Drug name: XXXXXX	Generic name: XXXXXX		Function/action: XXXXXX
Nutrients affected	Adverse reactions		Biochemical factors
Na <sup>302</sup>	Nausea <sup>437</sup> , <sup>438</sup>	↓Appetite <sup>437</sup> , 438	hypoglycaemia <sup>437</sup>
B1 <sup>870, 874</sup>	Vomiting <sup>437</sup> , 438	↑Appetite <sup>438</sup>	hyperglycaemia <sup>438</sup>
	Constipation 437, 438	Dry mouth <sup>437</sup> , 438	hyponatraemia <sup>57, 302, 347, 348, 437, 438, 527</sup>
	Diarrhoea <sup>437</sup> , 438	Sweating <sup>437</sup> , <sup>438</sup>	hypercholesterolaemia <sup>438</sup>
	↑Weight <sup>438</sup> , 428	Tremor <sup>437</sup> , 438	hypouricaemia <sup>438</sup>
	↓Weight <sup>437,</sup> <sup>438</sup>		

### **Nutritional care**

### **Pharmacokinetics**

- Binding of drug to plasma proteins ~ 98% 437, 438.
- Associated with cytochrome P450 pathway <sup>437</sup>, isozyme 2D6 <sup>438</sup>.
- May alter glycaemic control 437.

## **Drug Food Interactions**

- Tryptophan contra-indicated 438. Tryptophan food sources include bananas, pineapples, walnuts, milk protein, eggs, white bread, beef, corn 499.
- Interacts with grapefruit juice to increase drug availability 403.
- Alcohol contra-indicated 438.

# **Drug Nutrient Interactions**

- Concurrent administration with diuretic has a synergistic effect for hyponatraemia 302.
- Regular measurement of serum sodium levels recommended 302.
- THTR2 (Thiamine Transporter 2) and drug interactions:-
- THTR2 is a transporter that facilitates absorption of thiamine from the intestine into enterocytes 872, excretion of thiamine from the kidneys 874, and facilitates thiamine absorption into retinal cells 872;

- drug is an inhibitor (blocks transporter function) of THTR2 870, 874;
- therapeutic doses of drug are likely to inhibit thiamine absorption 870, 874, and renal reabsorption 874, and may contribute to thiamine deficiency 870, 874, especially in at risk populations 870; proposed mechanism inhibition of intestinal THTR2 870, 874;
- drug inhibition of THTR2 is a proposed mechanism for drug-induced lactic acidosis 870.
- Drug is an inhibitor (blocks transporter function) 885 of OCT1. OCT1 functions as a major thiamine transporter 768, 890, 888, 881, 884, 883, 879 that can also transport choline 673, 881, 882, 884 and tyramine 881, 883, from the portal vein into liver hepatocytes 768, 673, 878, 881, 884, 886, 888.
- Drug is an OCT2 inhibitor <sup>894</sup> proposed mechanism:- inhibition of tyrosine phosphorylation, likely via Src-family kinase Yes1 <sup>900</sup>. OCT2 transports a number of endogenous substances, including choline <sup>883, 884</sup>, histamine <sup>883, 884</sup>, creatinine <sup>883, 884</sup>, and primarily thiamine <sup>875, 883</sup>; a significant function seems to be transfer of thiamine from the blood stream into the kidneys <sup>875</sup>.
- Drug is a substrate (can be carried by the transporter) 874 of OCT3. OCT 3 is a polyspecific organic cation transporter 873 that transports several endogenous substances, including choline 884, 874, histamine 884, 874 creatinine 884, 874, carnitine 875, 883, 903; albeit thiamine transport is equivocal 901. OCT3 is predominant in skeletal muscle 883, 902, and strongly expressed in salivary gland 883, 902; dysfunction or inhibition of salivary glands can lead to dry mouth 902.

#### **Non Oral Feeding**

Can be administered to the stomach before, during and after bolus, intermittent or continuous feeding <sup>219</sup>.

### **Impaired Swallow**

Can be administered with nectar, honey or thickshake consistency fluids; and vitamised, minced or soft texture foods <sup>219</sup>.