Background
Pruritus (itching) is a common and often distressing symptom near the end of life. The itch sensation may arise from stimulation of the skin itch receptor via unmyelinated C fibers, or itch may arise as a central phenomenon without skin involvement (e.g. opioid induced pruritus). Although histamine causes pruritus, many patients with pruritis show no signs of histamine release. Besides histamine, serotonin, prostaglandins, kinins, proteases and physical stimuli have all been implicated as mediators of pruritus.

Common Causes
- Dermatological (dryness, wetness, irritation, eczema, psoriasis)
- Metabolic (hepatic failure, renal failure, hypothyroidism)
- Hematologic (iron deficiency, polycythemia, thrombocytosis, leukemia, lymphoma)
- Drugs (opioids, aspirin, drug reactions)
- Infectious (scabies, lice, candida)
- Allergy (urticaria, contact dermatitis, drug reactions)
- Psychogenic

Management  Management of pruritus involves eliminating the cause when possible. Symptomatic strategies include:
- **Moisturizers**: Dryness (xerosis) is very common and may exacerbate other causes. The mainstay of treatment is skin hydration. Note: Most OTC preparations only have small amounts of moisturizer—they are mostly water. Serious dryness requires emollients and moisturizers (such as petroleum jelly) that patients find oily or greasy. Nevertheless, they may applied after bathing, over damp skin, with a superficial covering.
- **Cooling agents** (e.g. Calamine and/or Menthol in aqueous cream, 0.5%-2%) are mildly antipruritic. They may act as a counterirritant or anesthetic. A more direct way to anesthetize the skin is with the eutectic mixture of local anesthetics lidocaine and prilocaine (EMLA cream).
- **Antihistamines** may be helpful in relieving itch when associated with histamine release. Morphine causes non-immune mediated histamine release from mast cells. Although there is not much supporting research, many report benefits of combining H1 and H2 receptor subtype antihistamines. These may have central effects as well as peripheral antihistaminergic effects. Doxepin (10-30 mg PO at bedtime), a tricyclic antidepressant, is a very potent antihistamine and may help in more refractory cases.
- **Topical steroids** may be helpful in the presence of skin inflammation. These are best applied in ointment rather than cream formulations to alleviate dryness. Systemic steroids have been used in refractory cases.
- **Newer Generation Antidepressants** There are accounts of paroxetine being used successfully to treat pruritus associated a paraneoplastic process, opioids or cholestasis. Also mirtazapine has been shown to improve pruritus at low doses of 15 mg/day in small case reports; this is likely due to its known antihistamine effects and its blockage of post-synaptic 5HT2 and 5HT3 receptors.
- **Opioid Antagonists** Low dose, continuous infusions of IV naloxone has the largest body of data supporting its use in adult and pediatric patients with opioid induced pruritus. There are smaller studies suggest oral naloxone may have less favorable results. Small studies suggest a potential role for methylaltrexone in opioid induced pruritus.
- **Other**: An old-fashioned but effective remedy is immersion in an oatmeal bath (e.g. Aveeno). More recent pharmacological treatments include cholestyramine for cholestatic pruritus; ondansetron for patients with cholestatic, opioid-induced, or renally-induced pruritus. Since the pain sensing neurological system seems to be responsible for pruritis, agents like gabapentin have also been reported to be helpful.
References


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