21 NEDOCROMIL SODIUM 2% OPHTHALMIC SOLUTION IN THE TREATMENT OF RAGWEED SEASONAL ALLERGIC CONJUNCTIVITIS (SAC). I.Jarmoszuk,MD, M.Blumenthal, MD, W.Silvers,MD, D.Aaronson,MD, Chicago,IL, Minneapolis,MN, Englewood,CO, Des Plaines,IL.

The efficacy of nedocromil in the treatment of ragweed SAC was evaluated in a double blind placebo controlled parallel study. Following a 1 week baseline 117 patients were randomly assigned to receive active or placebo solution BID for 8 weeks during ragweed season. The peak pollen period (2 weeks of highest pollen) was determined by daily counts. Patients recorded symptoms daily and a clinical exam occurred 7 times during the study. Male and female patients (ages 12-65) entered the study with a positive ragweed skin test and $\geq$2 year history of ragweed SAC. Allowed concomitant medications were nasal steroid and artificial tears used prn for intolerable symptoms. Data from 104 (A=51, P=53) patients were analyzed. The clinician's assessments demonstrated significant differences in favor of nedocromil for itchy eyes and overall eye condition (p=0.001) and for burning and tearing (p= 0.08). Efficacy of nedocromil as compared to placebo was demonstrated by a decrease in overall eye symptoms (p=0.09). Both patient and physician thought that nedocromil was significantly more effective than placebo (p=0.006,p=0.009) in controlling symptoms during peak pollen. No difference in use of concomitant medications appeared. No severe adverse reactions reported. We conclude that nedocromil ophthalmic solution is effective in reducing symptoms of SAC during peak pollen.

22 DIFFERENTIAL COGNITIVE EFFECTS OF TERFENADINE AND CHLORPHENIRAMINE. Kimford J. Meador, M.D. and David W. Loring, Ph.D., Augusta, Georgia

A new antihistamine terfenadine (Seldane) has been proponed to have reduced cognitive side effects. In the present study, the relative cognitive effects of terfenadine 60 mg, chlorpheniramine maleate 8 mg, and placebo were tested using a double-blind, randomized, three-period crossover paradigm in 12 healthy subjects (3 men, 9 women; mean age = 32). The dependent variable was latency of the P3 evoked potential. The P3 is a cognitively evoked electroencephalographic response which is an objective and sensitive measure of sustained attention and cerebral processing speed. Disease and drug states which adversely affect the central nervous system can slow the P3. For example, the centrally active anticholinergic scopolamine can slow cognitive processing speed and prolong P3 latency. Each subject was tested on 3 test days separated by at least 3 days each. Three hours post oral dosage, two trials of the P3 evoked potential were obtained employing the standard tonal oddball paradigm. Results demonstrated a significant drug effect with chlorpheniramine but not terfenadine slowing the P3. Post dose means ($\pm$ standard error) for P3 latency (ms) were: placebo 315 ($\pm$7), terfenadine 321 ($\pm$6), chlorpheniramine 338 ($\pm$6). The findings suggest that terfenadine may be particularly efficacious in patients who require alertness and intact cognitive abilities.

23 EFFECT OF CHLORPHENIRAMINE (C) VS PLACEBO (P) ON NOSE AND EAR FUNCTION OF ATOPIC SUBJECTS BEFORE AND AFTER HISTAMINE NASAL CHALLENGE. MJ Sharpe, GG Shapiro, CT Furukawa, WE Pierson, CW Bierman, Seattle, Washington

The purpose of this evaluation was to assess whether antihistamine therapy can change baseline airway characteristics and/or the response of the nose and eustachian tube to histamine nasal challenge. Sixteen asymptomatic allergic subjects received one week of C 8 mg bid or placebo in a randomized, double-blind, crossover trial. At a prior screening visit and after each regimen, patients performed posterior rhinometry and 9-step tympanometry before and after nasal histamine challenge.

There were no significant changes in baseline nasal resistance (NR), nasal power or mean cross sectional diameter of the nose from antihistamine therapy. C did not prevent a significant increase in nasal resistance and power after histamine challenge, the response with C and P being similar. Seven ears of patients on C and 8 ears of patients on P developed eustachian tube dysfunction after histamine challenge.

CTM in usual doses did not reduce changes in nasal dynamics or eustachian tube function in the baseline state or after nasal histamine challenge.

	NR-Inspiration			NR Expiration		
	a-hist		p-hist	a-hist		p-hist
C	.70	p<.05	1.70	1.5	p<.05	3.94
NS				NS		
P	.95	p<.05	4.26	1.91	p<.95	6.18

*NS = not significantly different

24 THE ASSOCIATION OF PERCUTANEOUS IMMEDIATE HYPERSENSITIVITY AND RESPIRATORY SYMPTOMS IN THE U.S. POPULATION: DATA FROM THE SECOND NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY:1976-80(NHANES II). Gergen PJ, and Turkeltaub PC. Hyattsville and Bethesda MD.

Information on the diagnosis(D) of hayfever(AR), asthma(AS), respiratory and catarrhal symptoms, relation to season and/or pollen exposure, wheezing, and smoking status was collected on a sample of the U.S. civilian noninstitutional non-black population 12-74 years of age (n=12,727). Regardless of D, wheezing was labeled AS and seasonal catarrhal symptoms associated with pollen exposure were labeled AR. Each examinee was prick-puncture skin tested (25 gauge needle) with 8 FDA approved allergens(1:20 W/V): S/G ragweed, rye,bermuda grass,oak,alterneria,cat,dog,house dust. A positive was defined by a mean erythema diameter$\geq$10.5 mm. When adjusted for age, the size of the wheal and erythema were similar regardless of smoking status, however symptoms varied. All results were adjusted for age and smoking status. In examinees 12-34 yrs; AR, AS were positively asssociated with the number of positive skin tests (NPST)(p<.05) and increased 6.8 and 2.7 fold between nonreactors and NPST$\geq$2. Chr bronchitis (CB), Chr cough(CC) and Chr rhinitis(CR) were not related to the NPST. In examinees 35-74 yrs, AR was positively associated with NPST, but AS (p=.09) and CB (p=.56) were not. CC and CR were negatively related to the NPST. Puncture skin testing is a useful screening test for predicting AR in the overall population and AS in the younger ages.