2013

Xenical

Megan Brown

Parkland College

Recommended Citation
Brown, Megan, "Xenical" (2013). Natural Sciences Poster Sessions. 49.
https://spark.parkland.edu/nsps/49

Open access to this Poster is brought to you by Parkland College's institutional repository, SPARK: Scholarship at Parkland. For more information, please contact spark@parkland.edu.
XENICAL

How the Drug Interacts with the Body:
Xenical (orlistat) is administered orally in the form of either 60 mg or 120 mg capsules. The absorption within the body is minimal but is metabolized in the gastrointestinal tract. The drug is a non-systemic inhibitor which essentially means the drug is not absorbed into your central nervous system. Thus, it is not distributed throughout the circulatory system. Xenical stays in the intestinal tract.

Once the Drug has been Absorbed:
Once xenical has been administered, typically within 1 hour of eating a meal containing fat, it travels to the intestinal tracts to block the body from absorbing fats. It does this by stopping the enzymes produced from the pancreas and the GI tract that help the body absorb those fats, which eventually will result in weight loss. Patients taking xenical should be closely monitored because it may increase absorption of pravastatin and decrease absorption of fat-soluble vitamins A, D, E, and K, as well as the drugs amiodarone and cyclosporine.

How the Body Breaks Down the Med.:
Once the body has used xenical for all its intents and purposes, it is metabolized in the gastrointestinal tract. This is after the body has used the drug to block fat absorption after meals and right before it is eliminated from the body.

And finally, how the body disposes the med.:
Elimination of xenical goes hand in hand with the side effects of the drug. Xenical is eliminated through feces. Fecal elimination with use of this drug is pretty unpleasant. Stool tends to be oily and fatty due to the fat that was unable to be absorbed in the body. This could possibly even be diarrheal and be very painful.

Generic Name:
Orlistat

Trade Name:
Alli

Chemical Name:
[3S,4S,5R,7S,8S,9R,10R,11S,12R,13R,14R,15S]-13,15-[(1,3-Dioxo-1,3,4,6,7,8,9,10,11,12,13,14,15-dodecahydro-5H-naphthalen-2-yl)oxy]tridecane-2,4-dione, 11-[10,12-[(1S,3S,4S,5R,7R,8S,9S,10S,11R,12R,14R)-13,15-[(1,3-Dioxo-1,3,4,6,7,8,9,10,11,12,13,14,15-dodecahydro-5H-naphthalen-2-yl)oxy]tridecane-2,4-dion-10-yl]hexadeca-2,4-dione

Chemical Formula:
C68H71NO15

Available Dosage:
60 mg capsules and 120 mg capsules

Calculating Molar Mass:
C: 921.2 g/mol
H: 53.3 g/mol
O: 111.6 g/mol

Calculating Dosage to Molecules:
60 mg of [117.2 g/mol/120 mg] = 0.5 molecules

Converting Dosage to Tablets:
60 mg = 1 capsule
120 mg = 2 capsules

Drug Classification:
Anorectic, non-systemic lipase inhibitor

Medicinal Terms:
Weight Loss: Adult/Adolescent (Older Than 12 Yr). PO 60-120 mg T.I.D. With Each Main Meal Containing Fat

Labeled Uses:
Weight loss and weight maintenance in conjunction with diet & exercise

Unlabeled Uses:
There are no unlabeled uses

Water Solubility:
Xenical is basically insoluble in water

H. Mullen
CHE106-006
Parkland College