance the consideration and the use of quantitative ankle muscle strength assessment among other criteria necessary for RTP after LAS.

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Table 1: Characteristics of the population

	Total population n=212		Population selecting ankle strength criterion n=103 (49%)		Chi-square test
	Physicians n=109 (52%)	Physiotherapists n=103 (48%)	Physicians n=41 (38%)	Physiotherapists n=62 (60%)	
<b>Years of experience n (%)</b>					
< 5 years	28 (25.7%)	57 (55.3%)	10 (24.4%)	37 (59.7%)	
5-20 years	41 (37.6%)	22 (21.4%)	15 (36.6%)	14 (22.6%)	X <sup>2</sup> = 12.718
> 20 years	40 (36.7%)	24 (23.3%)	16 (39.0%)	11 (17.7%)	p=0.002**
<b>Sports Medicine or Physiotherapy Education n (%)</b>					
Yes	50 (45.9%)	51 (49.5%)	19 (46.3%)	27 (43.5%)	X <sup>2</sup> =0.078
No	59 (54.1%)	50 (48.5%)	22 (53.7%)	35 (56.5%)	P=0.780

Figure.1.

Legend. Ankle muscle strength criterion for RTP reportedly used by the surveyed physicians and physiotherapists. The proportion of physicians or physiotherapists using ankle muscle strength criterion for RTP decision is depicted in light grey while the use of a quantitative measure for this criterion is depicted in dark grey. Use of quantitative measure for ankle muscle strength represents the percentage of physicians or physiotherapists who selected isokinetic and/or hand-held-dynamometer and/or Myolux® tool.

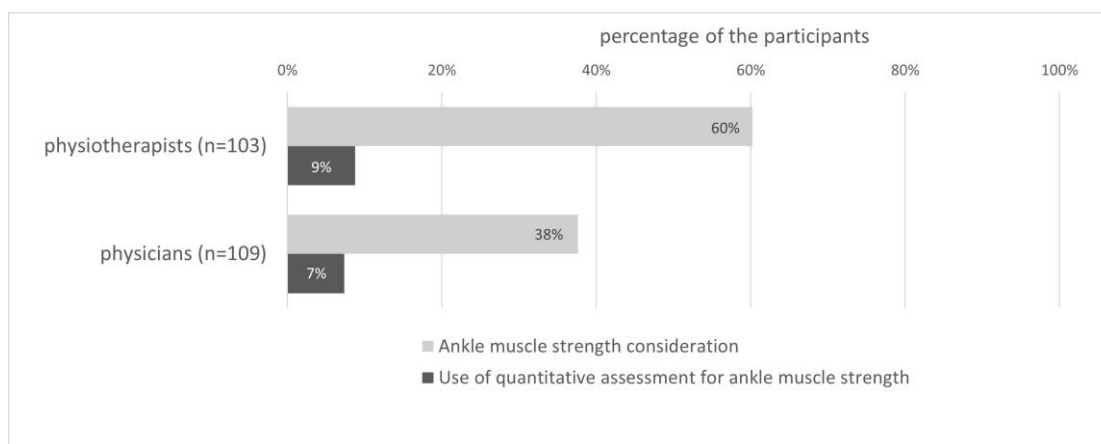


Table 2. Comparison of ankle muscle strength consideration between physicians (n = 41) and physiotherapists (n=62) in daily practice

	Physicians		Physiotherapists		Chi-square test
	n	%	n	%	
<b>How do you assess ankle muscle strength ?</b>					
No instrument (manual)	38	93%	57	92%	$\chi^2 = 0.019$ ; p = 0.890
Isokinetic dynamometer	4	10%	3	5%	$\chi^2 = 0.942$ ; p = 0.332
Hand-Held dynamomter	1	2%	4	6%	$\chi^2 = 0.860$ ; p = 0.354
Other (Myolux®)	4	10%	2	5%	$\chi^2 = 1.919$ ; p = 0.166
<b>What muscle(s) group(s) do you assess ?</b>					
Evertors	38	93%	60	97%	$\chi^2 = 0.894$ ; p = 0.344
Invertors	32	78%	44	71%	$\chi^2 = 0.051$ ; p = 0.821
Dorsiflexors	33	80%	51	82%	$\chi^2 = 0.640$ ; p = 0.423
Plantarflexors	29	71%	54	87%	$\chi^2 = 4.224$ ; p = 0.039*
<b>According to which contraction mode(s) do you assess ankle muscle strength ?</b>					
Isometric	32	78%	33	53%	$\chi^2 = 6.532$ ; p = 0.011*
Concentric	18	44%	47	76%	$\chi^2 = 10.79$ ; p = 0.001**
Eccentric	11	27%	38	61%	$\chi^2 = 11.75$ ; p < 0.001***
<b>On what element(s) do you base yourself to determine if the muscular function is sufficient?</b>					
Bilateral differences	38	93%	59	95%	$\chi^2 = 0.276$ ; p = 0.599
Anterior Values	5	12%	15	24%	$\chi^2 = 2.271$ ; p = 0.132
Reference values	2	5%	4	7%	$\chi^2 = 0.111$ ; p = 0.739
<b>What bilateral difference do you tolerate for RTP ? (33 physicians and 55 physiotherapists)</b>					
Less than 15%	24	73%	47	86%	
16 – 25 %	9	27%	8	15%	$\chi^2 = 1.143$ ; p = 0.143

n : number of selected (vs no selected item)

\* p < 0.05 ; \*\* p < 0.01 ; \*\*\*p < 0.001

APPENDIX

<p><b>Appendix A. French Survey</b></p>	
<p>Titre du sondage: Critères de retour à la compétition après entorse externe de cheville non-opérée</p>	
<p>Chers confrères, chères consœurs,</p> <p>Le Laboratoire d'Analyse du Mouvement Humain de l'université de Liège ainsi que le CHU de Liège - FIFA Medical Centre of Excellence, souhaiteraient faire un constat des critères utilisés par les médecins en pratique quotidienne pour déterminer si un sportif est apte ou non à recommencer la compétition, après une entorse du ligament collatéral latéral de la cheville non-opérée. Ce constat se réalise au moyen d'un questionnaire en ligne adressé à des médecins pratiquant dans le domaine du sport.</p> <p>Il est important que vos réponses correspondent à la réalité de ce que vous rencontrez dans votre pratique courante et non pas à des connaissances théoriques de ce qu'il est recommandé de faire. Je vous remercie donc tous de bien vouloir compléter ce sondage dans son entièreté en étant le plus honnête possible afin de nous permettre de faire avancer le problème de la prise en charge de l'entorse de cheville dans le monde du sport.</p> <p>Lorsque l'ensemble de vos réponses auront été collectés, celles-ci seront analysées de manière confidentielle et parfaitement anonyme. Une fois les analyses terminées, nous nous engageons à vous envoyer les résultats de ce sondage. Si vous désirez recevoir les résultats de ce sondage avant leur publication, envoyer un mail à l'adresse de contact qui se trouve à la fin du questionnaire.</p> <p>Merci de votre collaboration</p>	
<p>À retenir,</p> <p>Veuillez remplir le questionnaire en fonction de <b>votre pratique courante</b>, et non en fonction de vos connaissances théoriques. Gardez à l'esprit qu'on parle ici d'une entorse du <b>ligament collatéral latéral non opéré</b> chez des <b>patients sportifs</b>.</p> <p>Merci,</p>	
<p><b>Partie 1 : les critères</b></p>	
<p>Dans votre pratique médicale quotidienne, de quels paramètres tenez-vous compte pour déterminer si un patient est apte à reprendre la compétition sportive après une entorse externe de cheville non-opérée?</p> <p>(Sélectionnez maximum 5 critères)</p> <p><i># La proprioception fait référence à la capacité du sujet à ressentir le mouvement ainsi que la position articulaire de manière précise.</i></p>	<ul style="list-style-type: none"> <li>• La douleur</li> <li>• L'oedème</li> <li>• La mobilité de la cheville</li> <li>• Les sensations subjectives d'instabilité du patient (instabilité, insécurité, anxiété)</li> <li>• La fonction musculaire de la cheville (force, endurance, puissance)</li> <li>• La sensibilité profonde/proprioception de la cheville #</li> <li>• La laxité articulaire de la cheville</li> </ul>

	<ul style="list-style-type: none"> <li>L'aptitude à réaliser des tâches fonctionnelles (équilibre, sauts, course, changement de directions...)</li> </ul> <p style="text-align: right;">Autre critère</p>
<b>Partie 2 : l'évaluation des critères</b>	
<b>La douleur</b>	
Utilisez-vous une échelle d'évaluation de la douleur ?	<input type="radio"/> Oui <input type="radio"/> Non
<b>L'œdème</b>	
Évaluez-vous l'œdème:	<input type="checkbox"/> De manière subjective (visuelle) <input type="checkbox"/> De manière objective (mesure)
<b>La mobilité de cheville</b>	
Quelle(s) méthode(s) vous permet de quantifier la mobilité de la cheville dans les différents mouvements réalisés?	<input type="checkbox"/> Une évaluation subjective (visuelle) <input type="checkbox"/> Une évaluation objective (outils de mesure)
Avec quel(s) outil(s) évaluez-vous de manière objective la mobilité de la cheville?	<input type="checkbox"/> Inclinomètre <input type="checkbox"/> Mètre ruban <input type="checkbox"/> Goniomètre <input type="checkbox"/> Autre
<b>Sensation subjectives (d'instabilité, d'insécurité, d'anxiété)</b>	
De quelle(s) manière(s) évaluez-vous les sensations subjectives du patient (instabilité, insécurité, anxiété)?	<input type="checkbox"/> Au moyen de questionnaires validés <input type="checkbox"/> Verbalement, lors de la consultation <input type="checkbox"/> Au moyen d'un questionnaire non validé <input type="checkbox"/> Autre
<b>Les muscles de la cheville</b>	
De quelle(s) manière(s) évaluez-vous la fonction musculaire de la cheville?	<input type="checkbox"/> Manuellement <input type="checkbox"/> Avec un dynamomètre isocinétique <input type="checkbox"/> Avec dynamomètre manuel <input type="checkbox"/> Avec une sandale de déstabilisation (Myolux) <input type="checkbox"/> Autre
Quel(s) muscle(s)/groupe(s) musculaire(s) évaluez-vous	<input type="checkbox"/> Éverseurs (péroniers latéraux)

	<input type="checkbox"/> Fléchisseurs dorsaux de la cheville (jambier antérieur) <input type="checkbox"/> Inverseurs (jambier postérieur) <input type="checkbox"/> Fléchisseurs plantaires de la cheville (triceps sural) <input type="checkbox"/> Autre
<p>Selon quel(s) mode(s) de contraction évaluez-vous la force maximale</p>	<input type="checkbox"/> Isométrique <input type="checkbox"/> Concentrique <input type="checkbox"/> Excentrique
<p>Sur quel(s) élément(s) vous basez-vous pour déterminer si la fonction musculaire est suffisante ?</p>	<input type="checkbox"/> Comparaison bilatérale <input type="checkbox"/> Comparaison à des valeurs d'avant blessure <input type="checkbox"/> Comparaison à des valeurs de référence <input type="checkbox"/> Évaluation subjective <input type="checkbox"/> Pas d'avis <input type="checkbox"/> Autre
<p>Quelle différence bilatérale tolérez-vous ?</p>	<input type="checkbox"/> Moins de 10 % <input type="checkbox"/> 10%-15% <input type="checkbox"/> 16%-20% <input type="checkbox"/> 21%-25% <input type="checkbox"/> 26%-30% <input type="checkbox"/> 31%-35% <input type="checkbox"/> 36%-40% <input type="checkbox"/> >40%
<p><b>La proprioception de la cheville</b></p> <p><i># La proprioception fait référence à la capacité du sujet à ressentir le mouvement ainsi que la position articulaire de manière précise.</i></p>	
<p>Avec quel(s) outil(s) évaluez-vous la proprioception de la cheville?</p>	<input type="checkbox"/> Avec un arthromoteur (appareil d'isocinétisme ou autre) <input type="checkbox"/> Avec une sandale de déstabilisation (Myolux) <input type="checkbox"/> Avec un goniomètre <input type="checkbox"/> Sans outils de mesure, j'évalue la proprioception de la cheville du patient lors



	<p>d'une tâche de stabilisation simple (équilibre unipodal par exemple)</p> <p><input type="checkbox"/> Autre</p>
<b>La laxité articulaire</b>	
Comment évaluez-vous le degré de laxité articulaire de la cheville?	<p><input type="checkbox"/> Par des tests cliniques manuels</p> <p><input type="checkbox"/> Par des mesures instrumentales</p> <p><input type="checkbox"/> Autre</p>
Quel(s) test(s) manuel(s) utilisez-vous?	<p><input type="checkbox"/> Test du tiroir antérieur</p> <p><input type="checkbox"/> Talar tilt test</p> <p><input type="checkbox"/> Test du tiroir antérieur avec une mesure précise du déplacement antéro-postérieur (cf. image "Tiroir antérieur")</p> <p><input type="checkbox"/> Talar tilt test avec une mesure précise de l'angle atteint en varus (cf. image "Varus de l'arrière pied")</p> <p><input type="checkbox"/> Autre</p>
Quelle évaluation instrumentale de la laxité utilisez-vous?	<p><input type="checkbox"/> Radio de stress</p> <p><input type="checkbox"/> Ultrason en condition de stress</p> <p><input type="checkbox"/> Utilisation d'un arthromètre</p> <p><input type="checkbox"/> Autre</p>
<b>Les aptitudes fonctionnelles</b>	
De quelle(s) aptitude(s)/performance(s) tenez-vous compte?	<p><input type="checkbox"/> Analyse de la marche</p> <p><input type="checkbox"/> Hop test</p> <p><input type="checkbox"/> Analyse de gestes fonctionnels propres à la discipline du sujet (drible, slalom, ...) Analyse de la qualité des sauts et réceptions de sauts</p> <p><input type="checkbox"/> Star excursion balance test (SEBT)</p> <p><input type="checkbox"/> Analyse de la course</p> <p><input type="checkbox"/> Équilibre bipodale (surface stable/instable)</p> <p><input type="checkbox"/> Y balance test (YBT)</p>

	<input type="checkbox"/> Équilibre unipodal (surface stable/instable) <input type="checkbox"/> Autre
De quelle(s) manière(s) évaluez vous la capacité du patient à réaliser ces tâches fonctionnelles?	<input type="checkbox"/> Comparaison à des valeurs d'avant blessure <input type="checkbox"/> Comparaison à des valeurs de référence <input type="checkbox"/> Évaluation subjective (observation et analyse visuelle) <input type="checkbox"/> Pas d'avis <input type="checkbox"/> Autre
<b>Partie 3 : Les caractéristiques de la population</b>	
Parmi l'ensemble de votre patientèle, quel pourcentage représentent les patients sportifs, toutes lésions confondues?  <i>* Il s'agit ici d'une estimation</i>	<input type="radio"/> Moins de 10% <input type="radio"/> 10%-20% <input type="radio"/> 21%-30% <input type="radio"/> 31%-40% <input type="radio"/> 41%-50% <input type="radio"/> 51%-60% <input type="radio"/> 61%-70% <input type="radio"/> 71%-80% <input type="radio"/> 81%-90% <input type="radio"/> 91%-100%
Quel est votre spécialisation? (version médecin)	<input type="checkbox"/> Médecine physique et réadaptation <input type="checkbox"/> Médecine du sport <input type="checkbox"/> Médecine générale <input type="checkbox"/> Chirurgie orthopédique <input type="checkbox"/> Autre
Quel est votre spécialisation? (version kinésithérapeute)	<input type="checkbox"/> Sport <input type="checkbox"/> Ostéopathie <input type="checkbox"/> Thérapie manuelle <input type="checkbox"/> Pas de spécialisation <input type="checkbox"/> Autre
Combien d'années d'expérience avez-vous dans la prise en charge de patients sportifs?	<input type="radio"/> 0-2 ans <input type="radio"/> 3-5 ans <input type="radio"/> 6-8 ans

	<ul style="list-style-type: none"><li><input type="radio"/> 9-11 ans</li><li><input type="radio"/> 12-14 ans</li><li><input type="radio"/> 15-17 ans</li><li><input type="radio"/> 18-20 ans</li><li><input type="radio"/> 21-23 ans</li><li><input type="radio"/> 24-26 ans</li><li><input type="radio"/> 27-29 ans</li><li><input type="radio"/> 30 ans ou plus</li></ul>
Avez-vous des remarques ?	...

Appendix B. Ankle muscle strength consideration and use of quantitative assessment selected after ankle sprain according to the clinicians' demographics (selected vs. not selected).						
	Ankle muscle strength consideration by clinicians (n=212)			Use of quantitative assessment for ankle muscle strength by clinicians (n=103)		
	n total	selected	Chi-squared test	n total	selected	Chi-squared test
<b>Age</b>						
25-35	97	56.7%		55	9.1%	
36-45	43	41.9%		18	27.8%	
46-55	32	37.5%	X <sup>2</sup> =5.116	12	16.7%	X <sup>2</sup> =5.514
>56	40	45.0%	0.164	18	27.8%	0.138
<b>Years of experience</b>						
<5y	85	55.3%		47	10.6%	
5-20y	66	43.9%	X <sup>2</sup> =2.558	29	24.1%	X <sup>2</sup> =2.479
>20y	61	44.3%	P=0.278	27	18.5%	P=0.290
<b>Sport Medicine education</b>						
Yes	101	45.5%	X <sup>2</sup> =0.7138	46	30.4%	X <sup>2</sup> =11.704
No	111	51.4%	P=0.392	57	5.3%	P<0.001***