



The BRG Guide

Overview:

This document provides general guidelines on setting the Base Rate of Guilt (BRG) for various testing situations. The BRG, also called the prior probability, is the estimated percentage or number of people in a testing group that are guilty of the behavior for which you are testing. One of the first scientific articles to discuss the importance of Base Rates was "Antecedent Probability" (Psychological Bulletin, Meehl & Rosen, 1955). Since that time, the concept of BRG has been discussed in scientific articles by polygraph experts such as Raskin, Kircher, Honts, Nelson, and Handler for many years.

The BRG may vary based on the type of test (diagnostic vs screening), testing topic(s), testing population, location, and other things. In field cases without absolute truth, you will never know the true BRG. However, by using historic test failure rates, actuarial or experience tables, and/or national statistics, you can derive and estimated BRG.

Adjusting the BRG essentially increases/decreases the sensitivity of the testing algorithm when scoring tests.

DLC Test Guidelines

DLC Investigations:

1. Sexual abuse of a child = .5
2. Sexual assault (he said/she said) = .5
3. Case with strong evidence of guilt = .5 (gives a 50/50 chance)
4. Case with strong evidence of innocence = .2 (this is rare)
5. Case with unknown facts = .5 (gives a 50/50 chance)
6. A group is suspected but only one person could have done it (ex: 1 of 4) = .25
7. Truthful report = .5

ICAC tests:

1. For sting operations or warrants where someone is caught with child porn = .6
2. For regular more screening test = .5

DLC Breakdown tests:

1. Person fails MCT test and takes DLC break down test = BRG of .6 or .7

Infidelity BRG's:

1. No strong evidence = .2
2. More risky behaviors, stronger evidence, or small history of infidelity = .3
3. Follow up to failed test (change time frame), strong history or real evidence infidelity/lying = .5
4. Full disclosure infidelity = .3 (we often lower to .2 for full disclosures done with is more with certified sex therapists)



MCT Test Guidelines

Pre-employment/Employee Screening (private sector): average BRG is typically around .30

1. Pre-employment: Typically set between .25 - .35 for all topics.
2. Employee routine screening: typically set between .20 - .30

Pre-employment (Law Enforcement/Government): average BRG is typically around .20 - .25

New Recruits (common topics):

1. Drug use = .3
2. Stealing = .2 (depending on value amount could increase to .25)
3. Crimes = .15 (Unless category is broadened to include more minor crimes, then .2)

Lateral Transfers (common topics):

1. Drug use = .2
2. Violate specific law enforcement duties = .25 (can lower to .2 depending on duties listed)
3. Crimes = .15

Sex Offender/Sex History Maintenance: average BRG is typically around .25

1. **Sex offender:** typically set at .25, or .30 for all topics (can increase or decrease depending on how long they have been in therapy for, outside evidence of a behavior, and overall how strict you want to be)
2. **Sex therapy:** typically set at .20 or .25 for all topics.

MCT for Diagnostic Testing:

1. Known allegation/Strong evidence of guilt = .5
2. No known allegation/weak evidence of guilt = .2
3. Multiple people are suspected but only one person could have done it (Ex: 1 of 4) = .25