

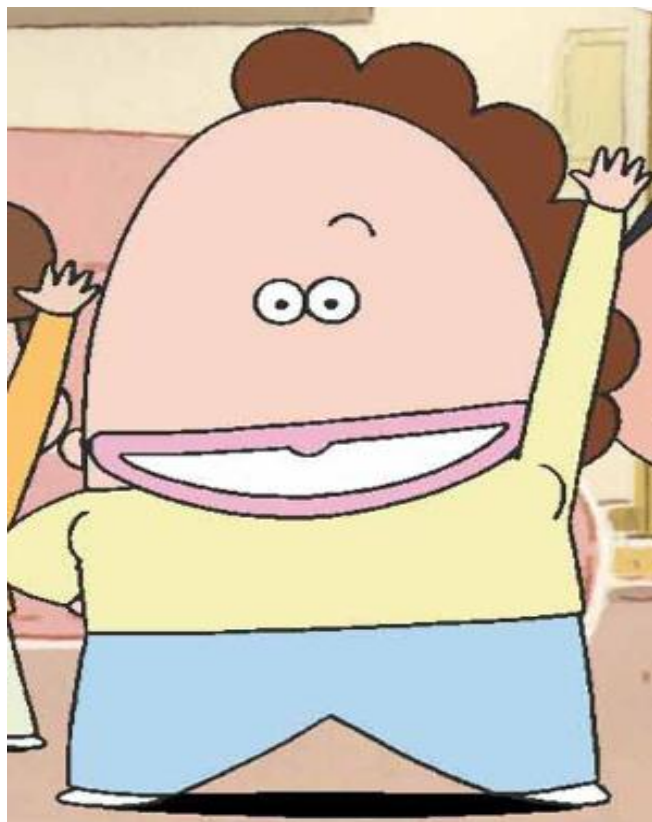
# 淋巴水腫怎麼辦？



報告者: 護理部 湯梅芬  
日期：2014年2月11日

# 事情緣由

開完刀，手很腫  
我要找護理長！



# **Randomised controlled trial to determine the benefit of daily home-based exercise in addition to self-care in the management of breast cancer-related lymphoedema: a feasibility study**

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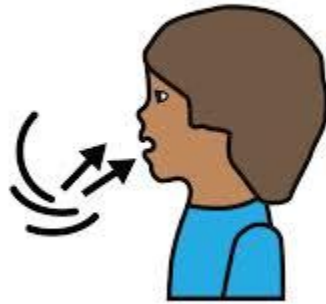
- \* Support Care Cancer (2013) 21:1013 – 1023
- \* DOI 10.1007/s00520-012-1621-6

# 步驟 1：研究探討的問題為何？

|   |   |
|---|---|
| P | Breast cancer (England)/ breast cancer-related lymphoedema  |
| I | daily home-based exercise programme   |
| C | Self-care: standard care  |
| O | <ul style="list-style-type: none"><li>• The primary objective was to determine difference in limb volume reduction for the two groups.</li><li>• Secondary objectives were to monitor change in other areas that impact BCRL: quality of life, arm function and range of shoulder movement.</li></ul> |



Take deep breath



## Daily home-based exercise programme

The exercise programme combines a series of gravity-resistive isotonic arm exercises in a sequence designed to simulate MLD, as per Leduc et al. [26]. The first three exercises incorporate deep breathing and aim to stimulate the lymphatics in the trunk and at the root of the limb; four gravity-resistive arm exercises follow to stimulate venous and lymphatic return from the arm; finally, the first three exercises are repeated in reverse order to encourage clearance of fluid stimulated by the exercise.

26. Leduc A, Caplan I, Lievens P (1981) Traitement physique de l'oedeme du bras. Masson, Paris

## Self-care: standard care

Throughout the trial, both groups continued their previously prescribed daily self-care measures: compression hosiery, skin care and general activity/exercise. All compression hosiery was replaced prior to randomisation according to each participant's previous prescription.

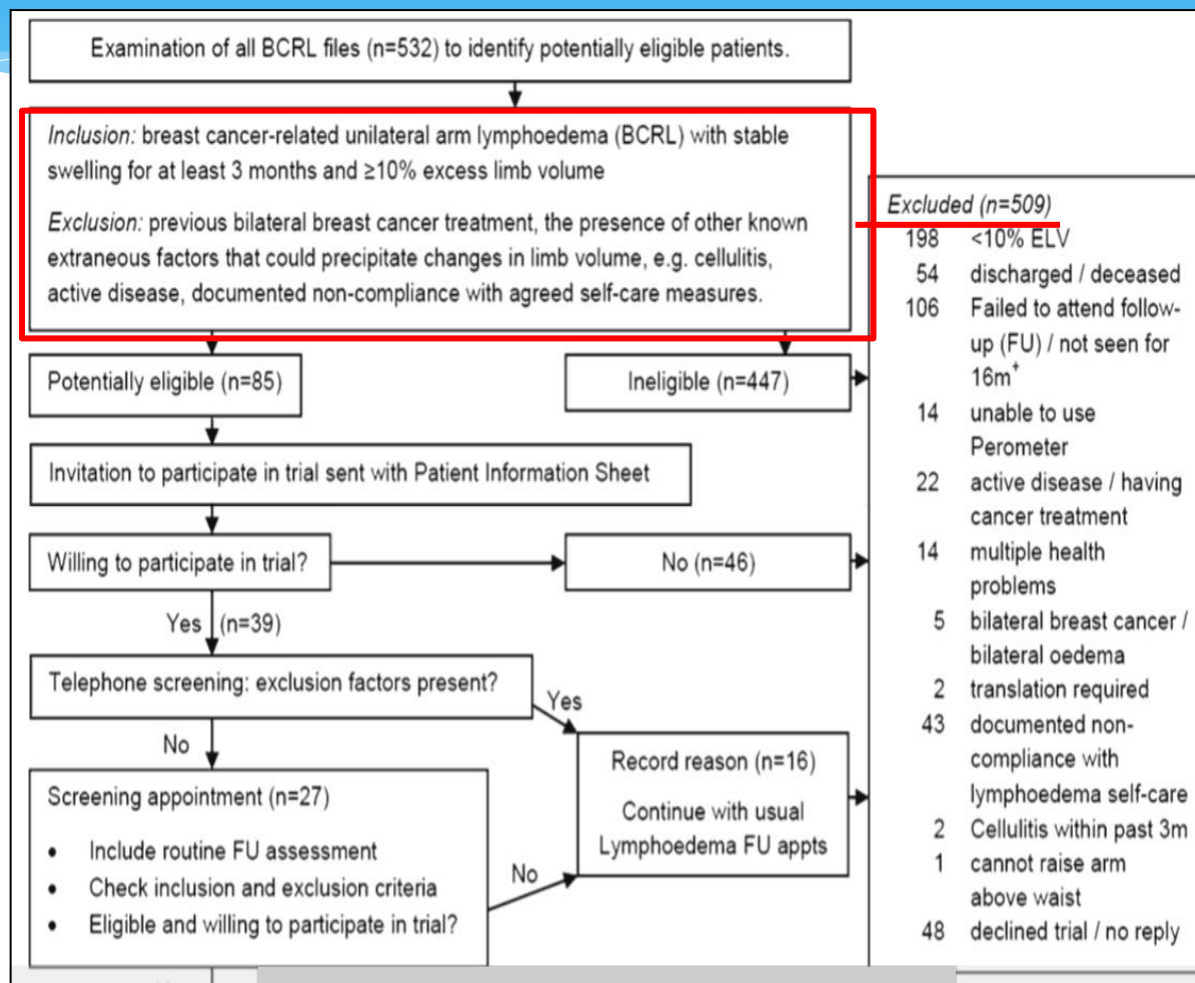
Regular hand-pumping had recently been introduced in the clinic as standard advice, to be used during any exercise or activity involving a closed handgrip, with the aim of minimising congestion in the forearm and associated symptoms of ache or heaviness deep within the arm which were anecdotally reported by individuals with arm lymphoedema. All participants were encouraged to use regular hand-pumping and to continue their usual daily activities, including any regular exercises or fitness programme; they were asked not to change any aspect of exercise without prior discussion with the researcher.

Monitoring of lymphoedema was undertaken for the 6-month period of the trial by the researcher, a lymphoedema specialist. Participants were requested not to discuss their involvement in the trial with other patients.

## 步驟 2：研究的品質有多好(內在效度)？

受試者是否  
具有代表性？  
(收案場所、納  
入 / 排除 條件)

YES



評讀結果：■是 否 不清楚



## 步驟 2：研究的品質有多好(內在效度)？

分派方式是否隨機且具隱匿性...？

YES

within a 3-month period, to a maximum of 70 (35 in each group); however, only 23 women were eligible and willing to participate in the trial.

### *Randomisation*

Participants were randomly allocated using sequentially numbered sealed envelopes to either standard self-care alone (control group, CG) or standard self-care plus exercise (intervention group, IG). Randomisation was in blocks of six and eight to ensure that allocation to each group was balanced if recruitment was less than expected [25]. The researcher was blind to the allocation process.

### *Self-care: standard care*

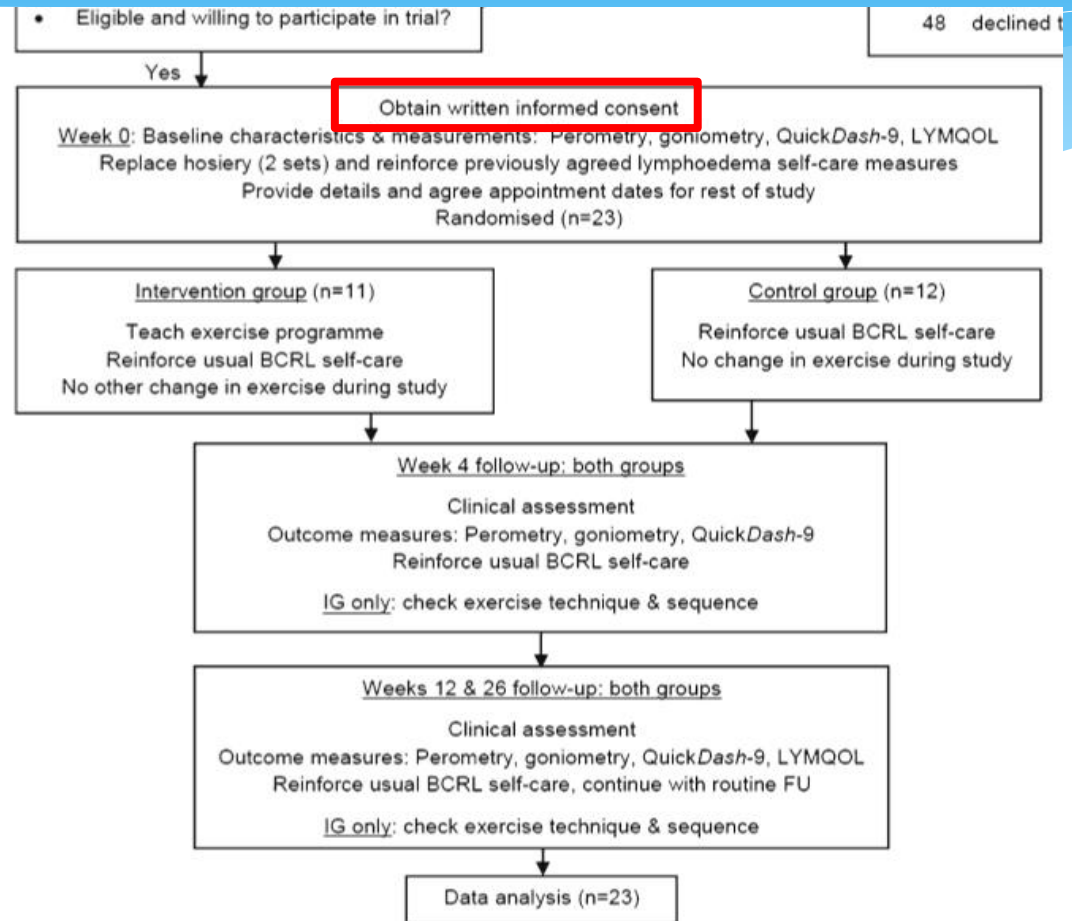
Throughout the trial, both groups continued their previously

評讀結果：■是 否 不清楚

## 步驟 2：研究的品質有多好(內在效度)？

符合收案條件的  
對象是否簽署  
同意書

YES



評讀結果：■是 否 不清楚



## 步驟 2：研究的品質有多好(內在效度)？

各組研究對象  
的條件是否  
相近

YES

**Table 1** Demographic characteristics of 23 study participants (week 0)

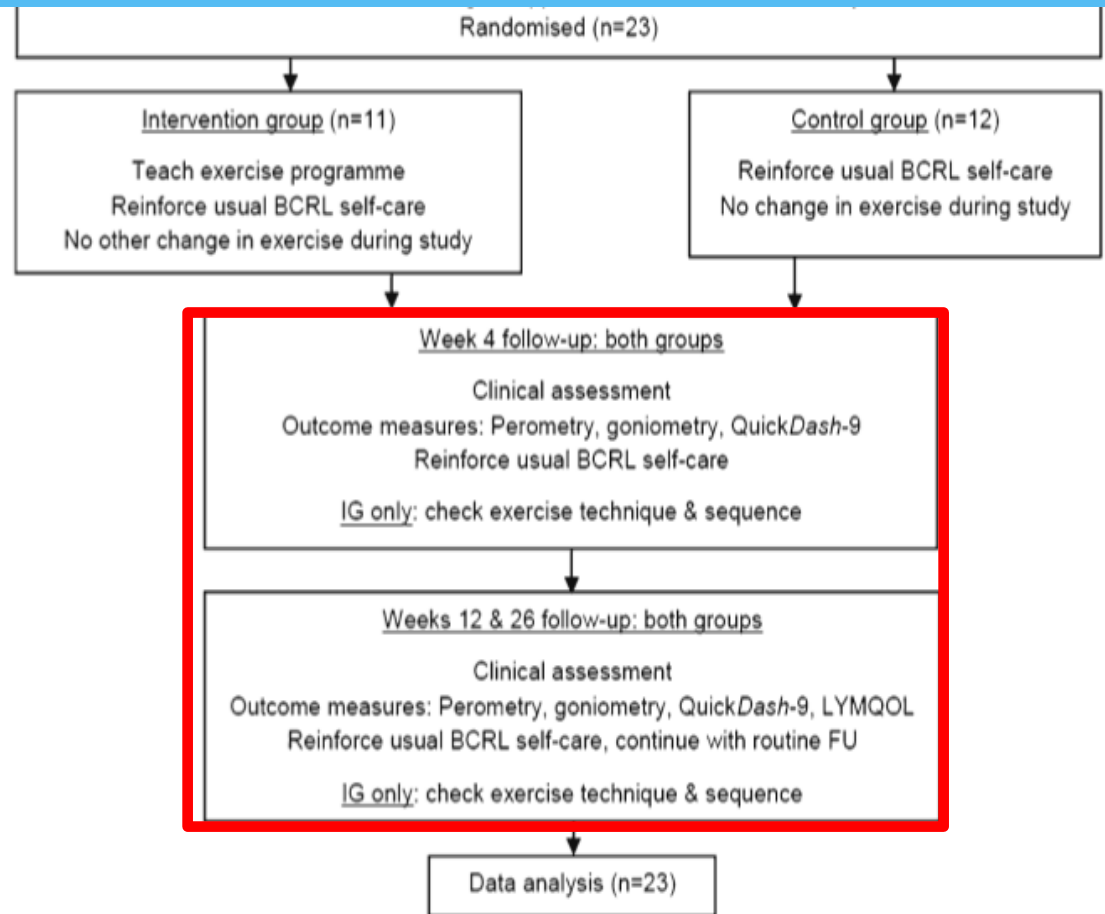
|   | Intervention (n=11)<br>Median (%; LQ,UQ) | Control (n=12)<br>Median (%; LQ,UQ) | p value |
|---|--|-------------------------------------|---------|
| Age (years)                               | 66 (51,68)                               | 64.5 (56,73.5)                      | >.05    |
| Ethnicity, N(%)                           |  |                                     |         |
| White British                             | 7(64)                                    | 10(83)                              | >.05    |
| Other White                               | 0(0)                                     | 1(8)                                |         |
| Black/Black British Caribbean             | 4(36)                                    | 0(0)                                |         |
| Any other ethnic group                    | 0(0)                                     | 1(8)                                |         |
| Employment, N(%)                          |  |                                     |         |
| Professional/managerial                   | 3(27)                                    | 2(17)                               | >.05    |
| Clerical/service/administration           | 2(18)                                    | 2(17)                               |         |
| Manual                                    | 0(0)                                     | 1(8)                                |         |
| Retired                                   | 6(55)                                    | 7(58)                               |         |
| Perceived occupation/activity level, N(%) |  |                                     |         |
| Active                                    | 9(82)                                    | 9(75)                               | >.05    |
| Sedentary                                 | 1(9)                                     | 2(17)                               |         |
| Heavy work                                | 0(0)                                     | 0(0)                                |         |
| Missing data                              | 1(9)                                     | 1(8)                                |         |
| BMI                                       | 30.95 (27.22,32.55)                      | 27.43 (24.97,29.79)                 | >.05    |
| Normal (18.5–24.9)                        | 0(0)                                     | 3(25)                               |         |
| Overweight (25–29.9)                      | 5(45)                                    | 6(50)                               |         |
| Obese (≥30)                               | 6(55)                                    | 3(25)                               |         |
| Breast surgery, N(%)                      |  |                                     |         |
| WLE                                       | 6(55)                                    | 6(50)                               | >.05    |
| Mastectomy                                | 3(27)                                    | 4(33)                               |         |
| Mastectomy and reconstruction             | 2(18)                                    | 2(17)                               |         |
| Axillary surgery, N(%)                    |  |                                     |         |
| SNB                                       | 1(9)                                     | 0                                   | >.05    |
| ALND                                      | 7(64)                                    | 11(92)                              |         |
| SNB and ALND                              | 3(27)                                    | 1(8)                                |         |
| Radiotherapy, N(%)                        |  |                                     |         |
| Breast only                               | 9(82)                                    | 7(58)                               | >.05    |

評讀結果：■ 是 否 不清楚

## 步驟 2：研究的品質有多好(內在效度)？

各組是否給予  
相同的治療

YES



評讀結果：■是 否 不清楚

## Methods

This 6-month randomised controlled trial was a pilot study comparing a daily home-based exercise programme plus standard lymphoedema self-care with self-care alone in the management of stable BCRL.

### Participants

The study site was a Lymphoedema Clinic within a cancer centre in England. Five hundred thirty-two BCRL patient files were examined to identify women with stable unilateral BCRL,  $\geq 10\%$  ELV, in the self-care phase of treatment;

forearm. Compression hosiery was worn throughout to maximise the impact of muscle activity on superficial and deep lymphatic and venous drainage [27].

IG participants were taught the exercise programme at the first appointment (week 0) and instructed to do the exercise programme daily at home (approximately 10–15 min). They were given an instruction sheet with photos accompanying the explanation of each activity. The technique was checked at each appointment and any necessary adjustments were noted. CG participants were offered instruction in the exercise programme following study completion and all accepted.

involvement in the trial with other patients.

### Intervention

The exercise programme combines a series of gravity-resistive isotonic arm exercises in a sequence designed to simulate MLD, as per Leduc et al. [26]. The first three exercises incorporate deep breathing and aim to stimulate the lymphatics in the trunk and at the root of the limb; four gravity-resistive arm exercises follow to stimulate venous and lymphatic return from the arm; finally, the first three exercises are repeated in reverse order to encourage clearance of fluid stimulated by the exercise.

$$\% \text{ ELV}_{\text{time 1}} = \frac{\text{SLV}_{\text{time 1}} - \text{NSLV}_{\text{time 1}}}{\text{NSLV}_{\text{time 1}}} \times 100$$
$$\% \text{ change in ELV}_{\text{time 2}} = \frac{\text{ELV}_{\text{time 2}} - \text{ELV}_{\text{time 1}}}{\text{ELV}_{\text{time 1}}} \times 100$$

**Fig. 2** Calculation of relative ELV and change in ELV

Lymphoedema Clinic. Patient perception of function was monitored using the QuickDASH-9 questionnaire [31]; there is no lymphoedema-specific tool.

Range of shoulder abduction (frontal plane) and extension (sagittal plane) was measured using a plastic goniom-

## 步驟 2：研究的品質有多好(內在效度)？

受試者與評估者是否對治療方式及(或)評估目的維持盲法(blind)？

YES

### *Randomisation*

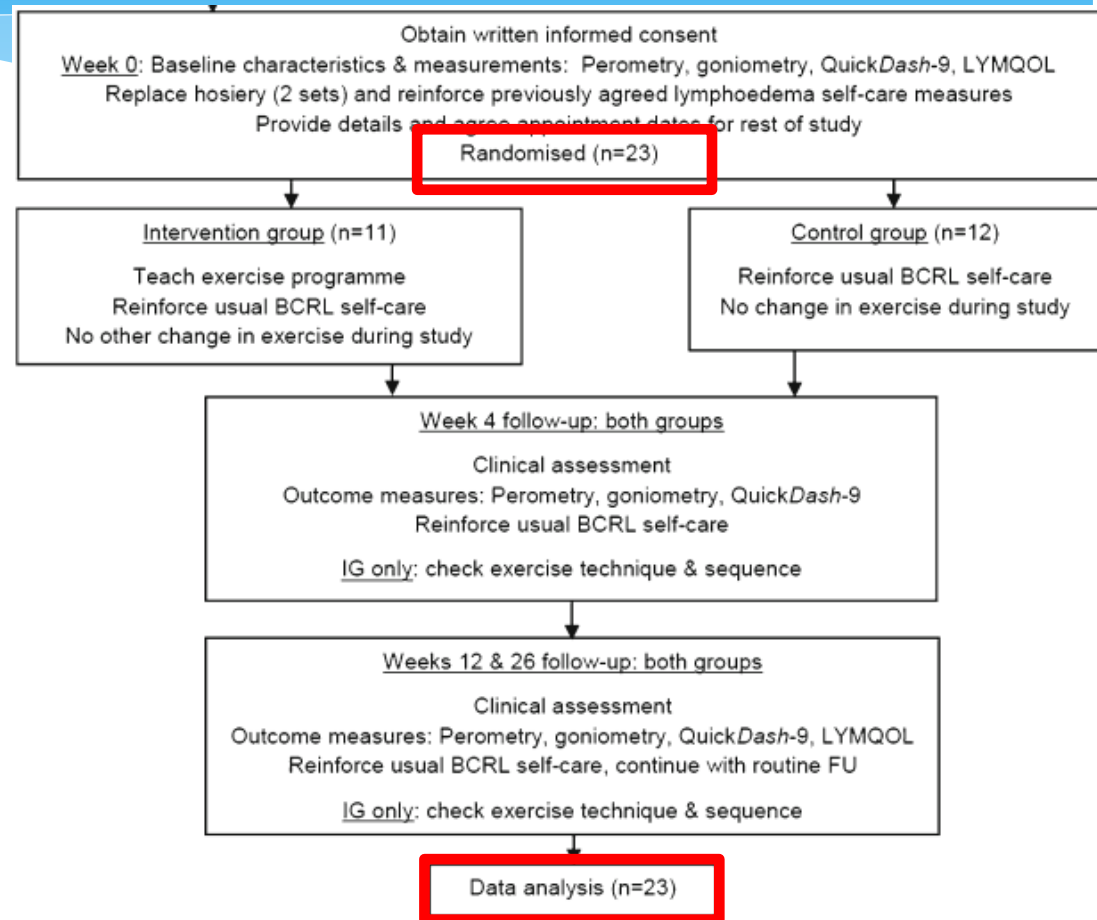
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評讀結果：■是 否 不清楚

## 步驟 2：研究的品質有多好(內在效度)？

是否有足夠的追蹤  
(Follow up)？

YES



評讀結果：■ 是 否 不清楚

# 結論

- The intervention group showed a clinically and statistically significant improvement in relative ELV at week 26 (95 % CI – 26.57 to – 5.12), whereas the control group improvement crossed the line of no effect (95 % CI – 17.71 to 1.1).
- This study demonstrated the feasibility of conducting a RCT of exercise as a therapeutic intervention in the management of BCRL.
- Although the sample was small, the results support the findings of other exercise studies which have shown trends towards improvement.



花媽



請問專業的照護  
同仁們！

是否贊成乳癌病  
人在家執行預防  
淋巴水腫的運動？

# 討論

- \* 本文作者並未針對daily home-based exercise programme 應執行的內容進行具體說明，臨床上執行有困難，建議跟原作者聯繫，再決定是否推到臨床



# 謝謝聆聽

