Stress and Hair Loss

- Autoimmune problems that cause hair loss must be associated with the collapse of the follicle’s immune privilege (HFIP).
- Stress is associated with an increase in CRH (corticotropin releasing hormone, produced from the brain and from hair follicles), an increase in NGF (Nerve growth factor, produced from mast cells), an increase in SP (Substance P), and mast cell degranulation, which leads to inflammation of the nerves around the hair follicles, which leads to HFIP.
- CRH promotes degranulation of mast cells.
- Mast cells produce Gamma interferon (IFNγ), which triggers HFIP collapse.
- Mast cells also produce TNF alpha (TNFα), which prevents hair growth.
- Substance P is a neuropeptide released from sensory nerves in the skin. This release is involved in inflammation of the nerves:
  - Functions as a neurotransmitter and neuromodulator
  - Induces the collapse of hair follicle immune protection
  - Is a vasodilator
  - Is associated with itching
  - Is involved in pain perception

- Stress increases blood sugar levels by increasing:
  - Growth hormone
  - Thyroxine
  - Glucagon
  - Corticosteroids
  - Adrenaline and noradrenaline

Reducing Stress

- Get adequate sleep
- Do moderate physical activity
- Manage your stress better
- Practice meditation or another mind-body practice
- Feel socially connected / Improve relationships
- Nurture hope
- Laugh more
- Get a massage
- Add music to your life
- Stop smoking
- Avoid excessive alcohol use