

Prevention of Surgical Site Infection

- From pre-operative preparation to post-operative care

Marble Ma

APN, O&T, PWH

Surgical Site Infection

- ◆ 3rd most frequently reported nosocomial infection among hospitalized patients
- ◆ Increase patients' morbidity, mortality, length of stay and cost of healthcare institutions
- ◆ Increase LOS by an average of 7.3 days
- ◆ 77% SSI died related to infection

Surgical Site Infection

Classification of SSIs

- ◆ Superficial incisional SSIs (skin & subcutaneous tissue)
- ◆ Deep incisional SSIs (deep soft tissue, muscle & fascia)
- ◆ Organ/space SSIs (involve any part of the anatomy)

Surgical Site Infection

Most common organisms

- ◆ Staphylococcus aureus (20%)
- ◆ Coagulase negative staphylococcus (14%)
- ◆ Enterococcus (12%)

Pre Op

- ◆ Schedule case - start from clinic (e.g. Joint Replacement Preparatory Class)
- ◆ Emergency admission
 - start from admission
 - even better start from site of injury

Contributing factors to infection

- ◆ Environmental factor
 - ◆ clean environment

- ◆ MOI (mechanism of injury)

- ◆ Patient factors
 - ◆ major contribution factor e.g. knowledge, ability, hygiene, obesity, age, nutritional status, smoking
 - ◆ so education is very important - education class
 - ◆ skin cleansing product, clean pajamas, post op bed preparation

- ◆ Practices
 - ◆ Guideline & Protocol should be clear and well established

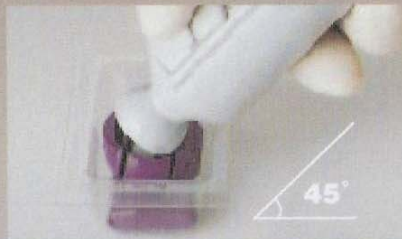
Mechanism of injury (MOI)

- Mechanical injury (RTA)

- Thermal injury (Burns & Scald)

How to use the 3M™ Surgical Clipper*

Changing Blades



3M™ Surgical Clipper
Single-use Blades — 9660

Attach

After removing the backing from the blade packaging, hold the clipper handle at a 45-degree angle and snap on single-use blade.



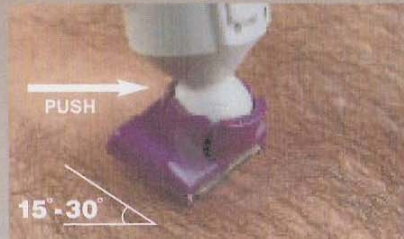
Remove

Holding at a 45-degree angle to the clipper, “pop off” used blade into a sharps waste receptacle.

To eliminate cross-contamination, use a new blade for each patient.

* Refer to package insert for warnings and more detailed instructions.

Clipping



3M™ Surgical Clipper

Push

Position blade at 15 to 30 degrees to skin surface. Gently push the clipper forward across the patient’s skin, clipping “against the grain” of hair.

↕ Or... ↕



Pull

Rotate blade 180 degrees and position 15 to 30 degrees to skin surface. Gently pull toward you or “rake” the clipper gently across the patient’s skin.

Do not use excessive pressure to push the clipper down on the patient’s skin. Let the clipper glide across the skin surface.

Cleaning



3M™ Surgical Clipper

Wipe

With the clipper in the “off” position and the blade already removed, wipe clipper handle with an alcohol wipe or other wet cloth.

↕ Or... ↕



Rinse

Rinse head of clipper handle under warm, running water and wipe dry.

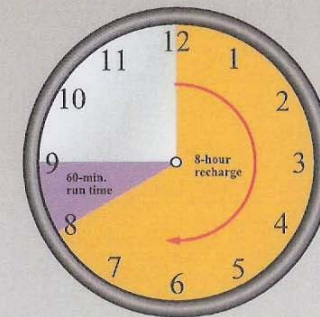
Do not immerse in water.

Charging



3M™ Surgical Clipper
Charger — 9662

When not in use, store clipper handle in “off” position in charger. Yellow light indicates charging mode.



An 8-hour recharge provides approximately 60 minutes of run time.

Before initial use, charge for 24 hours. There’s no risk of overcharging or premature charging. Charging more than 8 hours will not result in longer run time.

Surgical clipper

- ◆ No hair removal is best
- ◆ Use of razors to remove hair has been identified as a primary reason for increased surgical site infection
- ◆ Clipping is preferred over shaving as clipping causes less epithelial damage

Surgical clipper

	Infection rate (%)
Not shaved or clipped	0.9%
Shaved with a razor	2.5%
Hair is clipped	1.7%
Shaved with an electrical clipper	1.4%

Pre-op preparation of patient

- ◆ Identify and treat all infections remote to surgical site is possible
- ◆ Screen of hyperglycaemia
- ◆ Minimize the pre-operatively LOS
- ◆ Educate about cessation of smoking
- ◆ Maintain normothermia
- ◆ Do not remove hair preoperatively unless required

Pre-op preparation of patient

- ◆ Remove hair immediately before the operation, electric clippers preferred
- ◆ Education on bath at least night before OT, bath again the morning before OT if possible
- ◆ Use hibiscrub for bathing
- ◆ Bowel preparation if needed
- ◆ Antiseptic skin preparation
- ◆ Administer prophylactic antibiotic if needed in ward (e.g. Vancomycin), otherwise on induction in OT

Post op Management

- ◆ Keep dressing intact for 24-48 hours post-op
- ◆ Change dressing with normal saline if soaked
- ◆ Hand hygiene before & after perform dressing
- ◆ Use aseptic technique to perform dressing
- ◆ Use disposable product to prevent cross-infection
- ◆ Observe for S/S of wound infection: pain or tenderness, localized swelling, redness or heat, fever
- ◆ Administer antibiotics as prescribed

Conclusion

Just simple and basic nursing care is enough

Prevention is base on nursing care and attitude
(good practice)