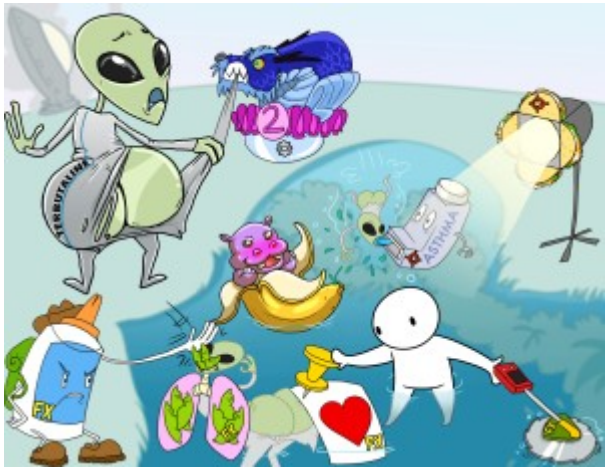
Terbutaline (Brethine)

Terbutaline is a beta 2 adrenergic receptor agonist that is administered for short term control of asthma, as well as a tocolytic to suppress preterm labor. Terbutaline can result in the development of many side effects if used in high doses. These side effects include tremors, tachycardia, hypotension, pulmonary edema, and hyperglycemia. Not advised to be used for prolonged tocolysis beyond 48 to 72 hours.



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Mechanism of Action

Beta-2 Agonists
Beta-fish (2) Tutu Dragonist
As a beta 2 agonist, terbutaline functions by increasing bronchodilation and reducing the resistance of the airway in asthmatics. In addition, beta 2 stimulation aids in relaxing the smooth muscle of the uterus and delaying the onset of labor.

Indications

Asthma
Asthma-inhaler
Terbutaline is indicated for the treatment of episodes of bronchospasm in asthmatic patients. Terbutaline decreases the resistance within the airway by producing bronchodilation.

Tocolytic
Taco-lights
As a beta 2 agonist, terbutaline delays preterm labor by relaxing the smooth muscle of the uterus and stopping contractions. Not advised to be used for prolonged tocolysis beyond 48 to 72 hours due to reports of severe adverse reactions in pregnant patients.

Side Effects

Tremor
Trimmer
One major side effect of terbutaline is the development of a tremor. This can occur with the overstimulation of beta 2 and possibly beta 1, if a higher dose is used. This can be uncomfortable for the patient and the doctor should be notified when this occurs.

Tachycardia
Tac-heart-card
In high doses, terbutaline can stimulate beta 1 receptors, which are responsible for stimulating the heart. This can result in overstimulation of the cardiac muscle, thus increasing heart rate and producing angina, palpitations, and cardiac ischemia. The patient may present with chest pain, nervousness, somnolence, and flushing. It is important to place the patient on a cardiac monitor to monitor any changes in the cardiac rhythm.

Pulmonary Edema
Lungs Edamame
Pulmonary edema has been noted as a side effect in pregnant women receiving intravenous terbutaline. Although this side effect is rare, if the pregnant woman has predisposing factors to pulmonary edema, they may experience this side effect. The stimulation of beta 1 could possibly increase the leaking of fluid from capillaries thus promoting the development of pulmonary edema. Not advised to be used for prolonged tocolysis beyond 48 to 72 hours.

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Hypokalemia

Hippo-banana

Hypokalemia is a drop in serum potassium levels, which can occur as a side effect of IV terbutaline. Terbutaline, a beta-agonist, drives potassium into cells, decreasing serum levels. This effect can lead to symptoms like muscle weakness and, in severe cases, arrhythmias. Monitoring potassium is key during terbutaline infusion to prevent complications.

Hyperglycemia

Hiker-glue-bottle

Hyperglycemia may occur in diabetic patients due to overactivation of beta 2 receptors. Diabetic patients should monitor their blood sugar more frequently and may require increased doses of insulin while on this medication. Important to note, that hypoglycemia may occur in neonates exposed via mothers administered this medication preterm or during labor.

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