

**Recommendations for Monitoring of Patients on Long Course of Prednisolone**

**Key messages in this factsheet**

* The Royal Victorian Eye and Ear Hospital is undertaking an initiative to minimise 3 specific risks associated with chronic oral steroid use – steroid induced hyperglycaemia, osteoporosis and PJP infection.
* You may receive a letter with the following recommendations when patients have been commenced on >30mg/day of prednisolone for >4 weeks. We consider the risks to be significantly increased above these thresholds.
* Giant cell arteritis is the classic example where these recommendations should apply. Other Eye and Ear indications such as optic neuritis and sudden sensorineural hearing loss only require a short course (~2 weeks). Duration of prednisolone for uveitis is variable and can cross the 4 weeks threshold to warrant close monitoring.
* It is important for patients on steroids to have appropriate follow-up at RVEEH, if you are aware your patient has missed his/her appointment, please contact the sub-specialty fellow (Neuro-ophthalmology fellow for giant cell arteritis patients)

**Detection and management of osteoporosis**

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| **Calcium and vitamin D supplementation:**  Recommended for all patients on prednisolone to prevent bone mineral density loss. |
| **DXA bone densitometry:**   * Recommended for all patients 70 years or older. * Recommended for patients >40 years old who are on prednisolone for >3 months with an average dose >7.5mg/day (can be repeated every 12 months). |
| **Bisphosphonate and other anti-osteoporosis medications:**  RACGP/Osteoporosis Australia guideline recommends treatment based on history of previous minimal trauma fracture, T-score and fracture risk score. |
| **Other recommendations:**  Consider falls reduction strategies, exercise, smoking cessation and modifying dietary/alcohol intake. |

**Detection and management of steroid-induced hyperglycaemia**

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| **Monitoring** | **When** |
| HbA1c | At commencement of treatment |
| Random BGL | At least weekly. 2 hours post lunch/meal is best. |
| **Tips:**   * Treatment is advised if BGL >12mmol/L on a regular basis. * Metformin is relatively contra-indicated due to its side effect profile and the longer duration to reach therapeutic levels. Gliclazide may be effective in treating mild cases of hyperglycaemia. * Insulin therapy (eg: NovoMix 30 at breakfast and lunch) is generally the most effective treatment, it also avoids the risk of overnight hypoglycaemia with gliclazide. * Organise urgent appointment with a diabetes educator if insulin therapy required. | |

***Pneumocystis jiroveci* pneumonia (PJP) risk and prophylaxis**

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| Prophylactic treatment is recommended for patients on prednisolone >4 weeks with average dose of >30mg/day. |
| **Trimethoprim+sulfamethoxazole** is the most effective prophylaxis unless contraindicated. Recommended dose 160+800mg orally, 3 times weekly.  Paediatric dosing of TMX-SMX: 2.5mg/kg/dose 12 hourly, 3 times weekly.  For use in pregnancy (category C) and patients with hypersensitivity, please contact Infectious Diseases for advice. |
| **Discontinued:**  Prophylaxis should be discontinued when the dose of prednisolone has been tapered to <15mg/day. |

**References**

* The Royal Australian College of General Practitioner and Osteoporosis Australia (2017). *Osteoporosis prevention, diagnosis and management in postmenopausal women and men over 50 years of age*. 2nd ed. East Melbourne, VIC: RACGP
* Buckley, L., Guyatt, G., Fink, H. A., Cannon, M., Grossman, J., Hansen, K. E. & Morrison, L. (2017). 2017 American College of Rheumatology guideline for the prevention and treatment of glucocorticoid‐induced osteoporosis. *Arthritis & Rheumatology*, *69*(8), 1521-1537.
* Roberts, A., James, J & Dhatariya, K. (2018). Diabetes UK Position Statement Management of hyperglycaemia and steroid (glucocorticoid) therapy: a guideline from Joint British Diabetes Societies (JBDS) for Inpatient Care Group. *Diabetic Medicine*, 35(8), 1011-1017
* Winthrop, K.L & Baddley, J.W. (2018). Pneumocystis and glucocorticoid use: to prophylax or not to prophylax (and when?); that is the question. *Annals of the Rheumatic Diseases*, 77, 631-633.