zileuton (zye-loo-ton)
Zyflo CR
Classification
Therapeutic: bronchodilators
Pharmacologic: leukotriene antagonists

Pregnancy Category C

Indications
Long-term control agent in the management of asthma.

Action
Inhibits the enzyme 5-lipoxygenase that catalyzes to formation of leukotrienes. Leuko-
trienes are components of slow-reacting substance of anaphylaxis (SRSA) and medi-
ate the following: Airway edema, Smooth muscle constriction, Altered cellular ac-
tivity. Result is decreased inflammatory process that is part of asthma. Therapeutic
Effects: Decreased incidence and severity of asthma.

Pharmacokinetics
Absorption: Rapidly absorbed following oral administration.
Distribution: Unknown.
Protein Binding: 93%.
Metabolism and Excretion: Mostly metabolized by the liver. Half-life: 2.5 hr.
Pharmacodynamic Effects: Improvement in pulmonary function

TIME/ACTION PROFILE (improvement in pulmonary function)
ROUTE ONSET PEAK DURATION
PO unknown 1.5 hr unknown

Contraindications/Precautions
Contraindicated in: Hypersensitivity; Active liver disease or transaminases 5 times upper limit of normal.
Use Cautiously in: Acute attacks of asthma; History of liver disease or alcohol
consumption; OB, Lactation, Pedi: Pregnancy, lactation, or children 12 yr

Adverse Reactions/Side Effects

Interactions
Drug-Drug: ↑ blood levels and effects of theophylline, beta blockers, pro-
nandrosterone, and warfarin.
Drug-Food: Food slows but does not alter extent of absorption.

Route/Dosage
PO (Adults and Children ≥12 yr): 1200 mg twice daily.

NURSING IMPLICATIONS
Assessment
● Assess lung sounds and respiratory function prior to and periodically during ther-
apy.
● Monitor closely for changes in behavior that could indicate the emer-
gence or worsening of depression or suicidal thoughts.
● Lab Test Considerations: Monitor ALT prior to therapy, monthly for the first
3 mos, every 2 mos for the 1st yr of therapy, and periodically thereafter. May
cause ↑ ALT concentrations. If ALT ≥5 times the upper limit of normal or the pa-
tient is symptomatic, zileuton therapy should be discontinued.
● May occasionally cause transient WBC.

Potential Nursing Diagnoses
Ineffective airway clearance (Indications)
Deficient knowledge, related to medication regimen (Patient/Family Teaching)

Implementation
● PO: Administer extended release tablets within 1 hr after morning and evening
meals. Swallow extended-release tablets whole; do not crush, break or chew.

Patient/Family Teaching
● Instruct patient to take medication as directed, at evenly spaced intervals, even if
not experiencing symptoms of asthma. If a dose of extended-release product is
omitted, do not double the next dose.

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Adverse Reactions/Side Effects
missed, omit and take next dose at scheduled time. Do not double doses. Do not discontinue therapy without consulting health care professional.

- Instruct patient not to discontinue or reduce other asthma medications without consulting health care professional. Health care professional should be notified if more short-acting bronchodilators than usual or more than the maximum number for 24 hr of inhalations of short-acting bronchodilator are needed.

- Advise patient that abortion is not used to treat acute asthma attacks but may be continued during an acute exacerbation.

- Advise patient to consult health care professional before starting or stopping other Rx, OTC, or herbal products while taking zileuton.

- Instruct patient to notify health care professional immediately if upper right quadrant pain, nausea, fatigue, lethargy, pruritus, jaundice, or flu-like symptoms occur.

- Advise patient to notify health care professional of behavioral changes or thoughts of suicide.

Evaluation/Desired Outcomes
- Reduction in symptoms of asthma.