



Happy New Year

from the Scientists and Staff
of **STERLING** Reference Laboratories



Everything Benzodiazepines

Xanax® one of the Top 10 prescribed

Deaths due to Benzodiazepine polypharmacy?

Benzodiazepines are central nervous system depressants that belong to a class of medications collectively known as sedative-hypnotic drugs. Sedative drugs reduce anxiety (anxiolytic) and exert a calming effect. Hypnotic drugs produce a state of drowsiness that promotes the onset and maintenance of sleep. The benzodiazepines were introduced into clinical practice in the late 1950s and early 1960s. They are very commonly prescribed for a variety of clinical reasons including relief of anxiety, for insomnia, for treatment of epilepsy and motor seizure disorders, for control of ethanol or other drug withdrawal states, for sedation and amnesia before and during various medical and/or surgical procedures, as a component of general anesthesia, for skeletal muscle relaxation in neuromuscular disorders and occasionally as aids in the diagnosis and/or treatment of psychiatric disorders. Other drugs that possess sedative/hypnotic properties include barbiturates, alcohol, meprobamate (Miltown®) and more recently introduced drugs like zolpidem (Ambien®), eszopicolone (Lunesta®) and zaleplon (Sonata®).

The benzodiazepines are only available by prescription in the United States and are classified as schedule IV drugs by the FDA. Fifteen benzodiazepines are available in the United States including alprazolam (Xanax®), clonazepam (Klonopin®), chlorazepate (Tranzene®), diazepam (Valium®), estazolam (ProSom®), flurazepam (Dalmane®), halazepam (Paxipam®), lorazepam (Ativan®), midazolam (Versed®), oxazepam (Serax®), prazepam (Centrax®), quazepam (Doral®), temazepam (Restoril®), and triazolam (Halcion®). Of these, alprazolam is one of the ten most prescribed medications in the United States. Many other benzodiazepines are available in Europe, Central and South America and Asia that are not legally available in the United States. One notable example is flunitrazepam (Rohypnol®), illegally imported into the United States, that has been used in conjunction with alcohol as a "date rape" drug due to its hypnotic and amnesic properties.

Benzodiazepines are relatively safe when used as directed. Physical dependence and tolerance may occur with chronic use of benzodiazepines necessitating higher doses to obtain the desired pharmacologic effects. Problems may occur when benzodiazepines are combined with other central nervous system depressants, especially alcohol. Concomitant use of benzodiazepines and alcohol can lead to severe additive effects involving loss of motor control, behavioural disinhibition and respiratory depression, that can be life threatening. At a recent forensic toxicology conference, polypharmacy involving benzodiazepines, alcohol and other central nervous system depressants were implicated in numerous deaths, either accidental or intentional. Drug levels in many of these cases

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were not at toxic levels if the drugs or alcohol had been used alone. Drug interactions, especially when polypharmacy is involved, are unpredictable and poorly understood and is deserving of further study. Monitoring benzodiazepine use is especially important because of the ready availability of these drugs and the potentially severe consequences of misuse or abuse of these medications.

As always, if you have any questions on interpretation, a consulting scientist is available at (800) 442-0438, (253) 552-1551, or via e-mail at certifying@regtox.com.



80-Hour Alcohol Tests & Screens

STERLING offers multiple options for testing and screening for Alcohol exposure with a window of detection extending to 80+ hours after heavy drinking. Call the Sales Department TODAY to discuss these options 1-800-442-0438

Your STERLING Advantage

What sets us aside from other laboratories?

Customized Testing Services – We provide a full range of testing services, from basic screenings to court admissible/forensic results. Customized test panels are designed to meet your needs, optimizing cost effectiveness. We offer specialty tests, including Ethylglucuronide (EtG), Steroids, and more. Test order forms are printed to your specifications and are simple and easy to use. Test results are user-friendly, and include a comment section for additional, pertinent findings and information from our Scientists. We offer the ability to capture additional information on results, such as Counselor, Program Codes, etc.

Laboratory Testing – All screening tests are performed using the latest Immunoassay technology on state-of-the-art instruments. SRL utilizes the "Gold Standard" in confirmation testing: Gas Chromatography / Mass Spectrometry (GC/MS), Gas Chromatography (GC) and Liquid Chromatography / Tandem Mass Spectroscopy (LC/MS/MS). Full adulterant testing is available: Creatinine, Specific Gravity, pH & Oxidants (Nitrites).

Customer Service – We have live-person operators at your service. This allows you immediate access to SRL personnel. Our Scientists are available to you for Free Scientific consultation! Expert testimony is also provided by our well qualified Scientific Staff. *(continued next page)*

Accreditations & Licenses – Not all States require laboratory licensing to perform drug testing. SRL maintains the following licenses and accreditations, way beyond what is required, and performs laboratory testing nationwide.

U.S. Department of Health and Human Services (SAMHSA), College of American Pathologists Laboratory Accreditation Program (CAP), Washington State Department of Health Clinical Laboratory Improvement Act (CLIA) License, U.S. Department of Justice Drug Enforcement Administration - Controlled Substances – Analytical Lab Registration, Washington State Department of Health, Board of Pharmacy – Quality Assurance Division – Controlled Substance License, State of New York Department of Health License, State of California Department of Health Services Methadone Drug Analysis Laboratory License (SRL is the only Lab outside of the State of California licensed to provide Methadone Testing in the State of California), State of Maryland Department of Health Services License, State of Pennsylvania Department of Health Clinical Laboratory License, State of Florida Agency for Health Care Administration Division of Health Quality Assurance – Clinical Laboratory License, State of Oklahoma Department of Health – Workplace Drug and Alcohol Testing Facility License.

ANNOUNCEMENT

Opiate Confirmation from GC/MS to LC/MS/MS

As announced earlier, effective September 9th, we have been confirming Opiates by LC/MS/MS. This confirmation methodology has distinct advantages over the past GC/MS confirmation method including enhanced sensitivity and specificity. We now have the capability of detecting and reporting OXYMORPHONE levels. Oxymorphone is a pharmacologically active metabolite of oxycodone. Oxymorphone may also be prescribed (OPANA®, or NUMORPHAN®) as an analgesic drug.

Opiate cut-off levels have not changed, and there is no change to pricing.

If there are any questions regarding this change please contact Dr. Bert Toivola, Jim Heit of one of our other scientist at 800-442-0438.

SAVE \$ on 80-Hour Alcohol Screens

EtG Screen as low as \$6.00!

We can now combine your EtG Test or Screen with your Drug Test or Screen to offer you further savings!

Join our other clients who are saving by combining these options. Call our Sales Department today for more information.



Urine Based Alcohol (Ethanol) Onsite Screen

Screen for Alcohol (Ethanol) in a U.S. made, **urine-based**, onsite cup or dip strip/card. These devices come with an Alcohol Color Chart for comparison of 0.0% to 0.2% BAC. Call our Sales Department for info!

**Watch your fax machine in January for our
Announcement of Specialty Test options!**

NEW Oral Fluid Lab Drug Screens

STERLING now offers Oral Fluid Lab Drug Screens customized from 4 to 11 Drugs.

WHY CONSIDER ORAL FLUID DRUG SCREENING?

- ✓ Fast and Simple Collection Procedure
- ✓ Recent Drug Use Detected
- ✓ Substitution Difficult in Oral Fluid
- ✓ Gender Neutral Collection
- ✓ Adulteration Difficult in Oral Fluid
- ✓ No Minimum Quantity of Collection Devices
- ✓ Saliva Drug Levels Correlate with Blood Drug Levels
- ✓ Lack of Required Urine Specimen Production – i.e. Renal Dialysis Patients
- ✓ **Negative and Positive Screen results within 24 hours from receipt at lab!**

Available Drugs Screened: Amphetamine, Barbiturate, Benzodiazepine, Cannabinoids (marijuana), Cocaine, Methadone, Methamphetamine, Opiates, Oxycodone, Phencyclidine (PCP), Propoxyphene

Step 1: Swab for 5 minutes.

Step 2: Snap – Insert & Snap.

**Step 3: Seal – Recap, Seal
and Send to SRL!**



**Call our Sales Department TODAY
for more information 1-800-442-0438!**

STERLING Reference Laboratories commitment to quality and service provides great opportunities for well qualified and skilled people. If you know of anyone who would compliment our team, please refer them to us. Thank you!

STERLING Reference Laboratories is a full-service, nationally renowned toxicology laboratory, testing for drugs of abuse, which has been serving its clients with superior service and unsurpassed quality since 1987. SRL is certified by Health and Human Services (SAMHSA) and the College of American Pathologists Laboratory Accreditation Program (CAP) – rigorous laboratory standards designed to ensure quality testing.

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