



ZYNRELEF is applied into the TKR surgical site following final irrigation and suction and prior to suturing

The TKR dose of Zynrelef is **400 mg** of bupivacaine (14 ml):

- **200 mg** is released in the first 24 hours
- **200 mg** is released over the next 48+ hours

There is **no** effect for 6-8 hours. Therefore, it is more sequential, not concurrently additive, to our block

Meloxicam is added to increase tissue pH which improves the efficacy of the bupivacaine. The Meloxicam dose is very low. Therefore, it **can** be used in CKD patients, and the usual dosages of systemic NSAIDS **can** be given

Per the FDA, the max bupivacaine dose per day is **400 mg** (not weight based)

Assuming **PAI** is used (Peri-Articular Injection = closure cocktail), there will be **450 mg** of bupivacaine +/- ropivacaine the first day:

1. Saphenous nerve block = 25 ml of 0.5% = 125 mg
2. IPACK = 10 ml of 0.25% = 25 mg
3. Zynrelef first day = 200 mg
4. PAI = 20 ml of 0.5% Naropin = 100 mg
5. *Lidocaine (IV, tracheal, and PAI) is not included as it will be dissipated before the Zynrelef onset*

Safety
Recommendations

Decrease PAI by one-half for patients < 70 kg or ≥ 80 years

Omit PAI for patients who are both < 70 kg and ≥ 80 years