

# EOS joint assessment checklist

The aim of this checklist is to help you assess whether your patient with haemophilia needs further investigations and/or referral to evaluate whether they could benefit from elective orthopaedic surgery (EOS). Use this checklist regularly to assess the status of any joint that is causing concern to you or your patient, and to monitor whether there has been a change in the status. Please see overleaf for a description of this tool and what it can – and cannot – do.

**Before beginning the review, check if there is evidence of an active bleed in the joint. If there is, then discontinue the check and ensure the patient receives appropriate treatment.**

## Patient details

Name:	DOB:        /        /	Hospital ID number:
Date of previous assessment (if known):	/        /	Today's date:                /        /
Joint being assessed:	Left <input type="checkbox"/>	Right <input type="checkbox"/>
History of orthopaedic surgery (date and procedure, if known):		

## 1. Assess patient

Checklist questions		Score
How often does the joint bleed?	Number of bleeds in last 6 months _____	
	Is this number different from the previous 6 months? Scoring: (0) lower (1) no difference (2) higher	
Is the joint swollen? Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, for how long has it been swollen?_weeks_months	
	How severe is the swelling? Scoring: (0) no swelling (1) moderately swollen (2) severely swollen and tense	
Does the joint hurt at rest without painkillers? Yes <input type="checkbox"/> No <input type="checkbox"/> Scoring: (1) yes (0) no	If yes, for how long has it been painful?_weeks_months Do you need to take painkillers to manage the pain? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, which painkillers? _____ What dosage? _____	
	How severe is the pain at rest? Scale: (No pain) 0 1 2 3 4 5 6 7 8 9 10 (Worst pain imaginable)	
Does the joint hurt when weight bearing? Yes <input type="checkbox"/> No <input type="checkbox"/> Scoring: (1) yes (0) no	How severe is the pain during weight-bearing activities? Scale: (No pain) 0 1 2 3 4 5 6 7 8 9 10 (Worst pain imaginable)	
Has the mobility of the joint changed? Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, how has the mobility <sup>a</sup> changed over the past 6 months? Scoring: (0) better (1) worse	
Function (activities of daily living)	Do the problems with the joint impact on the patient's daily life activities? <sup>b</sup> Yes <input type="checkbox"/> No <input type="checkbox"/>	
	If yes, has the function changed over the past 6 months? Scoring: (0) improved or no change (1) worse functioning	
Quality of life	Is the patient satisfied with their current quality of life? <sup>c</sup> Yes <input type="checkbox"/> No <input type="checkbox"/>	
	If no, has the patient's quality of life changed over the past 6 months? Scoring: (0) improved or no change (1) impaired or worsened quality of life	
Arthropathy	Does the patient have documented evidence of progressive or end-stage arthropathy? Yes <input type="checkbox"/> No <input type="checkbox"/> Scoring: (1) yes (0) no	
<b>Total Score</b>		

## 2. Refer?

You should consider referring the patient for further investigation/evaluation for EOS if:

1. The total score is  $\geq 6$  including scores of 1 on each of the bleeding, pain (at rest and weight bearing), joint and overall mobility and functioning and/or quality of life questions.

**OR**

2. The score represents a worsening of the joint condition since the last assessment

*Compare today's scores with the scores from the previous assessment to see if there is a change in the patient's status.*

<sup>a</sup> For example, has the extent to which the elbow or knee be flexed or extended changed? Does the shoulder, hip, wrist or ankle move less easily than before?

<sup>b</sup> For example, knee problems may cause difficulty getting out of bed or sitting still e.g. in a stadium or theatre, ankle problem may restrict walking ability, upper arm problems may affect activities of daily living such as eating, washing or dressing.

<sup>c</sup> Quality of life to be assessed subjectively by patient; are they satisfied with current situation or want something to change?

## Why is joint assessment important?

Joint arthropathy is an important consequence of joint bleeds. Arthropathy has a negative impact on patient wellbeing, affecting range of motion, pain, and potential need for early orthopaedic surgery.<sup>1</sup> Regular checking of joints can help patients recognise early any change in joint status/function.<sup>2</sup>

## The role of elective orthopaedic surgery in haemophilia

When arthropathy progresses, elective orthopaedic surgery (EOS) may be required for joint repair or replacement. Indications for surgery include impaired joint function and quality of life, severe pain, frequent joint bleeds, and progressive/end-stage arthropathy.<sup>3,4</sup> With current factor-replacement options, patients with severe haemophilia can undergo surgery safely, and a wide range of surgical procedures are available to relieve chronic pain, improve mobility and reduce bleeding frequency.<sup>5-7</sup> Patients requiring surgery should be managed by a multidisciplinary team, involving specialists in haematology, radiology, rheumatology, physiotherapy and orthopaedic surgery, as well as experienced and specialised nursing staff.<sup>8</sup>

## Who is the checklist for?

The checklist is for use by non-specialist healthcare professionals as a starting point for further discussions with the wider specialist multidisciplinary team.

## How to use the checklist

The checklist asks a series of questions about the joint being assessed, including 'yes/no' and visual analogue scale questions. It asks you to assess whether the function of the joint has changed over time. Questions also address bleeding frequency, functional (activities of daily living) impairment and the patient's quality of life. These are, of course, subjective assessments but they are intended to help you quickly identify where further specialist assessment – e.g. by a haematologist, radiologist, specialist physiotherapist or orthopaedic surgeon – may be needed.



### What this tool can do

- Provides a quick checklist and guide to allow you to assess the status of the joint and monitor any changes
- It may help you and the patient to decide if there is a problem, or sufficient worsening of joint status, that needs further evaluation



### What it does not do

- It is a subjective assessment – not intended to generate a validated specialist joint status 'score'
- It does not evaluate whether the patient is a suitable candidate for EOS
- It is not a substitute for formal specialist assessment

## When should you refer the patient for further evaluation?

You should consider referring the patient for further evaluation if the total score is 6 or more, including scores of 1 on each of the bleeding, pain (at rest and weight bearing), joint and overall mobility and functioning and/or quality of life questions OR this represents a worsening of the joint condition since the last assessment. Comparing today's scores with the individual joint scores from the previous assessment will help you identify if there is a change in joint status. If there is no worsening but the patient reports a severe impact on their activities of daily life, then you may also want to consider referral.



Please scan for further information and support

**References:** 1. Valentino LA. J Thromb Haemost 2010;8(9):1895–1902. 2. Stephensen D. Haemophilia 2005;11(Suppl. 1):26–29. 3. Takedani H, et al. Haemophilia 2010;16(2):290–295. 4. Teitel JM, et al. Haemophilia 2009;15(1):227–239. 5. Srivastava A, et al. Haemophilia 2013;19(1):e1–e47. 6. Ludlam C. Haemophilia 2005;11(Suppl. 1):7–10. 7. Luck JV Jr, et al. J Am Acad Orthop Surg 2004;12(4):234–245. 8. Negrier C, et al. Haemophilia 2008;14(Suppl. 4):1–2.

Changing Possibilities in Haemophilia® is a registered trademark owned by Novo Nordisk Health Care AG and the Apis bull logo is a registered trademark of Novo Nordisk A/S

Date of preparation: December 2020