Medications in Nephrotic Syndrome: Steroids

**Why do steroids work?**
Steroids act on the immune system to stop protein leaking into urine and reduce swelling

**Steroids are the most effective treatment**
>90% of children respond to steroids

It may take several weeks to see a difference in your (your child’s) condition.

**How do I (does my child) take steroids?**
- At the same time of day
- Follow the schedule given
- Take with food to prevent stomach upset

**Steroids come in tablet and liquid forms**
TIP: Crush tablets into yogurt, jam, apple sauce, mashed potato, or other soft foods. Add liquid to 1 tbsp. milk or juice to improve taste.

**TREATMENT OF THE FIRST EPISODE**
6 weeks of daily treatment (full dose = 2 mg/kg/day or 60 mg/m²/day) → 10 weeks of every other day treatment (gradually reduced dose) → 16 weeks total

**TREATMENT OF RELAPSES**
Full dose treatment until no protein in urine for 5 days in a row → Treatment dose reduced gradually over several weeks

**Precautions on steroids**
- If you (your child) throw(s) up:
  - < 30 min. → repeat dose once
  - > 30 min. → do not repeat; call team for advice
- Watch for signs of infection (steroids may mask symptoms)
- Let the dentist know you are (your child is) on steroids
- Do not receive vaccines without talking to the healthcare team
- Eat a low sodium, low calorie diet

**CHECK GROWTH, BONES & EYES REGULARLY**
Steroids may cause slower growth, bone, and eye problems when used over long periods of time.

**Side effects**
- Headache or dizziness
- Eye pain or changes in vision
- Trouble breathing
- Unusual bruising or rash
- Nausea, stomach pain
- Face swelling
- Trouble sleeping
- Changes in mood & behavior
- Increased appetite & weight gain
- Acne, hair growth

**COMMON SIDE EFFECTS**
Most of these side effects will go away when the dose is reduced

Seek medical care for any of these symptoms:

**Steroids treat initial episodes & relapses**

**Insight**
At the same time of day
Follow the schedule given
Take with food to prevent stomach upset

**Division of Nephrology**
Steroids: Additional Resources

Incidence and outcomes of nephrotic syndrome
INSIGHT Publication: Ethnic Differences in Incidence and Outcomes of Childhood Nephrotic Syndrome
http://cjasn.asnjournals.org/content/11/10/1760.short

How steroids work
National Institute of Diabetes & Digestive & Kidney Diseases (NIDDK): How is nephrotic syndrome treated?

The Kidney Foundation of Canada: Treatment for childhood nephrotic syndrome
https://www.kidney.ca/childhood-nephrotic-syndrome?

How to give steroids
AboutKidsHealth (SickKids): How should you give your child prednisone, prednisolone, dexamethasone?
http://www.aboutkidshealth.ca/En/HealthAZ/Drugs/Pages/Prednisone-Prednisolone-and-Dexamethasone-Corticosteroids-Taken-for-a-Short-Time.aspx

NephCure Kidney International: How is prednisone administered?
https://nephcure.org/livingwithkidneydisease/treatment-options/prednisone/

Side effects
The Royal Children’s Hospital Melbourne: What is the main treatment of nephrotic syndrome?

NephCure Kidney International: Children on Prednisone
https://nephcure.org/livingwithkidneydisease/treatment-options/prednisone/life-on-prednisone-children/

Dealing with behavioral issues and mood changes
Hospital for Special Surgery: How to reduce corticosteroid side effects, Section 8 - Mood changes
https://www.hss.edu/conditions_steroid-side-effects-how-to-reduce-corticosteroid-side-effects.asp

Coping with prednisone (& other cortisone-related medicines). Eugenia Zukerman & Julie R. Ingelfinger. 2nd Ed. 2007.

Long-term side effects
The Royal Children’s Hospital Melbourne: Won’t large doses of prednisolone cause side effects?

infoKID (British Association for Pediatric Nephrology): Side effects
http://www.infokid.org.uk/nephrotic-syndrome#section-5

Medicines for Children (Royal College of Paediatrics and Child Health): Side-effects with high doses or long courses
http://www.medicinesforchildren.org.uk/prednisolone-oral-nephrotic-syndrome

AboutKidsHealth (SickKids): Corticosteroids given for a long time
http://www.aboutkidshealth.ca/En/HealthAZ/Drugs/Pages/Corticosteroids-Given-for-a-Long-Time.aspx