



# PSYCHOPHARMACOLOGY NEWSLETTER

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## STATE DEPARTMENT OF MENTAL HEALTH MEDICAL DIRECTOR ADDRESSES BAY AREA PSYCHIATRISTS

### "Media reports poor treatment of individuals in foster care and group homes"

Soleng K. Tom, M.D., Medical Director, Department of Mental Health, Santa Clara Valley Health & Hospital Systems

Many of the nearly 5,000 foster children housed in Los Angeles County group homes are physically abused and drugged excessively while being forced to live without proper food, clothing, education and counseling. Children are given a variety of medications without the proper consent of a guardian or judge in nearly half of 158 audited cases. This is how the *Los Angeles Times* summarized a 1997 LA County Grand Jury report. Reports of alleged abuse, in appropriate use of medications, use of "chemical restraints" and lack of adequate evaluation and treatment have prompted State legislators to introduce a variety of bills addressing standards of care regarding this population.

Within this context Santa Clara Valley Health and Hospital System Mental Health Department hosted a meeting on May 26, 1999 with over 24 Medical Directors and Child and Adolescent Psychiatrists attending. This work group meeting addressed medication use in the foster home children and adolescent population and medication issues concerning the dual diagnosed individual .

All counties are receiving children and adolescents returning from out of county placements on a variety of medications prescribed by psychiatrists or primary care physicians. The receiving psychiatrist is then placed in the dilemma of discontinuing off label medications (i.e. atypical

antipsychotic medications) with the risk of decompensation or keeping individuals on the medication. The only FDA "approved" medications for use in the child and adolescent populations are Ritalin, imipramine, Zoloft and Luvox. Those in attendance felt that guidelines for medication use that had some consistency was an important issue to be looked at on a state wide basis.

Similar concerns have been raised about the use of psychiatric medications in individuals with developmental disability and mental health diagnosis. There has been concern in many quarters that psychiatrists are inappropriately prescribing psychiatric medications to developmentally disabled as "chemical restraints".

Penny Knapp, M.D., the Medical Director of the State Mental Health Department (a pediatrician and child psychiatrist) addressed the group and discussed the impending legislation around AB 933, issues concerning evaluation standards, training levels, confidentiality, risks of withholding anti-depressant medications, treatment of ADHD, need for improved inpatient and outpatient communications, consent and parental control rights. Dr. Knapp also addressed the need for skilled children and adolescent therapists and the role of pediatricians in assisting treatment of mental health clients.

The group had an active dialogue with Dr. Knapp and raised a variety of other issues including: the use of medications in lieu of other services, polypharmacy, difficulty in recruitment and retention of child psychiatrists, the arbitrary definition



Penny Knapp, M.D., Medical Director, State Mental Health Department

of "medical necessity" especially as it is applied to children and adolescents, the need to work with the Regional Centers and their scope of practice.

There was consensus that medication guidelines should be developed that give the psychiatrist maximum flexibility. The group listed a large variety of resources available and different counties present described how they were addressing these issues. George Fouras, M.D. from San Francisco County presented their unique program of having a child psychiatrist funded by Social Services to address the mental health needs of foster home placements.

A list of resources suggested at the conference was created. (If any reader would like copies, please contact Soleng Tom, M.D. at Santa Clara County Mental Health Department, 645 South Bascom Avenue, San Jose, CA 95128)

All agreed that this was an important step in getting psychiatrists together in the Bay Area and to have the opportunity to give the State Mental Health Department direct input.

## CRISIS INTERVENTION TEAM

Gary Viale, Pharm.D.

The Crisis Intervention Team (CIT) is an innovative approach developed to enhance interaction between mentally ill individuals, law enforcement, mental health agencies and others by the Memphis Police Department and adopted by five other major law enforcement agencies throughout the country . The goal is to minimize the use of force, increase the safety of the officer and the individual on the street, and learn about available

resources in community policing. Development of this program is the result of a collaborative effort between the San Jose Police Department (SJD), Santa Clara County Mental Health Department and the Alliance for the Mentally Ill of Santa Clara County (AMI). This intense forty hour CIT Academy required the coordination of a group of professional instructors from Stanford, San Jose State, Santa Clara County

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## GENDER MATTERS

Barbara Liang, Pharm.D.

Three-quarters of all psychotropic medications are prescribed for women. Yet, women are underrepresented in many medication trials, thus limiting our full understanding of drug effects on women. What available research indicates is that men and women have differences in drug absorption and metabolism, affecting drug efficacy and adverse effects.

The high number of psychotropics prescribed for women reflects the fact that mood disorders affect a disproportionate percentage of women in the childbearing years. Their mental health has a major impact on the well being of themselves, their families and society. There has been a reluctance to study medication effects in women during childbearing years, due to concerns about fetal drug effects. Yet, it is precisely during these years that women are more vulnerable to mood disorders related to hormonal fluctuations.

Further, the study of women's mental health cannot be limited only to childbearing years. Women experience hormonal fluctuations as well as physiologic changes throughout their life span. These changes influence the pharmacokinetics and pharmacodynamics of medications. In addition, exogenous hormones contained in oral contraceptives may inhibit liver microsomal enzymes, and increase the side effects of coadministered medications that require hepatic metabolism for clearance. Likewise, the effectiveness of oral contraceptives can be decreased with concomitant use of psychotropic agents such as carbamazepine.

Recently, San Mateo County held a "Gender Matters" conference, highlighting mental health issues unique to women. This article builds upon the conference and outlines gender specific psychopharmacology issues. Relevant research data is highlighted in four major diagnostic categories.

### Depression

Approximately twice as many women than men suffer from major depression and dysthymia. In addition, women are at risk for premenstrual dysphoric disorder, postpartum depression and perimenopausal mood disorders. Depression in women has been associated with a less successful treatment outcome. Female hormonal cycles and fluctuations may increase women's vulnerability to depression.

Should medications be used differently in women than in men? Some data indicate that

women synthesize less serotonin than men do; and premenopausal women respond better to SSRIs than TCAs. Theoretically, estrogen may interact with SSRIs at the serotonin receptors; although the clinical significance of this is unknown. Women with atypical depression have a positive response to MAOIs, whereas men have a better response rate to TCAs. In addition, women are more prone to the side effects of TCAs.

For menopausal depression, preliminary work suggests that adding estrogen to antidepressant medication may be of benefit, and high dose progesterone may offset the beneficial effect of estrogen.

For the treatment of premenstrual dysphoric disorder, an SSRI taken during the luteal phase is as effective as during the entire cycle. Questions remain about how long treatment needs to last.

Depression during pregnancy is linked with poor perinatal outcome and increased risk of postpartum depression. But are the drugs safe to use during pregnancy and breastfeeding? Studies indicate that both TCAs and SSRIs are relatively safe in pregnancy, with some anecdotal reports of first trimester miscarriage, as well as irritability and anticholinergic symptoms in the newborn.

Postpartum depression strikes many new mothers. Fortunately, TCAs and SSRIs are effective treatments, and most are safe during breastfeeding. The two medications to avoid are doxepin (Sinequan) and fluoxetine (Prozac), which produce high drug levels in breast milk, and can lead to side effects in the nursing babies.

### Schizophrenia

Unlike depression, which afflicts women more severely than men, schizophrenia seems to be somewhat "gentler" on women. Women with schizophrenia have a later age of onset compared to men, with peak age between 25-35 years of age. Women tend to have a more favorable course of illness, with less hospitalization, longer period between relapses, better response to treatment and higher social functioning.

Why the difference? It appears that estrogen may attenuate the symptoms of the illness. Increased estrogen have been associated with decreased positive and negative symptoms in women with schizophrenia; moreover, vulnerability to relapse increases during periods of low estrogen, such as during the luteal phase of the menstrual cycle, in the early postpartum period, and after menopause.

Medication treatment of the illness requires attention to both gender and age. Younger women tend to require lower doses of tradition-

al antipsychotics; however, this effect diminishes with age. Older women are at higher risk of tardive dyskinesia, perhaps due to lower estrogen levels in post-menopausal women. Traditional antipsychotics will elevate serum prolactin levels. Chronic prolactin elevation is associated with diminished estrogen levels, which can lead to menstrual and sexual dysfunction, infertility, osteoporosis and cardiovascular risk. Older women who have received traditional antipsychotics for decades are candidates for osteoporosis and cardiovascular disease screening.

The newer atypical antipsychotics have minimal effect on prolactin. This has the potential to improve fertility, thereby necessitating assessment of contraceptive needs of the women. Birth control pills may inhibit CYP450, the enzyme that inhibits the metabolism of antipsychotics, and may thereby increase drug levels.

All antipsychotics carry risk to the fetus during pregnancy, with clozapine having the least risk; however, clozapine has the unique risk of agranulocytosis. Approximately one third of women with schizophrenia will have an improvement in their psychosis during pregnancy, but there are no clear predictors of who will be in this group. All antiparkinsonian medications should be avoided in the first trimester due to reported birth defects associated with these medications.

### Bipolar Disorder

Although the rate of bipolar disorder is similar between men and women, significant differences exist in the manifestation of the illness. Mania or rapid cycling predominates during pregnancy, whereas depression predominates during the postpartum period. Exacerbation of symptoms is related to menstrual cycles, pregnancy and the perimenopause.

Women with bipolar disease taking mood stabilizers need to pay careful attention to family planning. If pregnancy is desired, women with one episode of mania and sustained well being may be able to gradually taper (>2 weeks) and discontinue lithium before conception. For those with 2-3 episodes, mood stabilizers may be gradually discontinued before conception or until early documentation of pregnancy. Women with >4 episodes are at higher risk for relapse without medication, therefore the slight higher risk to the fetus posed by the mood stabilizers seems justified against the greater risk of relapse.

Childbearing is a time of substantial risk. The decision to treat with mood stabilizers during this time needs to be carefully weighed between the risks and benefits of medication therapy.

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# ALAMEDA COUNTY BEHAVIORAL HEALTH CARE

## WHIRLWIND TOUR OF THE CYTOCHROME P450 SYSTEM

*Richard Singer, M.D., Medical Director  
Douglas DelPaggio, Pharm.D.,  
Director of Pharmacy Services, M.P.A.*

*Mark D. Watanabe, PharmD, PhD, BCPP*

Much attention has been cast recently on the cytochrome P450 enzyme system and how drug-drug interactions may be caused when the functioning of this system is altered. While the amount of information related to this subject is plentiful and often overwhelming, cytochrome P450 activity plays an important role in psychotropic drug metabolism. Therefore, it behooves the practicing clinician in psychiatry to have a fundamental grasp of basic principles and concepts. The term "cytochrome P450" actually refers to a family of hemoprotein (iron-containing) enzymes. While present in many body tissues, cytochrome P450 isozymes (CYP450) are most commonly associated with drug metabolism that occurs in the liver. In principle, ALL such isozymes are capable of carrying out the identical biochemical reaction: oxygen molecules that bind to the iron center are activated to transform drug molecules into chemically oxidized metabolites that are more readily excretable. Yet, it is known that all CYP450s do not metabolize all potential drug substrates with the same specificity. What imparts this difference is the nature of the protein envelope that surrounds the activating iron-heme complex. The electronic properties and the three-dimensional positioning of the amino acid residues nearest the active site will determine whether a given drug will be metabolized to any significant degree by a distinct isozyme.

The usual concern of the clinician is that whenever the natural function of CYP450 is inhibited, the extent of drug metabolism will decrease, resulting in an accumulation of the drug and an increased risk of associated toxicity. This concern, while reasonable, needs to be placed in perspective. Fortunately, most drugs have available to them multiple possible pathways for their metabolism, either through different CYP450s or via other enzyme systems. If each of the pathways contributes to the meta-

bolic clearance of the drug relatively equally, inhibition of one of them would not necessarily be expected to increase levels of the unmetabolized drug towards toxicity due to accumulation as the other pathways would maintain their functional capacity. In some cases, however, the conversion of a drug to a metabolite occurs through a predominant pathway. In this scenario, if the CYP450 involved is appreciably inhibited, the activity of the remaining pathways may be insufficient to prevent accumulation and possible toxicity. A real-life classic example of this involved the nonsedating antihistamine terfenadine, which was in essence a pro-drug that needed to be converted by CYP3A4 to the active moiety fexofenadine. Co-administration of CYP3A4 inhibitors (e.g., erythromycin, ketoconazole) with terfenadine led to clinically significant accumulations of the latter, which manifested as potentially lethal cardiotoxic reactions. Whenever there are documented serious interactions such as this, avoidance of using drugs that inhibit a critical CYP450 pathway would be clearly warranted.

In order to rigorously evaluate the influence of the CYP450 system in predicting drug-drug interactions, the knowledge of how co-administered drugs may inhibit or induce the activity of specific CYP450s should be supplemented by knowledge of what specific CYP450s metabolize a particular drug substrate. To illustrate, consider the concomitant use of antipsychotic and antidepressant medications in a patient with a diagnosis of schizoaffective disorder. Table 1 shows the relative importance of certain CYP450 isozymes in the elimination pathways for selected antipsychotic drugs. Note the distinctions that are made between identifiable "major" and "minor" CYP450 pathways. Table 2 summarizes the inhibitory effects of selective serotonin reuptake inhibitors on individual CYP450 isozymes based on a variety of sources: in vitro data, in vivo data, proprietary information from manufacturers, or product labeling. Using these two tables together, one might

expect, for example, that addition of a high-potency inhibitor of CYP2D6 such as fluoxetine to an existing drug regimen in a patient already taking risperidone (for which the CYP2D6 pathway is a "major" one) might likely lead to greater than expected blood levels of the antipsychotic at the same therapeutic dose. Whether this is of any inherent significance ultimately depends on the outcome observed in the clinical setting.

There are other concepts important to any discussion of CYP450-mediated interactions. CYP450s, as biologically active proteins, are also synthesized and released under genetic control. Certain CYP450s may exhibit "genetic polymorphism," whereby subpopulations of ethnic groups can be lacking in expression of the gene, rendering that isozyme ineffective and therefore unable to metabolize any substrates dependent on it for their elimination. Examples of these are CYP2D6 and CYP2C9/10, where small percentages of Asians and African-Americans may be considered "poor metabolizers" (i.e., lacking in enzyme) instead of "extensive metabolizers" (i.e., those having full enzyme activity). Usual doses of medications given to a "poor metabolizer" mimics using a CYP450 inhibitor of the same isozyme, and higher than expected doses may ensue. In addition, there are some drugs that act as CYP450 inducers, which increase the activity of the enzyme. This may have the effect of decreasing levels of medication below what may be thought of as therapeutic, even though standard doses are taken. A prototypical CYP450 inducer is carbamazepine, which enhances the activity of several isozymes, including CYP1A2. When carbamazepine is taken in combination with olanzapine, for which CYP1A2 is key in a major metabolic pathway, titration to the desired antipsychotic effect may be more challenging because adequate olanzapine blood levels may not be achieved.

As alluded to above, in most cases the prospect of a possible CYP450-mediated drug-drug  
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## WHIRLWIND TOUR OF THE CYTOCHROME P450 SYSTEM

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interaction per se does not constitute an absolute contraindication for the combination, but it alerts the clinician to be more observant when monitoring the effects of medication. In this regard, obtaining detailed medication histories, noting all legend and non-prescription agents a patient may be extremely helpful. Except when there has been clear documentation of a serious CYP450-mediated problem and a particular combination must be avoided, the risk of these drug-drug interactions occurring may be minimized simply by adjusting the dose or switching to another therapeutic agent with a different effect on CYP450. In any event, while the ability to predict CYP450 drug interactions remains as much of an art as a science, most of them are detected through careful clinical observations and retrospective reviews of the longitudinal course of pharmacotherapy.

**TABLE 1. ELIMINATION PATHWAYS FOR SELECTED ANTIPSYCHOTIC MEDICATIONS**  
[adapted from J Clin Psychiatry 1996; 57 (suppl 11): 12-25]

DRUG	CYP1A2	CYP2C	CYP2D6	CYP3A
CLOZAPINE	++	+/-	+/-	++
RISPERIDONE	-	-	++	-
OLANZAPINE	++	+/-	+	-

++ = major pathway      + = minor pathway  
+/- = possible pathway      - = not a pathway

**TABLE 2. CYP450 INHIBITION OF SELECTED ANTIDEPRESSANTS**  
[adapted from J Clin Psychiatry 1996; 57 (suppl 8): 17-25]

INHIBITION POTENCY	CYP1A2	CYP2C19	CYP2D6	CYP3A3/4
<b>HIGH</b>	fluvoxamine	fluvoxamine	fluoxetine paroxetine	fluvoxamine nefazodone
<b>MODERATE TO LOW</b>		fluoxetine	sertraline	fluoxetine
<b>LOW TO MINIMAL</b>	fluoxetine nefazodone paroxetine sertraline	venlafaxine	fluvoxamine venlafaxine	paroxetine sertraline venlafaxine
<b>UNKNOWN</b>	venlafaxine	nefazodone paroxetine sertraline	nefazodone	



Please welcome Mark Watanabe, Pharm.D., Ph.D. who joined the BHCS Office of the Medical Director on June 1st, as Clinical Pharmacist. A native Californian, Dr. Watanabe completed pharmacy school at UCSF, and left the Bay Area for his psychiatric residency in San Antonio, Texas. He then accepted a position with the Illinois Department of Human Services as pharmacotherapist in neuropsychiatry. This transitioned into a position through the University of Illinois at Chicago, where Dr. Watanabe was a Professor of Pharmacy Practice for 9 years. Before accepting his current position, Mark relocated to the Bay Area through Bristol-Myers Squibb where he served as the area Medical Science Manager for the past year. With his unique blend of public / private sector positions, and teaching experience, Mark will help implement medication monitoring, maintain the pharmacy system and provide educational programs and training through the Department of Pharmacy Services.

## STATE-WIDE MEDICAL DIRECTORS MEETING

County Medical Directors from across California held their quarterly meeting in Los Angeles on Wednesday, 6/23/99. Formed about a year and a half ago by Medical Directors as the Medical Services System of Care Subcommittee of the California Mental Health Directors Association, the meetings are designed to address common issues. Recommendations are developed for input to the SOC Committee, particularly as they relate to medical care. Some ongoing items currently being discussed include:

1. Physician credentialing and decredentialing in Managed Care Plans
2. Best Practices Process occurring in Stanislaus County
3. Statewide Performance Outcomes
4. Medical Necessity
5. Mental Health Pharmacy carve-outs
6. Psychopharmacology Medication Guidelines and/or use of Algorithms
7. Informed Consent/Medication Information forms in threshold languages
8. Use of Nurse Practitioners

## GENDER MATTERS

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Although lithium during the first trimester of pregnancy has been associated with Ebstein anomaly, a cardiovascular malformation, at a risk of 0.05 to 0.1% , its overall risk is less than other mood stabilizers. Carbamazepine or valproic acid have been associated with neural tube defects in the fetus at a rate of 1 to 5%. Craniofacial abnormalities and cognitive dysfunction have also been associated with carbamazepine and valproic acid, even past the first trimester exposure. Combining drugs increases the risk. Since administration of folate during pregnancy reduces the risk of fetal neural tube defects, women on valproic acid or carbamazepine should also take folate. Despite the fetal risks these drugs pose, the risks to the fetus is even higher if the illness goes untreated, causing problems such as premature labor, low birth weight, and low functioning at developmental tasks.

The postpartum period poses a high risk of relapse for women, therefore prophylaxis with a mood stabilizer is strongly recommended. Lithium levels should be carefully monitored during labor, delivery and first few days of postpartum due to changes in the women's fluid status.

### Anxiety Disorder

Women outnumber men in the incidence of anxiety and panic disorders. Benzodiazepine use and dependence are also higher in women than in men.

Pregnancy appears to reduce the symptoms of panic disorder in some women who may be able to be medication-free during their pregnancies. This could be due to the calming effects of progesterone during pregnancy. Cognitive behavioral therapy should be strongly considered as an alternative to medication during the first trimester. Diazepam has been associated with oral clefts in the fetus; shorter acting benzodiazepines such as lorazepam would be preferred. TCAs and SSRIs represent reasonable non benzodiazepine alternatives.

### Conclusion

Awareness of gender issues in mental health steer us away from the "cookie-cutter" approach in clinical care. We see how emphatically female hormones affect both the illness and treatment, and how these effects are dynamic rather than a static processes throughout a women's life. As medical research gives increasing attention to recruiting and studying the female population, we will be able to tease out the gender nuances in the treatment of mental illness.

Additional references regarding pregnancy and lactation are available on request. Please fax your request to Renee Williard, PhD, at 415-252-3036.



## CONTINUING

## MEDICAL EDUCATION

*Doug DelPaggio, PharmD*

### SEPTEMBER 1999

<b>9/14/99</b> <b>12:15-1:30 p.m.</b>	<b>Cultural Issues with Hispanic Patients, <i>George Bach Y Rita, M.D.</i></b> San Mateo County Mental Health Services, 225 W. 37th Ave., Multi-Purpose Room San Mateo, CA (650) 573-2530
<b>9/17/99</b> <b>12:00-1:00 p.m.</b>	<b>Pharmacotherapy of Personality Disorders, <i>Mark Frye, M.D.</i></b> San Francisco General Hospital 1001 Potrero Ave., Room 7M30 San Francisco, CA (415) 206-4938 (650) 696-5313
<b>9/21/99</b> <b>12:15-1:45 p.m.</b>	<b>Antidepressant Medication and Sexual Dysfunction, <i>T.B. Gosh, M.D.</i></b> Mills Peninsula Health Services 1783 El Camino Real Sierra Rooms Burlingame, CA 94010 (650) 696-5313
<b>9/23/99</b> <b>8:00 - 4:30 pm</b>	<b>Suicide Prevention and Early Intervention Conference</b> Laurel Hts. Conference Center 3333 California St. SF, CA (415) 551-0520
<b>9/24/99</b> <b>12:00- 1:00 p.m.</b>	<b>Suicide, <i>Jan Fawcett, MD</i></b> San Francisco General Hospital 1001 Potrero Ave., Room 7M30 San Francisco, CA (415) 206-4938
<b>9/28/99</b> <b>12:15-1:30 p.m.</b>	<b>Managing Addicts / Alcoholics in your Office Practice, <i>Barry Rosen, M.D.</i></b> San Mateo County Mental Health Services, 225 W. 37th Ave., Multi-Purpose Room San Mateo, CA (650) 573-2530

### OCTOBER 1999

<b>10/5/99</b> <b>12:15-1:45 pm</b>	<b>Psychopharmacology Update, <i>Barbara Liang, PharmD</i></b> Mills Peninsula Health Services 1783 El Camino Real Sierra Rooms Burlingame, CA 94010 (650) 696-5313
<b>10/15/99</b> <b>12:00- 1:00 p.m.</b>	<b>Pharmacogenetics in the Hispanic Population <i>Ricardo P. Mendoza, MD</i></b> San Francisco General Hospital 1001 Potrero Ave., Room 7M30 San Francisco, CA (415) 206-4938
<b>10/19/99</b> <b>12:15-1:45 p.m.</b>	<b>Tx of Depression Complicated by Adult ADHD <i>Alan K. Louie, M.D.</i></b> Mills Peninsula Health Services 1783 El Camino Real Sierra Rooms Burlingame, CA 94010 (650) 696-5313
<b>10/20-22/99</b> <b>9:00 - 4:00 p.m.</b>	<b>Crisis Counseling in Disaster Recovery Services (two day seminar)</b> Alameda Co Behavioral Health Care Services 2000 Embarcadero Cove, Ste. 400, Alameda Room Oakland, CA 94606 (510) 567-8113
<b>10/26/99</b> <b>12:15-1:30 p.m.</b>	<b>From Psychotherapy to Problem Solving <i>Dick Fisch, M.D.</i></b> San Mateo County Mental Health Services 225 W. 37th Ave., Multi-Purpose Room San Mateo, CA (650) 573-2530

### NOVEMBER 1999

<b>11/2/99</b> <b>12:15-1:45 p.m.</b>	<b>Destructive Impulse, <i>Gail Bates, M.D.</i></b> Mills Peninsula Health Services 1783 El Camino Real Sierra Rooms Burlingame, CA 94010 (650) 696-5313
<b>11/16/99</b> <b>12:15-1:45 p.m.</b>	<b>Antidepressants; Mgmt of Depression &amp; Chronic Pain, <i>A.David Bott, MD</i></b> Mills Peninsula Health Services 1783 El Camino Real Sierra Rooms Burlingame, CA 94010 (650) 696-5313
<b>11/30-12/1/99</b> <b>8:00-5:00 p.m.</b>	<b>Cultural Competence and Mental Health Summit VII</b> Oakland Convention Center 1001 Broadway Oakland, CA 94607 (510) 567-8126



## DRUG INFORMATION CONSULTATION

*Edited by Renée Williard, Ph.D.*

### Has olanzapine been found to cause hyperglycemia or worsen diabetes mellitus?

Clozapine has been associated with several reports of hyperglycemia and diabetic ketoacidosis and reports associated with olanzapine are growing. Risk factors appear to be African American ethnicity, obesity, and family history of diabetes or obesity. The mechanism of antipsychotic effects on glucose regulation is unknown. It is postulated that these agents may, through promoting weight gain, lead to insulin insensitivity and glucose intolerance which may induce diabetes in vulnerable patients. For patients who have risk factors for diabetes and who experience weight gain, regular blood glucose monitoring should be considered.

*Please submit questions to the Psychopharmacology Newsletter at PMB 219, 2532 Santa Clara Ave., Alameda, CA 94501. If you would like a personal response, please be sure to include your name and contact information.*

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## CRISIS INTERVENTION TEAM A COMMUNITY PARTNERSHIP

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Mental Health, the Veteran's Hospital, various mental health contract agencies throughout the county. Also involved were talented consumers and family members from AMI, who volunteered their time to teach the 27 officers and Public Safety Dispatchers who graduated from our first academy. All instructors, prior to teaching, rode along with patrol officers and spent time with police dispatchers to familiarize themselves with how the department functions.

The cadre of specially trained officers will work within the normal beat structure with the collateral-duty of responding to calls involving the mentally ill, even if it requires them to cross district and divisional boundaries. The ultimate goal is to train 150 members from each watch, some with foreign language abilities. A 20 hour annual CIT update is also planned.

Strong consideration has already been given to make this San Jose based CIT training open to other City and County law enforcement agencies.

To obtain additional information, please contact:

Sharon Roth, AMI-SCC Vice President at (408) 268-2882 or (408) 280-7264  
Lt. Brenda Herbert, SJPC, Bureau of Field Operations at (408) 277-4631  
Officer Tracey Millhone, SJPD, BFO, (408) 277-4715



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