

# Treatment options

	Indications	Advantages	Disadvantages	Level of evidence
<b>Topical therapies</b>				
Tranexamic acid gel	Mild epistaxis	Commonly used blood loss preventative due to its antifibrinolytic effects	Efficacy for epistaxis is not well established	Single case series (Level IV)
Estrogen cream	Mild epistaxis	No systemic effects as compared to oral administration, ease of application	Long term use results in squamous metaplasia of nasal mucosa; efficacy for epistaxis is not well established	Single randomized placebo controlled trial (Level II)
Mupirocin ointment	Mild epistaxis	Decreased crusting and bacterial colonization	No direct effect in terms of epistaxis prevention	Single randomized placebo controlled trial (Level II)
Bevacizumab (topical application)	Mild to moderate epistaxis	Ease of application, low risk of adverse reaction	Need for daily, ongoing use. Safety profile has not been well studied for topical application; currently not FDA approved for topical intranasal use	Prospective, randomized placebo controlled multi-institutional trial is ongoing, (Level I, pending)
<b>Local therapies</b>				
Bevacizumab (mucosal injection)	Moderate to severe epistaxis	May provide additional benefit when combined with surgical treatment	Septal perforation if injected into cartilaginous septum	Single case series (Level IV)
Sclerotherapy	Mild or moderate epistaxis	In-office procedure	Safety profile not well defined	Single case series (Level IV)
<b>Surgical cautery</b>				
Bipolar cautery	Mild to moderate epistaxis	Readily available, may be combined with laser photocoagulation	Deeper degree of thermal injury compared to laser photocoagulation	Single case series (Level IV)
KTP laser	Moderate to severe epistaxis	Useful for smaller, punctate lesions, very precise	Risk of injury to patient, OR personnel, airway fire; bleeding during procedure can limit visualization	Few case series (Level IV)

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Nd:YAG laser	Moderate to severe epistaxis	Useful for smaller, punctate lesions, very precise	Risk of injury to patient, OR personnel, airway fire; deeper thermal injury can result in septal perforation	Several case series (Level IV)
Coblation	Moderate to severe epistaxis	Ease of use, higher degree of OR safety compared to laser treatments. Useful for larger, conglomerate lesions. May be combined with laser therapy	Not well-studied, deeper degree of thermal injury and less precise than laser treatments	Single report (Level IV)
Other surgical therapies				
Septodermoplasty	Severe epistaxis, or moderate epistaxis not responsive to more conservative treatment	Effective for near-cessation of bleeding for up to 2 years	Destructive, loss of native nasal mucosa resulting in increased crusting. Donor site morbidity for skin graft	Several case series (Level IV)
Young's procedure	Life-threatening or severely recalcitrant epistaxis	Complete cessation of bleeding in most reports	Loss of nasal function, obligatory mouth breathing	Few case series (Level IV)
Systemic therapies				
Estrogen/anti-estrogen therapy	Mild, moderate, or severe epistaxis	Prevention of osteoporosis	May only be used in female patients	Prospective, randomized, placebo controlled trials (Level I)