

New and updated recommendations

We have reviewed the evidence on the use of arm and shoulder mobility. You are invited to comment on these new recommendations only. These are marked as **[2023]**.

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2 Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in [NICE's information on making decisions about your care](#).

[Making decisions using NICE guidelines](#) explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

3 1.12 Arm and shoulder mobility

4 1.12.5 Ensure breast units have written local guidelines in place for postoperative
5 physiotherapy that have been agreed with the physiotherapy department.
6 The guidelines should include details of how to give information about
7 functional exercises. **[2023]**

8 1.12.6 Give people having surgery or radiotherapy for breast cancer instructions
9 and information on functional exercises:

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- discuss the exercises with the person before radiotherapy starts, and ideally before any surgery
 - explain the benefits of doing the exercises
 - explain the exercises should be started the day after surgery
 - ensure the information is in a format suitable for the person to take away to refer to later

- 1 • answer any questions the person may have on the exercises, or how to
2 perform them. **[2023]**
- 3 1.12.7 Preoperatively assess people who are having surgery for breast cancer as
4 being at high risk of developing shoulder problems if they have any of the
5 following factors:
- 6 • any pre-existing shoulder conditions, such as
7 – history of shoulder surgery
8 – shoulder trauma injury (fracture or shoulder dislocation)
9 – frozen shoulder
10 – osteoarthritis or rheumatoid arthritis affecting the shoulder
11 – non-specific shoulder pain
12 – stiffness
13 – decreased function
- 14 • their BMI is over 30
15 • they have axillary node clearance planned
16 • they have radiotherapy to the axilla or supraclavicular nodes planned.
17 **[2023]**
- 18 1.12.8 Offer supervised support when performing functional exercises to people
19 who have been assessed as being at high risk of developing shoulder
20 problems after surgery for breast cancer (see recommendation 1.12.7 for
21 assessment). **[2023]**
- 22 1.12.9 Consider supervised support when performing functional exercises for
23 people:
- 24 • who are having surgery, but who are not at high risk of developing
25 shoulder problems
26 • who are having radiotherapy without surgery. **[2023]**
- 27 1.12.10 Ensure supervised support for functional exercise:
- 28 • is available as either individual, group or virtual support, depending on
29 the person's needs and preferences

- 1 • is tailored to the person’s needs (for example, modifying exercises for
 - 2 people with more complex needs)
 - 3 • includes checking that the person is performing the activity correctly
 - 4 • is delivered by staff who have been trained in physiotherapy. **[2023]**
- 5 1.12.11 Refer people to the physiotherapy department if they report a persistent
- 6 reduction in arm and shoulder mobility after breast cancer treatment, and
- 7 functional exercise has not helped. **[2023]**

8 **Recommendations for research**

9 The guideline committee has made the following key recommendations for research.

10 ***1 Strategies to reduce arm and shoulder problems***

11 What is the most effective and cost-effective way of delivering the intervention (for

12 example type of physiotherapy or exercise, mode of delivery, number of sessions) to

13 reduce arm and shoulder problems after breast cancer surgery or radiotherapy, and

14 what is the acceptability of the intervention for different groups, such as:

- 15 • women, men, trans people and non-binary people
- 16 • people from minority ethnic family backgrounds
- 17 • people with disabilities
- 18 • neurodiverse people?

For a short explanation of why the committee made the recommendation for research, see the [rationale section on surgery to the breast](#).

Full details of the evidence and the committee’s discussion are in evidence review A: strategies for reducing arm and shoulder problems after breast cancer surgery or radiotherapy.

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1 **2 Adherence and satisfaction to interventions to reduce arm and** 2 **shoulder problems**

3 What is the adherence to, and satisfaction with, different intervention formats (for
4 example individual, group, virtual, and face to face) to reduce arm and shoulder
5 problems after breast cancer surgery or radiotherapy, and what is the impact of
6 greater adherence on effectiveness for different groups, such as:

- 7 • women, men, trans people and non-binary people
- 8 • people from minority ethnic family backgrounds
- 9 • people with disabilities
- 10 • neurodiverse people?

For a short explanation of why the committee made the recommendation for research, see the [rationale section on surgery to the breast](#).

Full details of the evidence and the committee's discussion are in evidence review A: strategies for reducing arm and shoulder problems after breast cancer surgery or radiotherapy.

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12 **Rationale and impact**

13 These sections briefly explain why the committee made the recommendations and
14 how they might affect practice. They link to details of the evidence and a full
15 description of the committee's discussion.

16 **Arm and shoulder mobility**

17 Recommendations 1.12.5 to 1.12.8

18 **Why the committee made the recommendations**

19 The committee noted there was very little high-quality evidence for any of the
20 outcomes, and most of the evidence was low to very low quality. The committee
21 agreed that they did not feel confident in making recommendations based on low
22 quality evidence from mainly single studies. Therefore, they used their clinical
23 knowledge and experience alongside high-quality evidence from 1 UK-based

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1 randomised controlled trial (RCT) to support their decision making. This evidence
2 showed improved outcomes with a physiotherapy-led structured exercise
3 programme in addition to usual care for reduction of pain, quality of life improvement
4 and adherence to arm and shoulder exercises in people with a higher risk of
5 developing shoulder problems. The trial provided all participants with information
6 leaflets about exercises to help with arm and shoulder mobility after breast cancer
7 surgery. This reflects standard practice in the UK, and the committee agreed it was
8 important to reflect this advice in the recommendations. The recommendations also
9 highlight that written instructions on functional exercises and information should be
10 discussed, explained and clarified with the person before radiotherapy, because the
11 exercises should have been well established before starting this treatment. The
12 committee recommended that this should also ideally happen before surgery, but
13 acknowledged that there may only be a short period between diagnosis and surgery
14 so there may not always be enough time to do this. The committee were aware that
15 information on functional exercises is not always given out by someone who is a
16 specialist in physiotherapy, so they also recommended that breast units have local
17 guidelines in place that include details about how to deliver this information
18 effectively. The committee also agreed it was important that instructions on
19 functional exercises should be available in other formats to be accessible to people
20 with different needs (for example, video or large print).

21 Based on the effectiveness of the intervention in the UK-based trial, the committee
22 agreed that people who met the same criteria as those included in the trial should be
23 identified as being at higher risk of developing shoulder problems and be offered
24 supervised support to apply the exercises. The committee also agreed that, in their
25 experience, the majority of people having surgery or radiotherapy for breast cancer
26 would benefit from supervised support, and so made a recommendation that
27 supervised support should also be considered for people that were not identified as
28 being at higher risk for developing shoulder problems.

29 Based on their experience, the committee recommended that supervised support
30 should include a member of staff with physiotherapy training checking the
31 performance of the exercises, and correcting them as needed. The committee
32 agreed that people may not feel confident in translating written exercise instructions

1 into physical movement, so would benefit from having advice on whether they are
2 doing them correctly. This support also allows people who might be experiencing
3 difficulties with both the exercises and with shoulder function to be identified early
4 after radiotherapy or surgery. It will also ensure that people are able to receive the
5 full benefit from the exercises, and may increase adherence if someone is confident
6 they are doing the exercises correctly.

7 The committee also agreed supervised exercises and physiotherapy support should
8 be available in different formats (for example virtual or group sessions), and be
9 tailored to individual needs (for example, mental health and learning needs) to help
10 with adherence. There was no evidence about interventions delivered virtually, but
11 the committee agreed to recommend this option as it may help to reduce health
12 inequalities and address access options for people where other interventions are not
13 locally available. The committee were mindful that, while their experience shows that
14 virtual interventions are beneficial, there is a lack of evidence for this and so it was
15 included in the research recommendation.

16 There was limited, low-quality evidence on long-term outcomes and no evidence on
17 outcomes for different population subgroups, such as people from minority ethnic
18 family backgrounds, disabled people and neurodiverse people. The committee also
19 noted that lower-quality evidence comparing interventions was not conclusive. The
20 committee discussed the importance of understanding the most effective and cost-
21 effective way of delivering the intervention (for example, type of physiotherapy or
22 exercise, mode of delivery, number of sessions) and the acceptability of such
23 intervention for different populations, and made a research recommendation to
24 address this gap in the evidence.

25 There was no evidence on whether the format of the intervention (individual, group,
26 virtual, and face to face) impacted on adherence or satisfaction. Therefore, the
27 committee also made a research recommendation to cover this gap in the evidence.

28 **How the recommendations might affect practice**

29 There may be an increase in the number of people having supervised exercise or
30 physiotherapy support after breast cancer surgery or before radiotherapy. However,

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1 if this could be delivered virtually (individual or group), it is likely to have a lower
2 impact on NHS resources than being in-person 1-to-1 sessions.

3 Return to recommendations

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