

The Royal Dutch Pharmacists Association - Pharmacogenetics Working Group has evaluated therapeutic dose recommendations for atomoxetine based on CYP2D6 genotypes [PMID:21412232]. \newline

| Phenotype (Genotype) | Therapeutic Dose Recommendation | Level of Evidence | Clinical Relevance | | — | — | — | — | | PM (two inactive (3-8, 11-16, 19-21, *38, 40, 42) alleles) | Standard dose. Dose increase probably not necessary; be alert to ADEs. | Published controlled studies of moderate quality relating to phenotyped and/or genotyped patients or healthy volunteers, and having relevant pharmacokinetic or clinical endpoints. | Clinical effect (S): short-lived discomfort (< 48 hr) without permanent injury: e.g. reduced decrease in resting heart rate; reduction in exercise tachycardia; decreased pain relief from oxycodone; ADE resulting from increased bioavailability of atomoxetine (decreased appetite, insomnia, sleep disturbance etc); neutropenia $1.5 \times 10^9 / l$; leucopenia $3.0 \times 10^9 / l$; thrombocytopenia $75 \times 10^9 / l$; moderate diarrhea not affecting daily activities; reduced glucose increase following oral glucose tolerance test. | | IM (two decreased-activity (9, *10, *17, *29, *36, 41) alleles or carrying one active (1, *2, 33, 35) and one inactive (3-8, 11-16, 19-21, *38, *40, 42) allele, or carrying one decreased-activity (9, *10, *17, *29, 36, 41) allele and one inactive (3-8, 11-16, 19-21, 38, 40, 42) allele) | No recommendations. | Published controlled studies of good quality relating to phenotyped and/or genotyped patients or healthy volunteers, and having relevant pharmacokinetic or clinical endpoints. | Minor clinical effect (S): QTc prolongation (≤ 450 ms female, ≤ 470 ms male); INR increase ≤ 4.5; Kinetic effect (S). | | UM (a gene duplication in absence of inactive (3-8, 11-16, 19-21, *38, *40, 42) or decreased-activity (9, *10, *17, *29, *36, *41) alleles) | Insufficient data to allow calculation of dose adjustment. Be alert to reduced efficacy or select alternative drug (e.g., methylphenidate, clonidine). | — | — |

- *See [Methods] (http://www.pharmgkb.org/home/dutchpharmacogeneticsworking_group.jsp) or [PMID: 18253145] for definition of "good" and "moderate" quality.
- S: statistically significant difference.
- Please see attached PDF for detailed information about the evaluated studies: Atomoxetine CYP2D6¹

¹<atomoxetine_CYP2D6_271111.pdf>