

Title: DOES LEVALBUTEROL(XOPENEX®) LIVE UP TO THE HYPE?

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Abstract:

ASTHMA, IN GENERAL, IS A RESPIRATORY DISORDER THAT AFFECTS MILLIONS OF AMERICANS EACH YEAR. REASONABLY PRICED, EFFECTIVE TREATMENTS HAVE BEEN DEVELOPED BY SEVERAL PHARMACOLOGICAL COMPANIES DESIGNED TO TREAT THIS CONDITION BY VARIOUS MECHANISMS. LEVALBUTEROL HAS RECENTLY BEEN DEVELOPED AND MARKETED AS A DIRECT BETA₂ AGONIST WITH IMPROVED EFFICACY IN SYMPTOM RELIEF AS WELL AS AN IMPROVED SIDE EFFECT PROFILE. A DIRECT SUPERIORITY STUDY COMPARING SIDE EFFECT PROFILES OF BOTH RACEMIC ALBUTEROL AND LEVALBUTEROL CONCLUDED THAT NO SIGNIFICANT IMPROVEMENT WAS NOTICED WITH RESPECT TO SIDE EFFECT PROFILES BETWEEN THE TWO MEDICATIONS.

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ASTHMA TREATMENT

ASTHMA, IN GENERAL, IS A RESPIRATORY DISORDER THAT AFFECTS MILLIONS OF AMERICANS EACH YEAR. REASONABLY PRICED, EFFECTIVE TREATMENTS HAVE BEEN DEVELOPED BY SEVERAL PHARMACOLOGICAL COMPANIES DESIGNED TO TREAT THIS CONDITION BY VARIOUS MECHANISMS.



THE MOST COMMON MEDICATION USED TODAY TO TREAT SUCH A CONDITION, DURING ACUTE EXACERBATIONS, IS ALBUTEROL. ALBUTEROL IS A MEDICATION THAT ACTS ON THE SMOOTH MUSCLE TISSUE THAT LINES THE AIRWAYS OF THE LUNGS BY RELAXING THIS MUSCLE AND ALLOWING THE AIRWAYS TO OPEN UP FOR GREATER AIR FLOW.

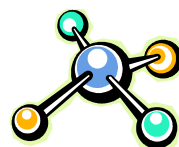
MORE RECENTLY, A NEW FORMULATION OF ALBUTEROL, LEVALBUTEROL, HAS BEEN DEVELOPED AND MARKETED BY SEPRACOR

INC. WITH THE CLAIM THAT THE NEW SELECTIVE CHEMICAL FORMULATION HAS AN IMPROVED ACTION ON BRONCHIOLE SMOOTH MUSCLE AS WELL AS DECREASED SIDE EFFECTS WHEN COMPARED TO THE MORE TRADITIONAL ALBUTEROL FORMULATION.

COMMON SIDE-EFFECTS OF THE TRADITIONAL BETA-AGONIST ALBUTEROL THAT WERE EXAMINED IN THIS COMPARATIVE STUDY TO LEVALBUTEROL INCLUDE: TREMULOUSNESS, NAUSEA, VOMITING, HEADACHE, LIGHTHEADEDNESS AND HYPOKALEMIA.

A RECENT WELL-DESIGNED STUDY FROM EASTERN VIRGINIA MEDICAL SCHOOL FOUND THAT EVEN THOUGH LEVALBUTEROL MAY BE MARKETED AS SUPERIOR TO ALBUTEROL IN CONTROLLING ASTHMA AS WELL AS LESS SIDE-EFFECTS, SUCH CLAIMS WERE FOUND TO BE UNTRUE.

RESULTS OF THE STUDY SHOWED THAT IN A HEAD-TO-HEAD COMPARISON OF SIDE EFFECTS LISTED PREVIOUSLY, PATIENTS THAT WERE



GIVEN EITHER ALBUTEROL OR LEVALBUTEROL HAD SIMILAR SIDE-EFFECTS AS WELL AS SIMILAR RESULTS IN RELIEF OF SYMPTOMS. THE ONLY REAL SIGNIFICANT DIFFERENCE BETWEEN THE MEDICATIONS ARE THE PRICE TAG.



LEVALBUTEROL COSTS \$53
WHILE ALBUTEROL INHALERS
COST AROUND \$25.

WITH SUCH A PRICE DIFFERENCE BETWEEN MEDICATIONS WITH VERY SIMILAR EFFECTS, IT APPEARS THAT ALBUTEROL SHOULD NOT BE SUBSTITUTED WITH LEVALBUTEROL DUE TO THE DRAMATIC PRICE DIFFERENCE WITH LITTLE OR NO GAIN IN EFFECTIVENESS OR DECREASED SIDE-EFFECTS.

QURESHI ET AL. *Clinical Efficacy of Racemic Albuterol versus Levalbuterol for the Treatment of Acute Pediatric Asthma*. AMERICAN COLLEGE OF EMERGENCY PHYSICIANS; JULY, 2005. VOL. 46 NUM. 1 PP. 29-36.