

August 2021 ~ Resource #370803

Dos and Don'ts With Patches

Use the information below to improve safe and appropriate use of transdermal patches. For more specific information about appearance, delivery system, and what to do if patches fall off, see our chart, *Characteristics of Transdermal Patches* (U.S. subscribers; Canadian subscribers).

Goal	Suggested Approach
Safe and effective patch application	<ul style="list-style-type: none"> <input type="checkbox"/> Instruct patients or caregivers to wash hands before AND after applying patches.^{1,8} <input type="checkbox"/> Ensure old patches are removed BEFORE applying a new one.¹⁰ <input type="checkbox"/> Carefully open packaging (without scissors if possible) to avoid accidentally cutting the patch.⁸ <input type="checkbox"/> Avoid touching the sticky side of the patch.⁸ <input type="checkbox"/> Check product labeling for recommended areas to use or areas to avoid. <ul style="list-style-type: none"> ○ For example, estrogen patches should NOT be applied directly to the breast.¹ <input type="checkbox"/> Apply patches to clean, dry, hairless, nonirritated, intact skin.^{1,8} <ul style="list-style-type: none"> ○ Avoid areas where tight clothing can loosen or rub the patch off (e.g., waistline).⁸ <input type="checkbox"/> Educate patients and caregivers about patches that are supplied with patch covers (e.g., clonidine [U.S. only]).¹⁰ <ul style="list-style-type: none"> ○ There have been cases where patients have only applied the patch cover (without the active medication).¹⁰ ○ Ensure the active medication patch is put on the skin BEFORE the patch cover is applied.¹¹ <input type="checkbox"/> For patients with altered mental status, consider applying patches where self-removal is difficult (e.g., upper back). <ul style="list-style-type: none"> ○ There's at least one case where a patient removed a fentanyl patch from the upper arm and placed it in the mouth, leading to toxicity (e.g., reduced consciousness).¹¹
Safe patch use for hospitalized patients	<ul style="list-style-type: none"> <input type="checkbox"/> Ask specifically about patches during medication histories.¹⁰ To help schedule future doses, ask and document:¹⁰ <ul style="list-style-type: none"> ○ what the patch is used for. <ul style="list-style-type: none"> ▪ There have been errors where a hormone replacement patch (e.g., <i>CombiPatch</i> [<i>Estalis</i> (Canada)]) was selected in the EHR instead of a hormonal contraceptive patch (e.g., <i>Xulane</i>, <i>Zafemy</i> [both U.S. only]).¹⁰ ○ what the dose or patch strength is, as many patches are available in several strengths (e.g., fentanyl, rivastigmine).¹⁰ ○ when any currently applied patch was placed. <ul style="list-style-type: none"> ▪ If the timing of the patch application is not clear, consider replacing the patch with a new one (rotating sites). ○ where any currently applied patches are located, to ensure proper site rotation. <ul style="list-style-type: none"> ▪ Skin assessments can be performed to look for patches. Keep in mind many patches are small, some do not have any markings, and some are clear (colorless).¹⁰ ○ about application frequency (how often patches are changed and any patch-free periods [e.g., nitroglycerin]). <ul style="list-style-type: none"> ▪ Application frequency can vary among products containing the same active ingredient. For example, some estradiol patches are applied twice a week (e.g., <i>Alora</i> [U.S. only]) and others are applied once weekly (e.g., <i>Climara</i>).¹⁰

Goal	Suggested Approach
Maximize technology safeguards with patches	<ul style="list-style-type: none"><input type="checkbox"/> Work with information technology to ensure patch descriptions are clear to minimize errors. For example, consider:¹⁰<ul style="list-style-type: none">○ highlighting patches that come with a medication patch and a patch cover (e.g., clonidine [U.S. only]).<ul style="list-style-type: none">▪ Consider dispensing the medication patch and patch cover secured together (e.g., in a sealable plastic bag), labeled clarifying which is the patch, which is the patch cover, and proper application.○ clarifying confusing product labeling.<ul style="list-style-type: none">▪ For example, some U.S. scopolamine patch packages list 1.5 mg on the product packaging, while others list 1 mg/three days. However, all of these patches deliver approximately 1 mg of scopolamine over three days (could request that the medication entry include “scopolamine 1.5 mg [delivers 1 mg over three days]”).○ limiting application frequency options for certain patches.<ul style="list-style-type: none">▪ For example, limit fentanyl patch application frequencies to every 48 or 72 hours (removing the option to select every 24-hour dosing).○ adding prompts within the EHR to remove patches to allow for patch-free intervals when indicated (e.g., nitroglycerin).
Determine if cutting a patch is appropriate	<ul style="list-style-type: none"><input type="checkbox"/> Most manufacturers do NOT recommend cutting patches regardless of the delivery system.<ul style="list-style-type: none">○ A few patches may be approved to be cut (e.g., <i>Qutenza</i> [U.S. only], <i>Lidoderm</i>).<input type="checkbox"/> Determine how critical exact dosing is.<ul style="list-style-type: none">○ If exact dosing is critical (e.g., buprenorphine, contraceptives, fentanyl, methylphenidate), advise against cutting or altering the drug patch (regardless of the delivery system).<input type="checkbox"/> Evaluate the delivery system used within the patch.<ul style="list-style-type: none">○ Never cut reservoir-based patches due to potential for “dose dumping.”¹○ Some matrix-based patches may be able to be cut to deliver a lower dose.<ul style="list-style-type: none">▪ Note: Using one half of a matrix patch may not equal half of the dose due to uneven cutting or reduced surface area.▪ Limited data indicate cutting some estradiol patches is safe (e.g., <i>Climara</i>).¹
Properly dispose of patches	<ul style="list-style-type: none"><input type="checkbox"/> Fold used and unused patches in half (sticky sides together), to prepare for disposal.<input type="checkbox"/> Check product labeling for disposal options (e.g., product disposal packs) and recommendations.<ul style="list-style-type: none">○ In Canada (in the U.S., if possible), recommend authorized collection or disposal sites (e.g., drug take-back programs, pharmacies).^{2,3,7}○ In the U.S., if disposing of patches at home:<ul style="list-style-type: none">▪ Most patches can be thrown in the trash. Be sure this is out of reach from kids and pets.▪ Some patches should be flushed down the toilet to prevent accidental exposure or diversion (e.g., buprenorphine, fentanyl, methylphenidate).⁶<ul style="list-style-type: none">• Check for flushing guidance (e.g., FDA [https://www.fda.gov/drugs/disposal-unused-medicines-what-you-should-know/drug-disposal-fdas-flush-list-certain-medicines#FlushList], hospital policy, government laws).

Goal	Suggested Approach
Reduce toxicity risk	<ul style="list-style-type: none"><input type="checkbox"/> Avoid exposing patches to heat sources. This can increase drug delivery and possibly lead to toxicity and/or overdose.¹<input type="checkbox"/> Educate patients about potential heat sources (e.g., electric blankets, heating pads, hot tubs, saunas, heated water beds).
Minimize skin irritation	<ul style="list-style-type: none"><input type="checkbox"/> Encourage application site rotation to avoid repeated exposure to the same area.¹<input type="checkbox"/> Consider recommending a topical corticosteroid to help reduce irritation associated with transdermal patches (e.g., hydrocortisone 1% cream).¹
Ensure safety during procedures	<ul style="list-style-type: none"><input type="checkbox"/> Remove patches that contain metal prior to MRI to prevent burns (e.g., <i>Androderm</i>, <i>Catapres-TTS</i>, <i>Neupro</i>, <i>NicoDerm CQ</i> [U.S.], <i>Habitrol</i> [Canada], <i>Transderm Scop</i> [U.S.]).^{4,5}<ul style="list-style-type: none">○ If you are unsure if a patch contains metal, check the product labeling or contact the manufacturer.○ It may be safest to remove all patches prior to MRIs, unless it is certain a patch does NOT contain any metal (e.g., not all manufacturers test for metal content).^{1,4}<input type="checkbox"/> Check policies and product labeling to see if removed patches can be reapplied or if a new patch should be used. For example:⁹<ul style="list-style-type: none">○ <i>Flector</i> patches (U.S. only) can be reapplied if only off the body for less than two hours.○ a new <i>Duragesic</i> patch should be applied regardless of the amount of time the patch is off the body.

Abbreviations: EHR = electronic health record; MRI = magnetic resonance imaging.

Users of this resource are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national organizations. Information and internet links in this article were current as of the date of publication.

References

1. Ball AM, Smith KM. Optimizing transdermal drug therapy. *Am J Health Syst Pharm* 2008;65:1337-46.
2. Drug Enforcement Agency. Diversion control division: national take-back initiative. https://www.deadiversion.usdoj.gov/drug_disposal/takeback/. (Accessed July 13, 2021).
3. Government of Canada. Safe disposal of prescription drugs. <https://www.canada.ca/en/health-canada/services/safe-disposal-prescription-drugs.html>. (Accessed July 13, 2021).
4. Government of Canada. Health Canada endorsed important safety information on magnetic resonance imaging systems. April 2005. <http://healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2005/14350a-eng.php>. (Accessed July 13, 2021).
5. The Wall Street Journal. FDA warns of burns during MRI from some drug patches. March 5, 2009. <https://www.wsj.com/articles/SB123627293447941721>. (Accessed July 13, 2021).
6. FDA. Drug disposal: FDA's flush list for certain medicines. October 1, 2020. <https://www.fda.gov/drugs/disposal-unused-medicines-what-you-should-know/drug-disposal-fdas-flush-list-certain-medicines#FlushList>. (Accessed July 13, 2021).
7. FDA. Disposal of unused medicines: what you should know. October 1, 2020. <https://www.fda.gov/drugs/safe-disposal-medicines/disposal-unused-medicines-what-you-should-know>. (Accessed July 13, 2021).
8. American Society of Health-System Pharmacists. Safe medication: how to use transdermal patches. <https://www.safemedication.com/how-to-use-medication/transdermal-patches>. (Accessed July 13, 2021).
9. Pharmacy Times. Transdermal patches that must be removed for MRI. August 25, 2016. <https://www.pharmacytimes.com/view/transdermal-patches-that-must-be-removed-before-mri>. (Accessed July 13, 2021).
10. ISMP. Analysis of transdermal medication patch errors uncovers a "patchwork" of safety challenges. March 11, 2021. <https://www.ismp.org>. (Accessed July 13, 2021).
11. Health Quality & Safety Commission New Zealand. Medication alert: transdermal patches. Updated September 2019. <https://www.hqsc.govt.nz/assets/Medication-Safety/Alerts-PR/Transdermal-patch-alert-organisational-September-2019.pdf>. (Accessed July 13, 2021).

Cite this document as follows: Clinical Resource, Dos and Don'ts With Patches. Pharmacist's Letter/Prescriber's Letter. August 2021. [370803]

—To access hundreds more clinical resources like this one, visit trchealthcare.com to log in or subscribe—