NPWT Readiness: A Clinical Checklist Before Therapy Begins

Negative Pressure Wound Therapy, or NPWT, can be a powerful tool in wound care, but it works best when the wound is properly prepared before therapy begins.

Incomplete debridement, hidden infection, fragile periwound skin, poor seal integrity, and unclear treatment goals are common reasons NPWT may not meet expectations. Most of these issues can be identified before the first dressing is applied.

That is why an NPWT readiness check matters.

Before starting negative pressure wound therapy, clinicians should confirm that the wound, the surrounding skin, the treatment goal, and the patient's overall condition all support safe and effective therapy. Wound bed preparation frameworks emphasize the importance of addressing the cause of the wound, patient-centered concerns, debridement, infection or inflammation control, and moisture balance before advancing treatment.

This guide covers five key areas to assess before starting NPWT. After each section, you'll find a practical checklist that can be used at the bedside or built into your team's workflow.

1. Wound Bed Preparation

NPWT does not replace wound bed preparation. The therapy is most effective when the wound has already been assessed, cleaned, and prepared for treatment.

Necrotic tissue, slough, and debris can interfere with dressing contact, seal formation, and pressure distribution. When devitalized tissue is present, clinicians should consider appropriate debridement before starting therapy. Depending on the wound and patient factors, this may include sharp, enzymatic, autolytic, or mechanical debridement.

Clinicians should also assess for tunneling and undermining. NPWT can be used in wounds with depth or irregular wound geometry, but the dressing must be able to conform to the wound's shape without creating dead space or uneven pressure. Recording tunnel depth, direction, and wound dimensions at baseline also makes it easier to evaluate progress over time.

If bone, tendon, hardware, organs, vessels, or grafts are exposed, the wound should be evaluated carefully before NPWT begins. Direct application over vital structures can increase the risk of serious complications, including erosion, fistula formation, or hemorrhage. Protective interfaces, specialist input, or alternative treatment plans may be needed depending on the wound.

Wound Bed Preparation Checklist

Before starting NPWT, confirm:

- Devitalized tissue, slough, and debris have been addressed
- The wound has been assessed for tunneling or undermining
- Wound measurements have been documented
- Exposed bone, tendon, hardware, blood vessels, or organs have been evaluated
- A protective contact layer has been considered when clinically appropriate
- The wound is ready for dressing contact and seal formation

2. Infection Status

NPWT should not be started over an active, untreated infection. The wound must be assessed for local and systemic signs of infection before therapy begins.

Clinicians should check for redness, warmth, swelling, purulent drainage, malodor, increasing pain, delayed healing, or changes in the wound bed. Systemic signs may include fever, elevated white blood cell count, or blood glucose changes in patients with diabetes.

For wounds near or involving bone, osteomyelitis should be ruled out or actively managed. Published reviews note that untreated osteomyelitis is considered a contraindication for NPWT, which makes coordination with infectious disease, orthopedics, podiatry, or another specialist especially important in higher-risk wounds.

Biofilm is another concern, especially in chronic wounds that stall, worsen, or continue to drain despite standard care. Biofilms are common in chronic wounds and can prolong inflammation and delay closure. NPWT may support wound management, but it should not be treated as a substitute for appropriate infection and biofilm control. One PubMed-indexed study found that NPWT altered biofilm architecture but did not eliminate viable bacteria on its own, supporting the need for broader antimicrobial and wound bed strategies when biofilm is suspected.

Infection Status Checklist

Before starting NPWT, confirm:

- The wound has been assessed for local signs of infection
- Systemic infection concerns have been reviewed
- Purulent drainage or malodor has been evaluated
- Osteomyelitis has been ruled out or is actively managed when suspected
- Biofilm has been considered in stalled or chronic wounds
- Infection management is documented before therapy begins

3. Periwound Skin Condition

Healthy periwound skin is essential for NPWT. If the dressing cannot maintain a seal, negative pressure will not be delivered consistently, and therapy may be interrupted.

Before applying the dressing, assess the skin around the wound for maceration, irritation, breakdown, fragility, or adhesive injury risk. Frequent dressing changes, drainage, moisture, and fragile skin can all increase the chance of periwound complications.

A skin barrier film, protective wipe, hydrocolloid strip, or other protective strategy may be needed before applying the drape. This is especially important for patients with fragile skin or wounds located near joints, bony prominences, skin folds, or uneven contours.

Seal challenges should be anticipated before therapy begins. Wounds in anatomically difficult locations may require alternative fixation techniques. PubMed-indexed research has described skin adhesive as one possible strategy for maintaining a durable NPWT seal in challenging wound locations.

Periwound Skin Checklist

Before starting NPWT, confirm:

- Periwound skin has been assessed for maceration, breakdown, or fragility
- Adhesive injury risk has been considered
- A skin barrier or protective dressing has been selected when needed
- Wound location and body contours have been assessed for seal challenges
- Alternative fixation strategies are available if a standard seal is difficult
- The dressing plan protects both the wound and the surrounding skin

4. Treatment Goal Alignment

NPWT is not right for every wound or every stage of healing. Before therapy begins, the care team should be clear about why NPWT is being used and what outcome they expect.

The treatment goal may include:

- Managing moderate to heavy drainage
- Supporting granulation tissue formation
- Reducing edema
- Stabilizing the wound environment
- Supporting graft or flap adherence
- Preparing the wound for closure

Clear goals help guide dressing selection, pressure settings, therapy mode, reassessment timing, and escalation decisions. They also help prevent NPWT from continuing simply because it was started.

Contraindications should be reviewed at the start of therapy and during follow-up. Wounds with untreated malignancy, unexplored fistulas to organs or body cavities, untreated osteomyelitis, necrotic tissue with eschar, or exposed blood vessels without adequate protection require careful clinical review before NPWT is considered.

Pressure and mode should also be chosen intentionally. Standard negative pressure ranges are often used in clinical practice, but the right setting depends on wound type, tissue tolerance, patient comfort, drainage level, and healing stage. A systematic review on chronic wounds noted that standard low-pressure ranges of 80 to 125 mmHg may improve microcirculation and support healing, but therapy should be performed by competent clinicians with appropriate monitoring and evaluation.

Treatment Goal Checklist

Before starting NPWT, confirm:

- The primary goal of therapy has been documented
- NPWT is appropriate for the wound type and healing stage
- Contraindications have been reviewed
- Pressure setting and therapy mode have been selected intentionally
- The rationale for therapy has been documented
- A reassessment schedule has been set
- Stop, continue, or escalate criteria are clear

5. Patient-Specific Factors

NPWT readiness is not just about the wound. Patient-specific factors can determine whether therapy can be started safely and continued consistently.

For lower-extremity wounds, vascular status is a critical consideration. NPWT depends on adequate tissue perfusion to support a healing response. If perfusion is compromised or uncertain, an ankle-brachial index, vascular assessment, or specialist consultation may be needed before therapy begins.

Bleeding risk should also be reviewed. Patients taking anticoagulants, patients with friable tissue, or wounds near vascular structures may require additional precautions. Bleeding should be controlled before NPWT is initiated, and the care team should monitor closely during dressing changes.

Pain tolerance, mobility, cognition, home support, and device management ability also matter. NPWT requires some level of patient or caregiver participation, especially when therapy continues outside the hospital. The patient or caregiver should understand the device, alarms, dressing precautions, leak troubleshooting, and when to call the care team.

This is especially important as NPWT continues to move into outpatient, home health, and post-acute settings. A readiness plan is incomplete if the wound is appropriate but the patient does not have the education, support, or follow-up needed to use therapy safely.

Patient-Specific Checklist

Before starting NPWT, confirm:

- Vascular status has been assessed for lower-extremity wounds
- Perfusion concerns have been addressed before therapy begins
- Bleeding risk and anticoagulant use have been reviewed
- Pain control needs have been considered
- Mobility and device management ability have been assessed
- Patient or caregiver education has been completed
- Follow-up and troubleshooting instructions are clear

Starting Right Supports Better Outcomes

A readiness check before NPWT begins is not extra work. It is the work.

When clinicians identify gaps in wound bed preparation, infection management, periwound protection, treatment goal alignment, and patient readiness before therapy starts, the care plan becomes safer, clearer, and easier to follow.

NPWT works best when the wound is ready, the goal is defined, and the care team knows what to monitor next.

Use the checklist below before starting therapy and make it part of your team's regular NPWT workflow.

Visit extricareusa.com to learn more about ExtriCARE's NPWT systems and clinical resources.

NPWT READINESS CHECKLIST

ExtriCARE Clinical Reference | extricareusa.com

Complete this checklist before initiating Negative Pressure Wound Therapy. Document findings and address any gaps prior to therapy start.

	Checklist Item	Clinical Notes / Considerations
1. Wound Bed Preparation		
☐	**Adequate debridement completed**	Necrotic or devitalized tissue has been removed. Wound bed is clean and free of slough that would impede seal formation or therapy delivery.
☐	**Wound bed is viable**	Granulation tissue is present or expected. Exposed bone, tendon, or untreated hardware has been evaluated and documented.
☐	**No tunneling or undermining left unassessed**	Tunneling depth and direction documented. Dressing application plan accounts for irregular wound geometry.
2. Infection Status		
☐	**No signs of active infection**	Periwound erythema, warmth, purulent drainage, and odor have been assessed. Systemic signs of infection (fever, elevated WBC) were reviewed if applicable.
☐	**Osteomyelitis ruled out or managed**	For wounds near bone, imaging or clinical assessment is completed. Active osteomyelitis is a contraindication unless managed under specialist guidance.
☐	**Biofilm burden considered**	Wound chronicity, stalled healing, or recurrence was assessed. Biofilm-directed therapy is completed or underway if indicated.
3. Periwound Skin Condition		
☐	**Periwound skin is intact**	No active maceration, erosion, or breakdown in the adhesive zone. Fragile or compromised periwound skin is documented, and protective measures are in place.
☐	**Skin prep applied as needed**	Skin barrier or protective film is applied to the periwound area to reduce adhesive trauma, particularly with repeated dressing changes.
☐	**Dressing will achieve a reliable seal**	Wound location, contour, and skin condition were assessed for seal feasibility. Alternative fixation planned for anatomically challenging sites.
4. Treatment Goal Alignment		
☐	**NPWT indication is clear**	Therapy goal documented: exudate management, granulation support, wound stabilization, or graft adherence. NPWT is appropriate for the wound type and healing stage.

	Checklist Item	Clinical Notes / Considerations
☐	**Contraindications reviewed**	Confirmed no untreated malignancy in the wound, fistulas to organs or body cavities, or exposed blood vessels in the wound bed without protective coverage.
☐	**Pressure setting and mode selected**	Continuous vs. intermittent mode and pressure target determined based on wound characteristics, tissue sensitivity, and patient tolerance. Pressure is not defaulted.
☐	**Duration and reassessment schedule defined**	Initial therapy duration is set with a defined reassessment point. Escalation or discontinuation criteria identified upfront.
5. Patient-Specific Factors		
☐	**Vascular status assessed**	Adequate perfusion confirmed or assessed. ABI or vascular referral completed for lower-extremity wounds with suspected perfusion compromise.
☐	**Anticoagulation status reviewed**	Patient's anticoagulation therapy and bleeding risk documented. Hemostasis is confirmed prior to initiating therapy.
☐	**Patient and caregiver education completed (home NPWT)**	Patient and/or caregiver understands device operation, alarm response, dressing change schedule, and when to contact the care team.
☐	**Patient can tolerate therapy**	Mobility, pain tolerance, and cognitive factors were assessed. The therapy plan accounts for the patient's ability to participate and adhere.

Clinician:

Patient MRN / ID:

Assessment Date: