

Steroids and Lupus

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Am I on Steroids?

- Prednisone
- Cortisone
- Prednisolone
- Hydrocortisone
- Methylprednisolone (Medrol), Depomedrol
- Dexamethasone (Decadron)
- Triamcinolone IM
- IV methylprednisolone (Solu-Medrol)
- Topical Steroids

What are steroids, and why are they used to treat lupus?

- May be life saving
- Hormones in your body.
- Cortisone, is a close relative of cortisol (natural anti-inflammatory hormone).
- Works quickly
- Controls inflammation
- Buys time for starting other medicines, and until they work

How is it given?

- By mouth
 - eg Flare, Joints, kidneys (Oral)
- By Vein
 - eg Kidneys, Brain (Intravenous)
- On surface
 - e.g. Skin, Eyes (Topical)
- By injection
 - e.g. Joint (intra articular)
- By inhalation
 - e.g lungs. (inhaler)

What steroid medications are commonly prescribed for lupus?

- Prednisone
- It is usually given as tablets that come in 1, 5, 10, or 20 milligram (mg) doses.

Am I on a high dose of steroids?

- Low dose of prednisone ≤ 7.5 mg per day
- Medium dose 7.5 and 30 mg per day
- High dose: > than 30 mg daily

Am I long term steroid treatment?

- Treatment for < one month = short-term treatment.
- *Corticosteroids for a few days or weeks are relatively safe when prescribed for skin flares*
- Treatment continuing for > 3 months= is long-term
 - Undesirable side effects
 - Balance of risk vs harm

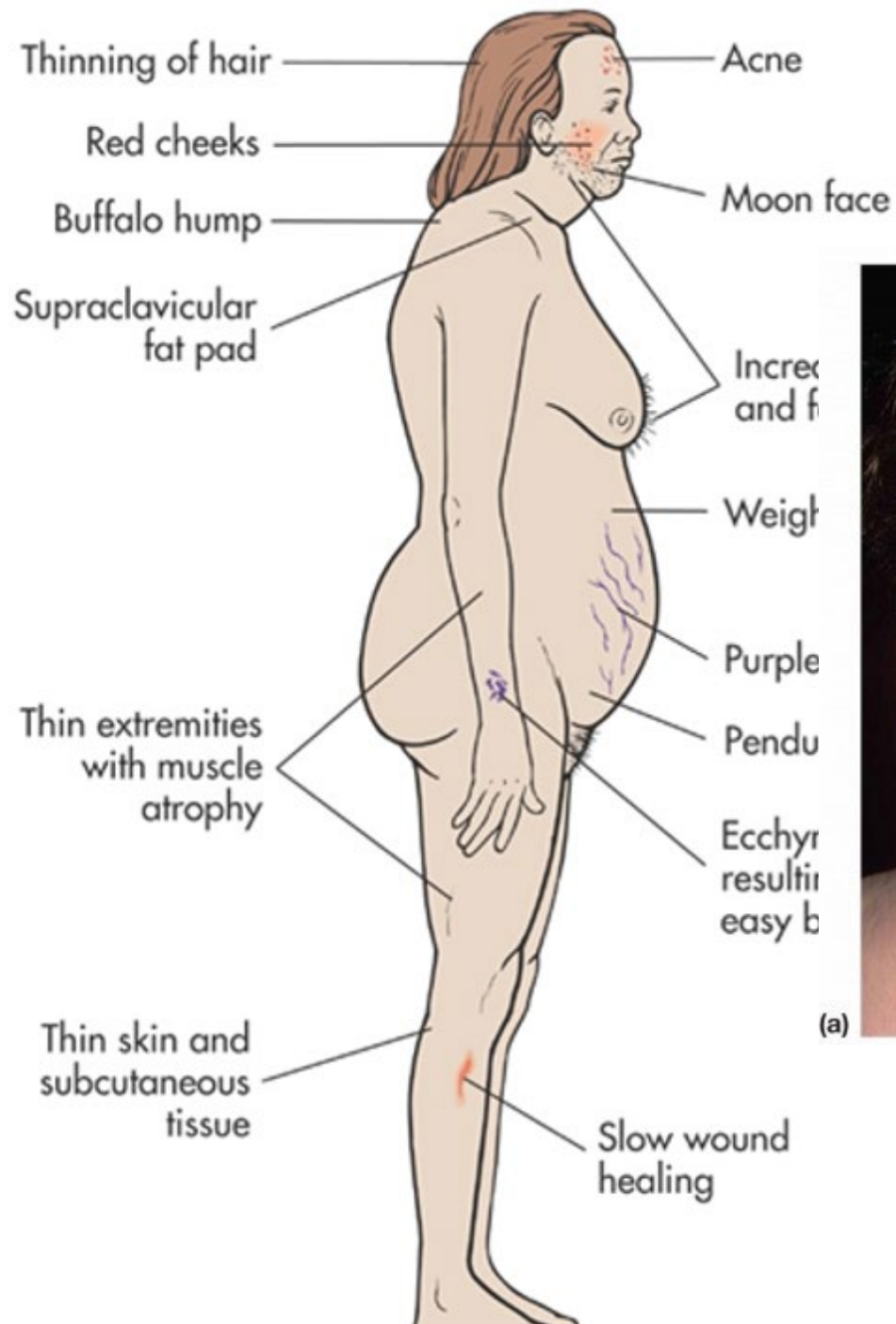
Potential Side Effects

- Harm vs Risk
- Risk increases with higher doses and longer-term therapy.
- usually prescribed only after other less potent drugs have proven insufficient in controlling your lupus.
- Your doctor will work with you:
 - lowest dose necessary
 - shortest possible time.
- sometimes combined with other drugs to help reduce some side effects.

Appearance

- Changes in appearance
 - Development of round/moon-shaped face
 - Weight gain
 - Redistribution of fat, leading to swollen face and abdomen, but thin arms and legs





(a)



(b)

Skin adverse effects

- Infections:
 - Bacterial infections: cellulitis, wound infection
 - Fungal infections: tinea, candida, pityriasis versicolor
 - Viral infections: herpes zoster
- Skin thinning, purpura, fragility, telangiectasia and slow wound healing, especially in sun-damaged areas
- Stretch marks (striae) under the arms and in the groin
- Steroid acne
- Hair growth on the face
- and hair loss.











DermNetNZ.org



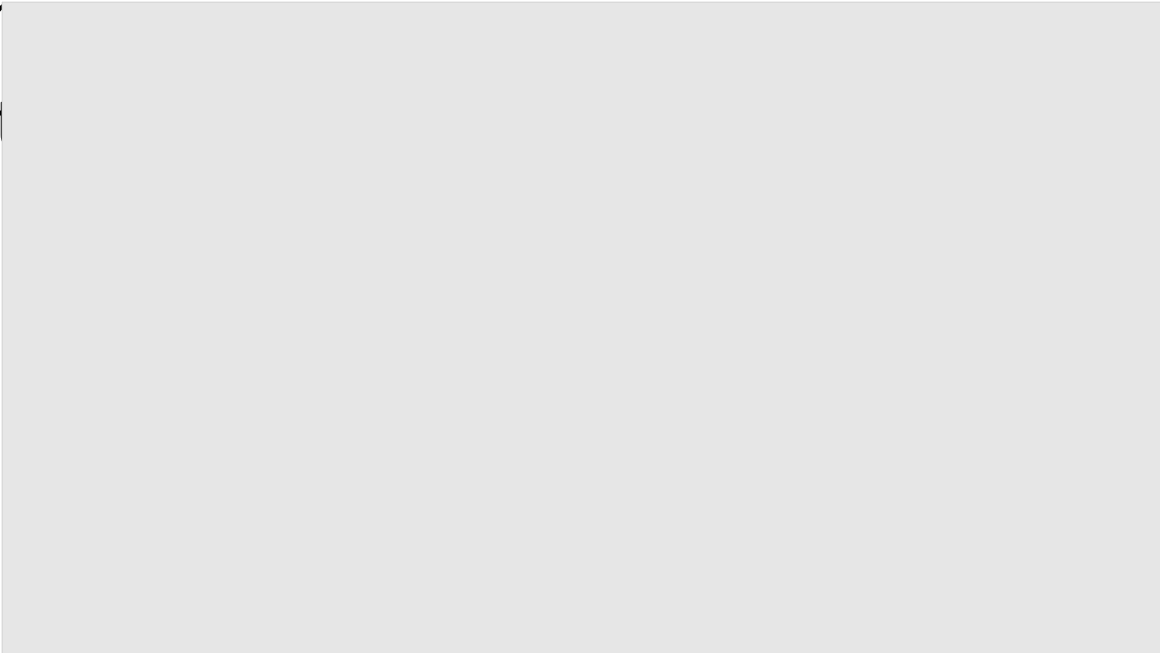


Persistent erythema after use of mometasone-based triple cream





Effects on the eye

- Glaucoma
 - Posterior subcapsular cataracts; children are more susceptible than adults
 - Eyelid oedema and exophthalmos
 - Central serous chorioretinopathy
- 

Vascular disease

- High Blood Pressure
- Heart Disease (Heart Attack)
- Stroke (Brain Attack)
- High Cholesterol
- Effect on Sugars/Diabetes

Gastrointestinal tract

- Heart burn, gastritis, Peptic ulcers
 - (non-steroidal anti-inflammatory drugs)
- Acute pancreatitis
- Fatty liver
- Fluid balance
 - Sodium and fluid retention cause leg swelling and weight increase
- Potassium loss
 - general weakness

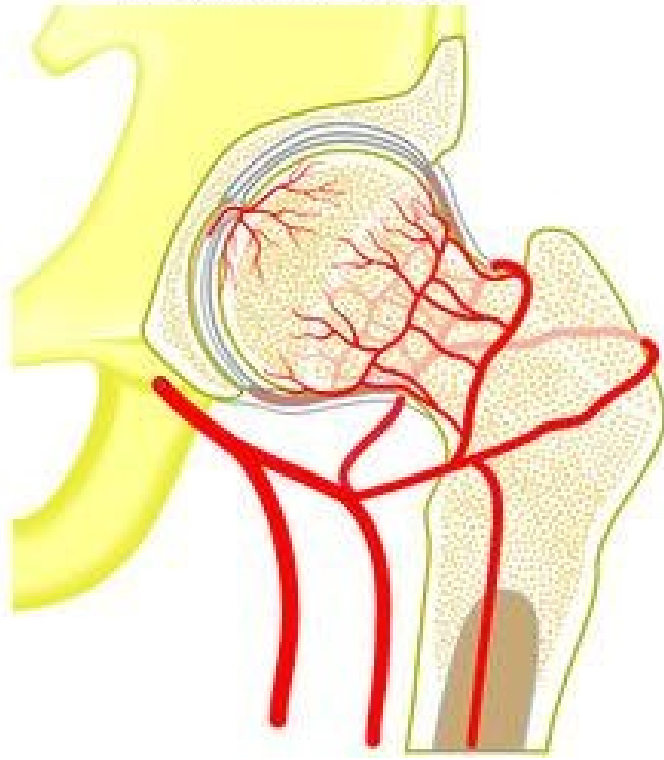
Reproductive system

- Irregular menstruation
- Pregnancy
 - Preterm
 - Large baby
 - Small baby
 - *Steroids may be necessary in some cases (active disease, some used for the developing baby)*
- Breastfeeding can usually continue but infant should be monitored for adrenal suppression if the mother on > 40 mg prednisone daily

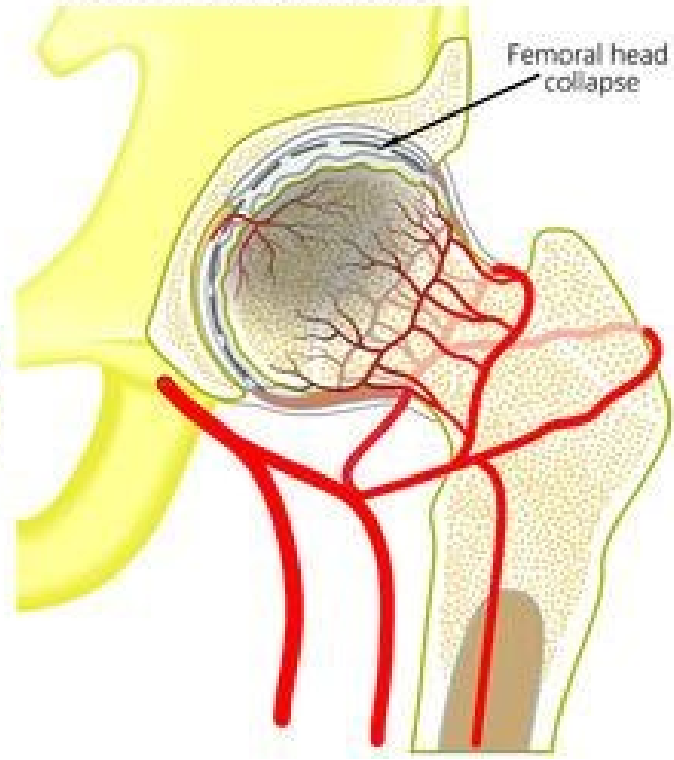
Musculoskeletal system

- Osteoporosis, Bone fracture
- Osteonecrosis, especially hip
- Myopathy affecting shoulders and thighs
- Tendon rupture
- Growth restriction in children

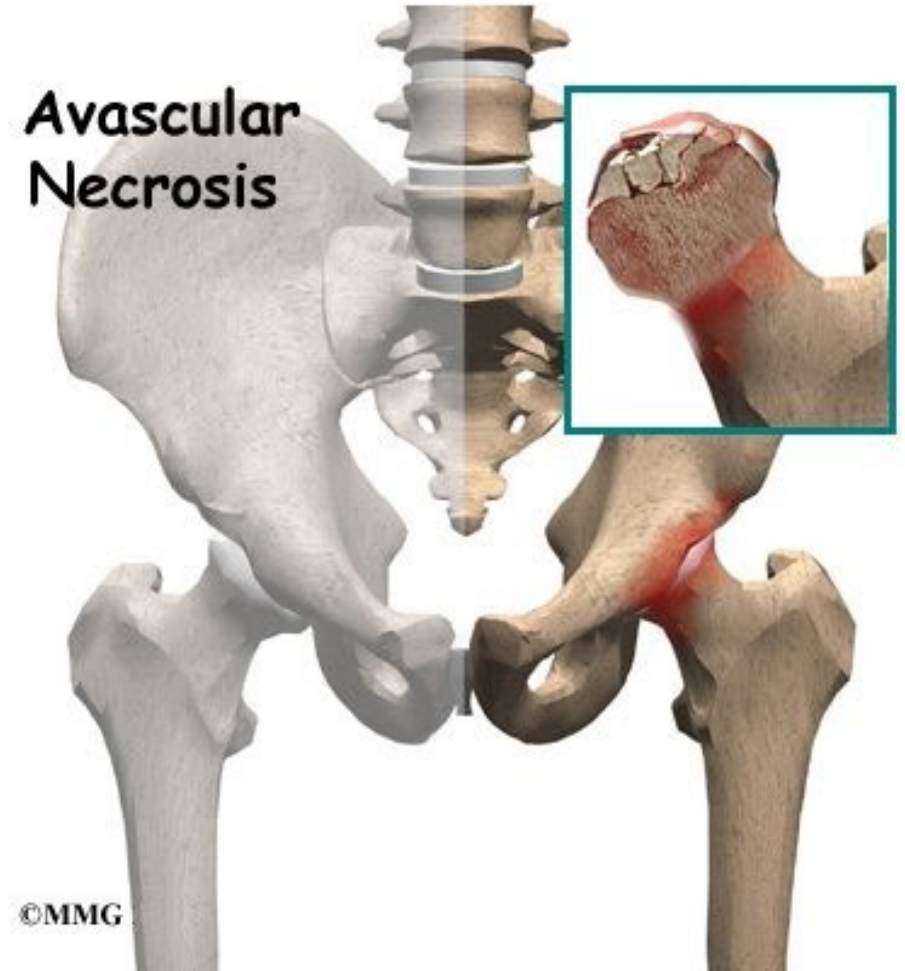
HEALTHY HIP JOINT



AVASCULAR NECROSIS



**Avascular
Necrosis**





Nervous system

- Mood changes, increased energy, excitement, euphoria, agitation
- hypomania, psychosis, delirium, memory loss, depression, anxiety
- Insomnia and sleep disturbance
- Shakiness and tremor

AM I CRAZY?

Prednisone Mood Side Effects
How to Cope





Metabolic effects

- Transient or persistent diabetes in previously non-diabetic patients
- Higher blood sugar levels in patients with diabetes mellitus
- Cushing syndrome

Immune response

- Raised neutrophil and total white cell count are usual on prednisone
- Impaired immunity
- Increased susceptibility to infections
 - [tuberculosis](#)
- Increased severity of [measles](#), [varicella](#)
- Reduced efficacy and increased risk of [vaccines](#)
- Live vaccines such as polio or MMR (measles, mumps, rubella) should not be given to patients taking ≥ 20 mg prednisone daily

What can I do to stay as healthy as possible while taking my steroid medications?

Educate

Diet

A healthy diet is important for everyone

Osteoporosis

Calcium, Vit D, exercise, no smoking, get tested, ?plan for steroids?, treatment

Staying Active

Muscles, mood

Smoking

CVD, Flare, OP

Infection

Safety, vaccines, ?plans for steroids?

Eye Exams

cataracts and aggravate glaucoma. HTN, DM, Cholesterol, HCQ

Do not abruptly stop taking steroids

You should not stop taking steroids abruptly if you have been taking them for more than 4 weeks.

Once your body has adjusted to taking steroids, your adrenal glands may shrink and produce less natural cortisone.

Therefore, it is important to slowly reduce the dosage of steroids to allow the adrenal glands to gradually regain their ability to produce cortisone on their own.

Have a refill consciousness

Are there other drugs that I might take while taking steroids?

PJP pneumonia

GERD/PUD

Osteoporosis

Cholesterol

Risks during intercurrent illness or surgery

- temporary increase in corticosteroid dose
- Patients who have taken ≥ 10 mg prednisone daily within 3 months of surgery requiring a general anesthetic are advised to tell their anesthetist so that intraoperative intravenous hydrocortisone can be added.
- Stress dose

Effects of reducing the dose of systemic steroid

- No tapering is necessary if a course of prednisone has been for less than one to two weeks.
- Steroid should be withdrawn slowly after longer courses, to avoid acute adrenal insufficiency, particularly if the medication has been taken for several months or longer.
- Side effects from reducing prednisone may include:
 - Fever
 - Hypotension
 - Tiredness
 - Headaches
 - Muscle and joint aches
 - Weight loss
 - Depression
 - Flu like symptoms

Monitoring during steroid treatment

- Regular monitoring during treatment with systemic steroid may include:
 - Blood pressure
 - Body weight
 - Blood sugar
- advised to avoid non-steroidal anti-inflammatory drugs if possible

Doctors and Researchers

Educate ourselves and Patients

No Steroid or quick steroid tapering regimen clinical trials like rituxilup