

**Substance Abuse
&
Hazard Recognition in the Home:**

**A Special Presentation to
Sacramento County Social Services**



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Alcohol

OBJECTIVE SIGNS AND SYMPTOMS OF ALCOHOL INFLUENCE

EYES:

HGN PRESENT
VGN MAY BE PRESENT
STRABISMUS
NORMAL / POSSIBLE DILATED PUPILS
BLOODSHOT SCLERA

OTHER SIGNS:

EUPHORIA
RELAXED INHIBITIONS
FORGETFULNESS
DISORIENTATION
IMPAIRED DISTANCE/
DEPTH PERCEPTION

PHYSICAL SIGNS:

FAST RHOMBERG
LAUGHING
IMPAIRED DIVIDED ATTENTION

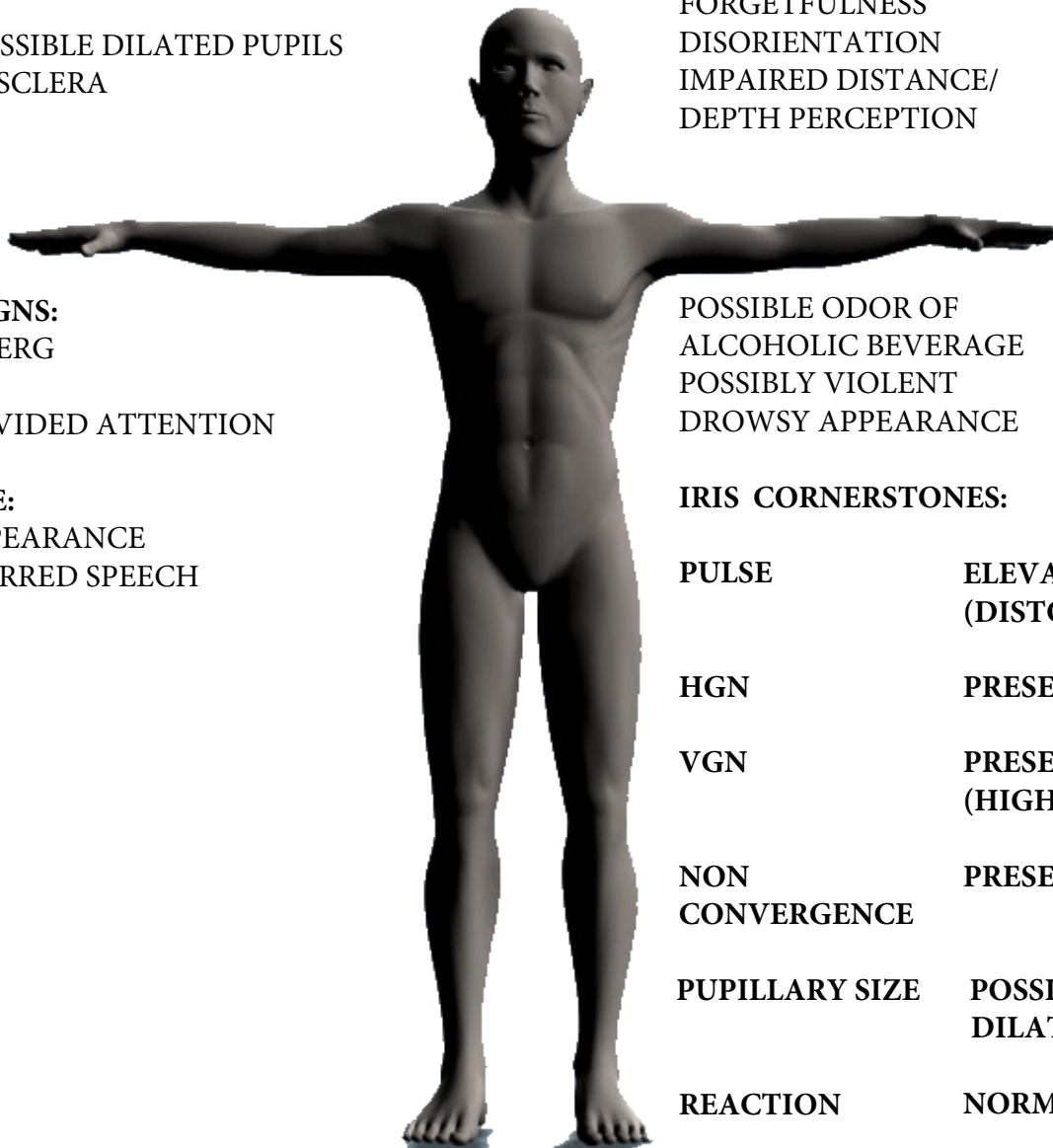
POSSIBLE ODOR OF
ALCOHOLIC BEVERAGE
POSSIBLY VIOLENT
DROWSY APPEARANCE

APPEARANCE:

FLUSHED APPEARANCE
POSSIBLE SLURRED SPEECH

IRIS CORNERSTONES:

PULSE	ELEVATED (DISTORTED)
HGN	PRESENT
VGN	PRESENT (HIGH BAC)
NON CONVERGENCE	PRESENT
PUPILLARY SIZE	POSSIBLE DILATION
REACTION	NORMAL
RHOMBERG	DISTORTED



ALCOHOL

HISTORY:

NAMES:

ALCOHOL
ETHANOL
ETHYL ALCOHOL

IT IS A POISON:

THE MOST COMMONLY ABUSED
PSYCHOACTIVE SUBSTANCE.

FIRST DISCOVERED OVER 5,000
YEARS AGO.

AL KOH'L - ARABIC FOR "ESSENCE".

MANUFACTURED THROUGH
NATURAL FERMENTATION OF
SUGARS AND YEASTS.

CAN ONLY REACH 14% ALCOHOL
CONTENT.

HIGHER AMOUNTS ARE DISTILLED.

POSSIBLE EFFECTS:

REDUCED INHIBITIONS
SLOWED REFLEXES
IMPAIRED VISION
POOR JUDGMENT
LACK OF COORDINATION
EMOTIONAL INSTABILITY
DEPTH PERCEPTION
GLARE RECOVERY
TUNNEL VISION
INABILITY TO DIVIDE ATTENTION
IMPAIRED CONCENTRATION

ALCOHOL CONTENTS:

ALCOHOL	%	PROOF	OZ/ (100 PROOF)
BEER	<5	10	12
WINE	12	24	4
BOURBON	43	86	1 1/4
SCOTCH	50	100	1
BACARDI	75	151	3/4

GLASS SIZE DESIGNED TO GIVE SAME AMOUNT:

SHOT	1 TO 1 1/2 OZ
WINE	4 OZ
BEER	12 OZ

ABSORPTION:

ABSORBS INTO SYSTEM AS ITSELF, GOES
THROUGH THE BODY AS ITSELF AND
ELIMINATED FROM THE BODY AS ITSELF.
GOES TO HIGH WATER CONCENTRATIONS
IN THE BODY (BRAIN).

1 TO 2% IS EXCRETED VIA URINE,
RESPIRATION, AND PERSPIRATION.

20% METABOLIZES IN THE STOMACH.

80% IN THE SMALL INTESTINES.

METABOLITES:

ENZYMES IN THE LIVER METABOLIZES
ALCOHOL INTO ACETALDEHYDE. IT IS
THEN METABOLIZED INTO ACIDIC ACID,
WHERE THE BY-PRODUCTS OF WATER AND
CARBON DIOXIDE ARE PRODUCED IN THE
KIDNEYS.

ACETALDEHYDE IS THE TOXIN THAT MAKES YOU SICK.

THE BODY METABOLIZES, OR BURNS OFF, APPROXIMATELY 3/4 TO 1 OUNCE OF ALCOHOL PER HOUR.

ENZYMES OF ALCOHOLDEHYDROGENASE, AND ACETALDEHYDE DEHYDROGENASE CAN BUILD IN THE SYSTEM CAUSING TOLERANCE.

RULES OF THUMB:

1. 175 LB MALE W/ 6 OZ OF (100 PROOF) = .15 BAC
2. .025 BAC = 1 OZ (100 PROOF)
3. BURN OFF .015/.020 BAC PER HOUR

EFFECTS ON THE BRAIN:

1-2 DRINKS	REASON, CAUTION, INTELLIGENCE, MEMORY
3-4 DRINKS	SELF-CONTROL, JUDGMENT
5-6 DRINKS	SENSES
7-8 DRINKS	COORDINATION
9 DRINKS	BALANCE
10+ DRINKS	VITAL CENTERS

ACUTE ALCOHOL TOLERANCE:

- TACHYPHYLAXIS:

THE LEVEL OF INTOXICATION FELT GOING UP WILL NOT BE THE SAME GOING DOWN.

ALCOHOL:

HOW IT AFFECTS GABA IN THE BRAIN



APPROXIMATE BLOOD ALCOHOL CONCENTRATIONS FOR DIFFERENT BODY WEIGHTS

No. of Drinks	1	2	3	4	5	6	7	8	9	10
MALE										
100 lbs.	.043	.087	.130	.174	.217	.261	.304	.348	.391	.435
125 lbs.	.034	.069	.103	.139	.173	.209	.242	.287	.312	.346
150 lbs.	.029	.058	.087	.116	.145	.174	.203	.232	.261	.290
175 lbs.	.025	.050	.075	.100	.125	.150	.175	.200	.225	.250
200 lbs.	.022	.043	.065	.087	.108	.130	.152	.174	.195	.217
225 lbs.	.019	.039	.058	.078	.097	.117	.136	.156	.175	.195
250 lbs.	.017	.035	.052	.070	.087	.105	.122	.139	.156	.173
FEMALE										
100 lbs.	.050	.101	.152	.203	.253	.304	.355	.406	.456	.507
125 lbs.	.040	.080	.120	.162	.202	.244	.282	.324	.364	.404
150 lbs.	.034	.068	.101	.135	.169	.203	.237	.271	.304	.338
175 lbs.	.029	.058	.087	.117	.146	.175	.204	.233	.262	.292
200 lbs.	.026	.050	.076	.101	.126	.152	.177	.203	.227	.253

TIME TABLE FACTOR

HOURS SINCE FIRST DRINK	1	2	3	4	5	6	7	8
SUBTRACT FROM BAC	.015	.030	.045	.060	.075	.090	.105	.130



**ALCOHOL INFUSED
WHIPPED CREAM**



**FIELD OPERATED BREATH
SENSOR FOR ALCOHOL**

