

拍痰（叩擊）注意事項(英文)

Precautions for phlegm stroking (percussion)

一、叩擊目的(Purpose for percussion)

利用空氣振動原理，使積在肺部的痰液鬆動，再應用重力原理及改變身體姿勢，使附著在氣管上的痰液鬆動，將深部痰液咳出，除去呼吸道分泌物，進而增進或提昇呼吸型態，以改善肺部功能、支氣管炎及肺擴張不全等症狀。再藉由咳嗽或抽痰的方式清除分泌物，可促進痰液排出，促進肺部擴張。

Based on the mechanism involving air shock, the phlegm accumulated in the lung is first loosened, the phlegm adhered on trachea is further loosened with utilizing the gravity force and changed postures of the body which removes the secretion in respiratory tract through coughing up the phlegm deep inside to facilitate or enhance the breathing pattern, improving pulmonary function and symptoms such as bronchitis and atelectasis. Moreover, removal of secretion by coughing or phlegm suction may facilitate excretion of phlegm, enhancing pulmonary dilation.

二、適用對象(Indications)

(一) 肺部分泌物黏稠或量多者。

Patients with thick or excessive respiratory secretions.

(二) 長期臥床或固定不動者。

Long-term bedridden or immobilized patients.

(三) 年紀大咳嗽能力差者。

The elderly with impaired coughing ability.

(四) 慢性阻塞性肺病、肺炎、支氣管擴張、肺塌陷等肺部疾病。

Pulmonary diseases including chronic obstructive pulmonary disease, pneumonia, bronchial dilation and atelectasis.

三、那些情形不適合進行叩擊？

Which situations are not suitable to perform percussion?

當屬於下列情況時，請勿給予叩擊，以免造成病人不舒服或病情的惡化，應經醫師評估許可後才能進行。

Please do not carelessly perform percussion for patients with the following diseases to avoid patients' discomfort or deterioration of diseases, it is necessary to have the physician's assessment and permission before performing it.

三軍總醫院 護理部 編印
胸腔內科

諮詢電話：(02) 24633330

- (一) 患有皮下氣腫、肺栓塞、肺膿瘍、氣胸、骨質疏鬆。
With subcutaneous emphysema, pulmonary embolism, lung abscess, pneumothorax, and osteoporosis.
- (二) 曾接受大血管手術後，如心肺血管手術術後。
After receiving major vascular surgery such as postoperative cardio-pulmonary vascular surgery.
- (三) 頭部損傷導致顱內壓升高時。
Increased intracranial pressure resulted from head injury.
- (四) 胸部肋骨骨折、胸部手術術後，或施行叩擊反而使病人疼痛者。
Chest rib fracture, postoperative chest surgery, or performing percussion contrarily causes pains of the patient.
- (五) 頸部、脊椎損傷者。
Damaged neck or spine.
- (六) 有出血傾向：咳血、凝血因子不正常者。
Bleeding inclination: hemoptysis, abnormal blood coagulation factor.
- (七) 已知或懷疑為肺癌或肺轉移性疾病者。
Known or suspect lung cancer or metastatic lung diseases.

四、人工叩擊執(Implementation approach for manual percussion)

- (一) 可利用手持拍痰杯(圖一)或將手指密合弓成杯狀(圖二)，手腕放鬆，利用手腕關節自然彎曲的力量以手指邊緣叩擊胸壁，叩擊時會發出“波波”聲(注意掌心不應觸碰病人胸壁皮膚)。
By holding a percussion cup (Figure 1) or closing and bowing all fingers to be cup-shaped (Figure 2), with the wrist relaxed, percuss the chest wall with edge of fingers by using the strength from the naturally bent wrist joint. There will be sounds of “bo-bo” coming out while performing percussion (notice that the palm shall not touch patient’s skin of chest wall).



圖一 Figure.1



圖二 Figure.2

三軍總醫院 護理部 編印
胸腔內科

諮詢電話：(02) 24633330

- (二) 雙手交替或單手叩擊，叩擊頻率約一秒鐘一下，叩擊背部特定部位每次 1~2 分鐘，才移至下一個叩擊位置，期間病人應配合做深呼吸、咳嗽將痰排出，如果病人無法將痰液咳出，可以抽痰方式將痰抽出。

Alternately percuss with both hands or one single hand at a frequency of about one percussion per second, it is required to percuss a specific location of the back for 1-2 minutes each time before move to another percussion area; please consult medical personnel for percussion locations, never percussing the spine, sternum, heart, and kidney. The duration may last 20-30 minutes each session. During the session, patient shall simultaneously do deep breathing and coughing to discharge phlegm, sputum suction may be used to suck out sputum in case the patient is unable to voluntarily cough out sputum.

- (三) 執行時間：進食前一個小時或飯後 2 小時實施，以避免造成嘔吐。

Performing time: one hour before or 2 hours after having meals to avoid any vomiting.

- (四) 執行頻率：一天約 3~4 次，每次可進行 20~30 分鐘，可視痰液多寡來增減次數。

Performing frequency: about 3 to 4 times a day, to be increased or reduced depending on various sputum amount.

五、機械型拍痰儀使用方式(Usage of mechanical percussor)

- (一) 依病人需求調整機械型拍痰儀(圖三)調整震動頻率、時間、震動壓力，每次使用時都需再次確認震動頻率、時間、震動壓力是否正確。

Adjust vibration frequency, duration, and vibration pressure for mechanical percussor (Figure 3) based on patient's requirement, reconfirming the correct vibration frequency, duration and vibration pressure is required before each use.



圖三 Figure 3

- (二) 每次使用時間為 20~30 分鐘，一天約 3~4 次，可視痰液多寡來增減次數。

Duration will be 20 to 30 minutes each use, 3 to 4 times a day, frequency may vary depending on sputum volume.

- (三) 使用部位每次需左右側背部交替使用，於使用後觀察病人叩擊部位皮膚是否有異常。

The areas performed should be alternatively changed to both sides of the back, observe the patient for any abnormality of skin in percussion areas after use.

六、注意事項(Precautions)

- (一) 執行者站的位置，應面向病人的臉，以便隨時觀察病人。

The performer is required to stand at the location toward the patient's face to observe the patient at any time.

- (二) 叩擊部位請依醫護人員建議，不可叩擊脊椎骨、胸骨、心臟、腎臟。

Please consult medical personnel for percussion locations, never percussing the spine, sternum, heart, or kidney.

- (三) 執行拍痰時注意勿拉扯或壓迫鼻胃管、點滴注射管路及其他傷口引流管路。

Notice to avoid dragging or compressing nasogastric tubing, drip infusion tubing and other drain tubing for wounds during performing phlegm percussion.

- (四) 協助病人採取適當姿勢並予枕頭適當支托，儘量使脊椎平直、胸部擴張。若病人為側躺，則叩擊者站在面向病人側進行叩擊（圖四）。

Assist the patient to take an appropriate posture and support properly with a pillow to flat vertebra and stretch the chest as much as possible. If the patient is lying on the side, the one who performs percussion shall stand facing the patient to perform percussion (Figure 4).



圖四 Figure 4

- (五) 若痰液太黏稠，可依醫囑先給予蒸氣或化痰藥物吸入後再執行叩擊，效果更好。

If the sputum is too thick, steaming or expectorants inhalation may be given conforming to physician's order prior to performing percussion for better efficacy.

- (六) 使用氧氣或易發紺的病人應持續維持氧氣提供。

For patients who are receiving oxygen or with persistent cyanosis, continuous oxygen supply would be required.

- (七) 叩擊時病人若有臉色發紺、胸悶、心悸、意識不清、呼吸困難、嘔吐、劇烈咳嗽或過度疼痛時應立即停止，協助病人翻回正躺，並採半坐臥姿，且立即通知醫護人員。



If the patient exhibits face cyanosis, dyspnea, vomiting, severe cough or excessive pain during percussion, immediately stop and assist the patient to turn back lying in supine position and take Fowler's position, immediately noticing medical personnel.

(八) 叩擊後鼓勵病人將痰液咳出，或請護理人員協助抽痰。

After percussion, encourage the patient to cough up the phlegm, or ask nursing staff to help performing phlegm suction.

參考資料(Reference)

沈季香、楊麗玉 (2020) · 探討胸腔物理治療對肺部感染病人住院天數、醫療費用之影響 · 護理雜誌, 67 (2), 58-64。

Ntoumenopoulos, G., Hammond, N., Watts, N. R., Thompson, K., Hanlon, G., Paratz, J. D., & Thomas, P. (2018). Secretion clearance strategies in Australian and New Zealand intensive care units. *Australian Critical Care*, 31 (4), 191-196.

Wang, T. H., Wu, C. P., & Wang, L. Y. (2018). Chest physiotherapy with early mobilization may improve extubation outcome in critically ill patients in the intensive care units. *The clinical respiratory journal*, 12(11), 2613-2621. <https://doi.org/10.1111/crj.12965>.

護理指導評值 Nursing Guidance Evaluation

◎是非題 True or false

1. () 叩擊目的，是利用空氣振動、重力原理及身體姿勢改變，使附著在氣管上的痰液鬆動，將深層痰液咳出？

Purpose of percussion is to loosen the phlegm adhered on trachea based on the mechanism involving air shock, gravity force and changed postures of the body for coughing up the phlegm deep inside?

2. () 執行拍痰時注意勿拉扯或壓迫鼻胃管、點滴注射管路及其他傷口引流管路？

Notice to avoid dragging or compressing nasogastric tubing, drip infusion tubing and other drain tubing for wounds during performing phlegm percussion?

3. () 當痰液太黏稠，可依醫囑先給予蒸氣或化痰藥物吸入後，再執行叩擊，效果會更好？

If the sputum is too thick, steaming or expectorants inhalation

三軍總醫院 護理部 編印
胸腔內科

諮詢電話：(02) 24633330



may be given conforming to physician's order prior to performing percussion for better efficacy?

◎選擇題 Multiple-choice question

4. () 叩擊時，執行者站的位置為何？

(1)應面向病人的臉，以便隨時觀察病人；(2)背對面向病人的臉，以便隨時觀察病人。

How about the location where the percussion performer standing?

(1) toward the patient's face to observe the patient at any time;
(2) with the back toward the patient's face to observe the patient at any time.

5. () 叩擊時病人若有下列哪些症狀，應立即停止，立即通知醫護人員？

(1)臉色發紺；(2)胸悶、心悸、意識不清；(3)呼吸困難；(4)以上皆是。

For which of the following symptoms the patient exhibits during percussion, it should be immediately terminated, notifying medical personnel immediately?

(1) face cyanosis; (2) chest distress, palpitation, unconsciousness; (3) dyspnea; (4) all of the above.

6. () 叩擊需在哪一個時間點執行？

(1)進食前一個小時；(2)飯後 2 小時；(3)以上皆是，以免造成嘔吐。

What is the timing to perform percussion to avoid any vomiting?

(1) one hour before meals; (2) 2 hours after meals; (3) both of the above.

(答對 5-6 題⇒完全了解；答對 3-4 題⇒部分了解；答對 1-2 題⇒完全不瞭解)

(Correct in 5 or 6 questions ⇒completely understood; correct in 3 or 4 questions ⇒partially understood; correct in 1 or 2 questions ⇒not understood at all)

1. (O) 2. (O) 3. (O) 4. (1) 5. (4) 6. (3)

三軍總醫院 護理部 編印
胸腔內科

諮詢電話：(02) 24633330