

Advances in IM Therapy

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Disclosure

Type of Affiliation	Commercial Entity
Consultant, Honorarium	Janssen Pharmaceutica, Pfizer, Inc.
Stock Shareholder	Johnson & Johnson, Merck & Co., Inc.

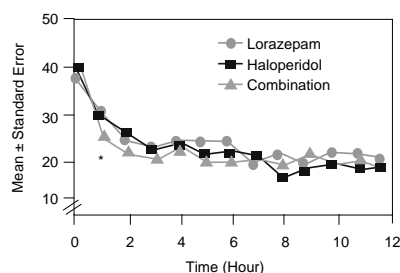
Dr. Hughes intends to discuss off-label/unapproved uses of products or devices.

Learning Objectives

Upon completion of this presentation, participants should be able to:

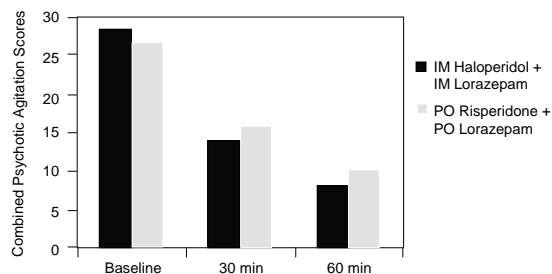
- Discuss current and future IM atypical neuroleptic drugs
- Discuss the benefits of medication over restraints in the acute crisis

Onset of Action Mean ABS Scores



* $P < .014$.
 ABS = Agitated Behavior Scale.
 Battaglia J et al. *Am J Emerg Med.* 1997;15:335-340.

Risperidone Liquid and Oral Lorazepam vs IM Haloperidol and IM Lorazepam

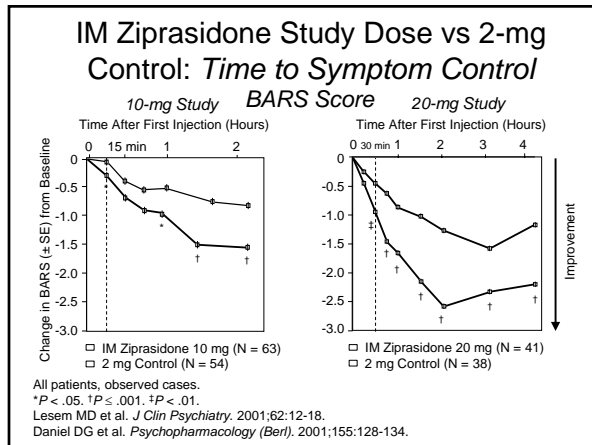
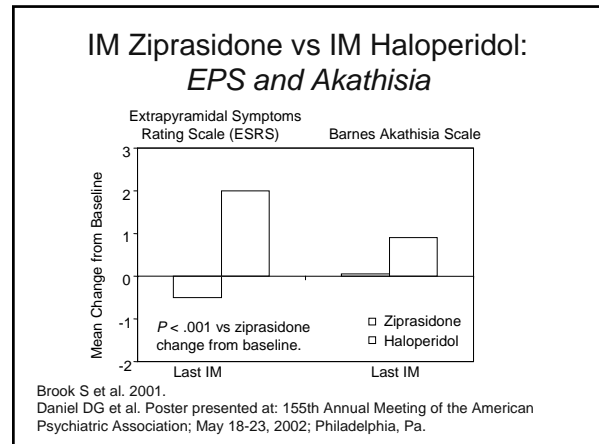
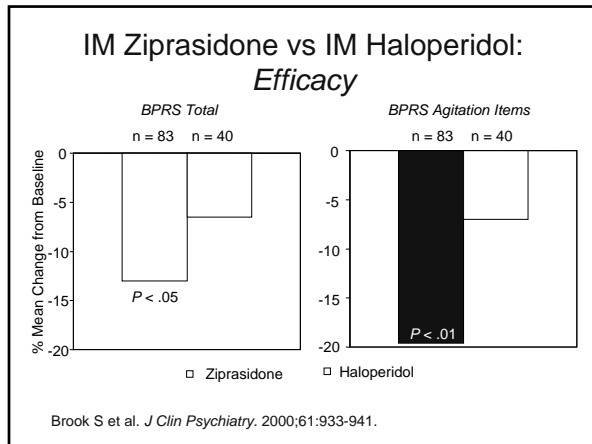


Adapted from Currier GW, Simpson GM. *J Clin Psychiatry.* 2001;62:153-157.

Clinical Studies of IM Ziprasidone: An Overview

- Two pivotal efficacy studies*: randomized, double-blind vs 2-mg control (no placebo arm)
- Three open-label, randomized, parallel-group (vs haloperidol), followed by switch to oral medication: 2 flexible dose, 1 fixed dose
- *Patient population in pivotal studies
 - Patient populations: schizophrenic, schizophreniform, schizoaffective, delusional, bipolar, and other psychotic disorders
 - Primary efficacy analyses: BARS, CGI-S in pivotal studies; BPRS Total, CGI-S, CGI-I vs haloperidol

BARS = Behavioral Activity Rating Scale; CGI-S = Clinical Global Impression-Severity; CGI-I = Clinical Global Impression-Improvement; BPRS = Brief Psychiatric Rating Scale. Briefing document for ziprasidone mesylate for intramuscular injection, 2001.

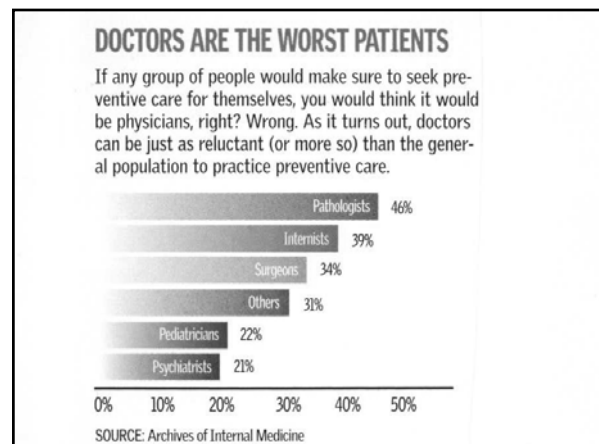


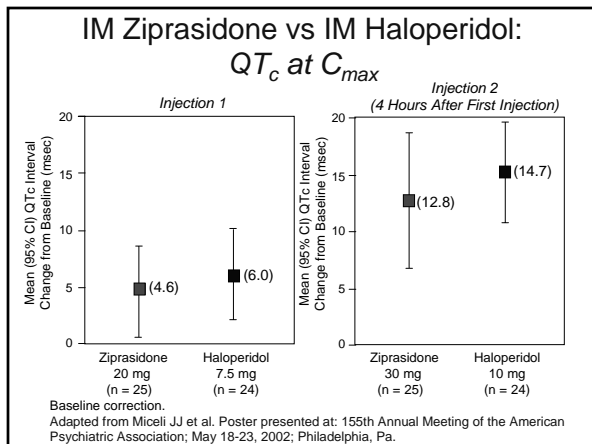
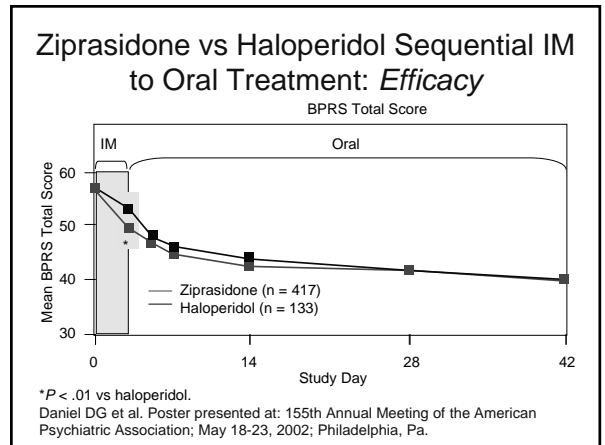
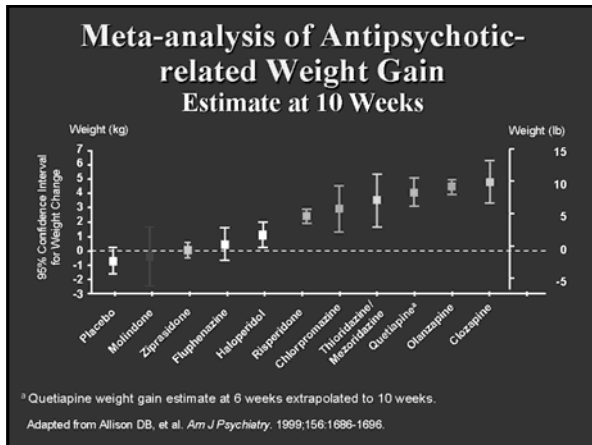
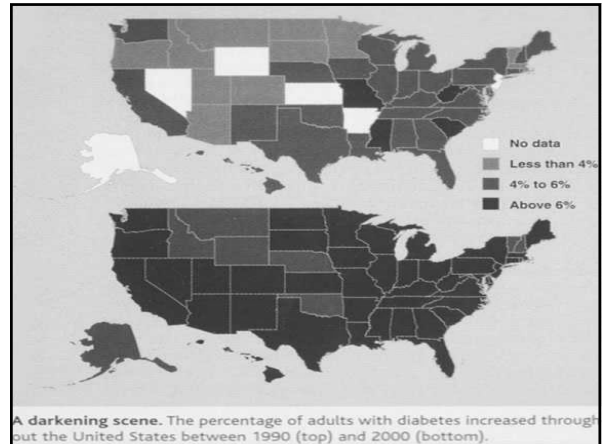
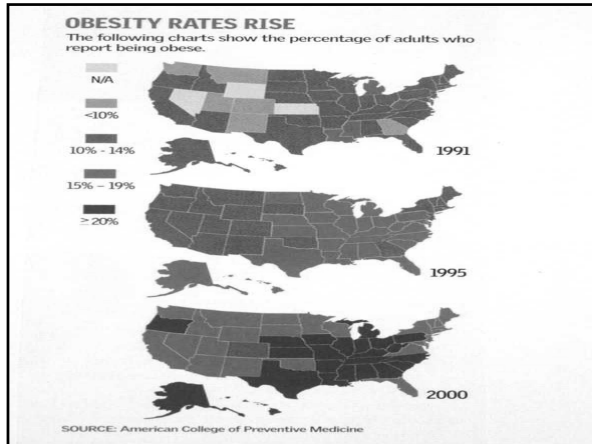
- ### The BARS 7-Point Observational Scale
- 7 Violent, requires restraint
 - 6 Extremely or continuously active
 - 5 Signs of overt activity; can be calmed
 - 4 Quiet and awake
 - 3 Drowsy, appears sedated
 - 2 Asleep, but responds normally
 - 1 Difficult or unable to rouse
- Validated as a reliable measure of activity levels in acute agitation, responsive to treatment differences
 - When evaluated by 342 experienced raters, demonstrated inter- and intrarater reliability
 - When correlated to scores in the CGI-S and PANSS negative scales, convergent and divergent validity were displayed
- Swift RH et al. *J Psychiatr Res*. 2002;36:87-95.

IM Ziprasidone vs IM Haloperidol: Adverse Events

	Ziprasidone, No (%) n = 417	Haloperidol, No. (%) n = 133
Asthenia	32 (7.7)	4 (3.0)
Headache	36 (8.6)	2 (1.5)
Increased salivation	13 (3.1)	7 (5.3)
Agitation	22 (5.3)	9 (6.8)
Akathisia	34 (8.2)	31 (23.3)
Anxiety	45 (10.8)	13 (9.8)
Dizziness	36 (8.6)	6 (4.5)
Dystonia	13 (3.1)	14 (10.5)
EPS	22 (5.3)	30 (22.6)
Hypertonia	24 (5.8)	19 (14.3)
Insomnia	89 (21.6)	21 (15.8)
Somnolence	54 (12.9)	7 (5.3)
Tremor	21 (5.0)	14 (10.5)

Brook S et al. 2001.





Prevalence Rates of HIV in the Seriously Mentally Ill

	US Population	Mentally Ill
HIV	0.3% to 0.4%	5.2% to 22.9%
Hepatitis B	4.9%	23.4%
Hepatitis C	1.8%	19.8%

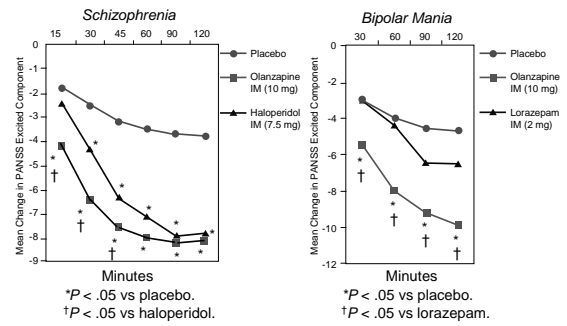
Rosenberg SD et al. *Psychiatric Services*. 2003;54:854-859.

Needlestick Data and Transmission Rates

- 600,000 to 1 million needle stick injuries occur per year to healthcare workers
- 16,000 of the above result in HIV exposure
- HIV transmission rate of 0.2%-0.4%, 35 per year
- Hepatitis B transmission is 2%-40%
- Hepatitis C transmission is 2.7%-10%

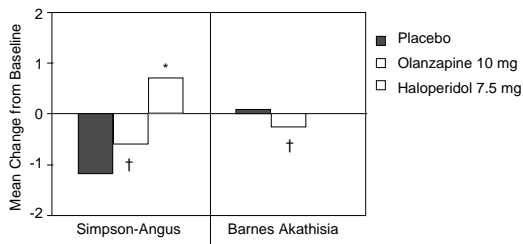
American Nurses Association. Needlestick injury. Available at: <http://nursingworld.org/readroom/1sneedle.htm>. Accessed September 25, 2003.

IM Olanzapine: *Time to Symptom Control*



Adapted from Briefing Document for ZYPREXA® IntraMuscular (olanzapine for injection), 2001.

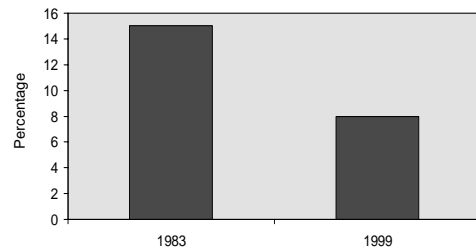
IM Olanzapine vs IM Haloperidol: *Movement Disorders*



Adapted from Briefing Document for ZYPREXA® IntraMuscular (olanzapine for injection), 2001; Breier A et al. *Arch Gen Psychiatry*. 2002;59:441-448.

Physical Restraint Rates in the United States

*Patients Favor Medication over Restraints by 2:1**



Allen MH. *J Clin Psychiatry*. 2000;61(suppl 14):11-20.
*Currier GW et al. In: Allen MH, ed. *Emergency Psychiatry*. Washington, DC: American Psychiatric Publishing; 2002.

Combining IM Olanzapine with an IM Benzodiazepine

- Single-dose study of IM olanzapine 5 mg administered 1 hour before lorazepam 2 mg
 - Synergistic increase in somnolence
- Simultaneous IM administration not recommended
- If benzodiazepine needed, wait 1 hour
- If patient has received benzodiazepine
 - Evaluate clinical status before olanzapine administration
 - Monitor for over sedation and cardiorespiratory depression

Zyprexa United Kingdom Summary of Product Characteristics. Eli Lilly and Company.