

A large, light-colored statue of Lady Justice, the personification of the goddess of justice, is the background for the left side of the slide. She is depicted from the waist up, wearing a long, flowing robe and a blindfold. Her right arm is raised, holding a sword, and her left arm is extended, holding a pair of scales. The statue is set against a light blue background.

Detection of Deception

Truth vs. Myth

A small, rectangular image at the top right of the slide shows a polygraph machine. The machine is dark-colored with a globe on top and various dials and buttons. It is set on a wooden desk in a room with a window in the background.

Polygraph Research

The American Polygraph Association has a compendium of 80 research projects, involving 6,380 examinations. Researchers conducted 12 studies of the validity of field examinations, following 2,174 field examinations, providing an average accuracy of 98%. Researchers conducted 11 studies involving the reliability of independent analyses of 1,609 sets of charts from field examinations confirmed by independent evidence, providing an average accuracy of 92%.

Bersh, P. J. (1969). *Journal of Applied Psychology*, 53(5), 399-403. The lie detection judgments of polygraph examiners in criminal investigations conducted by the military services were validated against unanimous guilt-innocence decisions by a panel of four Judge Advocate General (JAG) attorneys. Level of agreement was 92.4%.

Honts, C. R. (1996). *The Journal of General Psychology*, 123(4), 309-324. Data from the files of 41 criminal cases were examined for confirming information and were rated by two evaluators on the strength of the confirming information. The decision of the original examiners were correct 96% of the time, and the independent evaluations were 93% correct.

Patrick, C. J., & Iacono, W. G. (1991). *Journal of Applied Psychology*, 76(2), 229-238. Records from independent police files for 402 control question test (CQTs) conducted during a 5-year period by federal police examiners in a major Canadian city, the hit rate for identifying guilty subjects was 98%.

Raskin, D. C., Kircher, J. C., Honts, C. R., & Horowitz, S. W. (1988). *Report to the National Institute of Justice.* Polygraph charts from examinations conducted by the U.S. Secret Service were sampled and blindly interpreted by polygraph examiners and by computer interpretation using algorithms. Decisions by the original examiners on individual relevant questions ranged from 91-96% correct on confirmed truthful answers and 85-95% correct on confirmed deceptive answers.



Voice Stress Research

Cestaro, V. L., & Dollins, A. B. (1994). An analysis of voice responses for the detection of deception.

Pitch patterns showed no particular indication of deception. Using data from pitch patterns, the accuracy rate in the detection of deception was 37%, and it was not different from the chance level accuracy.

Cestaro, V. L. (1995). A Comparison Between Decision Accuracy Rates Obtained Using the Polygraph Instrument and the Computer Voice Stress Analyzer (CVSA). The CVSA produced the overall accuracy of 38.7%, and it was not different from chance.

Cestaro, V. L. (1996). A comparison of accuracy rates between detection of deception examinations using the polygraph and the computer voice stress analyzer in a mock crime scenario. For the CVSA, accuracy was 52.2%, not significantly different from the chance level accuracy of 50.0%.

Janniro, M. J., & Cestaro, V. L. (1996). Effectiveness of detection of deception examinations using the computer voice stress analyzer. The overall accuracy was 49.8%, and this was not different from the chance level. Moreover, no examiner did better than the chance level. Although the consistency of judgment among examiners was found, the CVSA failed to provide sufficient information in the detection of deception.

DoDPI Research Division Staff, Meyerhoff, J. L., Saviolakis, G. A., Koenig, M. L., & Yurick, D. L. (2001). Physiological and biochemical measures of stress compared to voice stress analysis using the computer voice stress analyzer (CVSA). There was no change in stress scores based on the interpretation of CVSA outputs. Furthermore, there was little agreement in stress scores among three judges.

Have You Been Told That Polygraph is Antiquated?

If so, don't throw it away just yet. There are proponents of other lie detection techniques that claim to have "no equal" and that the polygraph is "old". There is some truth to this claim — they are not equal and polygraph is the oldest and most reliable lie detection technique in use.

It is the only lie detection technique that has proven, independent scientific reliability and validity studies and peer acceptance; it is the only lie detection technique directly used by federal government agencies for investigatory purposes; and, it is used by more state and local law enforcement agencies than any other technique available.

There are some myths about the polygraph.

MYTH: Polygraph has a 30% inconclusive rate.

TRUTH: Typically, in the hands of a competent examiner, the inconclusive rate is approximately 5%.

MYTH: It is legal to use a detection of deception device covertly.

TRUTH: Certain manufacturers of voice stress technologies boast of the ability to use the methodology covertly. Using a detection of deception device covertly is, in many jurisdictions patently illegal. Polygraph is NEVER used covertly.

MYTH: Not enough polygraph exams can be done in one day.

TRUTH: Two to three polygraph exams can be conducted each day. Properly conducted examinations require preparation and cannot be rushed.

Detection of deception involves results that effect people for the rest of their lives. Make certain you weigh all the facts and verify all the claims before you chose which would produce the best results for you, your agency and the community you serve. You will discover what many already know — the only validated, reliable tool for detecting deception is the polygraph instrument!



Do you want to use a detection of deception device that is not supported by the federal government?

Even if it was less expensive, would you buy a bullet proof vest that was only effective about 50% of the time?

The Government's Position

MYTH: Many federal government agencies are satisfied customers of voice stress for detection of deception.

TRUTH: No federal government agency that has an established and accredited detection of deception program uses any form of voice stress.

The Department of Defense (DoD) has stated, based on extensive research by the Department of Defense Polygraph Institute (DoDPI), that the preponderance of scientific evidence clearly demonstrates the polygraph is far more accurate at detecting deception than is voice stress analysis. No Department of Defense agency uses any form of voice stress analysis for investigative purposes. The entire text of the published position statement of the Department of Defense Polygraph Institute concerning voice stress analysis may be found at www.polygraph.org.

Cost Comparison

MYTH: Polygraph is more expensive than voice stress.

TRUTH: Polygraph can actually be less expensive than voice stress.

POLYGRAPH

Polygraph Instrument*	\$5,950
<u>Tuition for one student (320 hours of training)</u>	<u>\$5,000</u>
Total Cost	\$10,950

**The purchase of computer hardware is not required, provided that you have a desktop or laptop computer upon which the polygraph software may be installed.*

Voice Stress - Legal Liability?

MYTH: I can legally and without concern of liability use a voice stress device to screen applicants.

TRUTH: The Equal Employment Opportunity Commission has stringent rules requiring any test used in hiring decisions be scientifically validated. This is what attorney Gordon Vaughan warns about using voice stress:

"The use of a scientifically invalidated technique such as voice stress for screening applicants or screening or disciplining employees, absent any validated study assessing whether there is a disparate impact of such testing on the bases of race or gender (see generally 29 C.F.R. sec 1607.1 et seq) may subject the user department to serious liability under EEOC rules."

Gordon Vaughan, attorney, Vaughan & Demuro

VOICE STRESS¹

CVSA™ Program, loaded into Toshiba Satellite Laptop Computer*	\$9,950
<u>Tuition for one student (6-days of training)</u>	<u>\$1,340</u>
Total Cost	\$11,290

**Dedicated computer to be used solely for CVSA™ must be ordered from the manufacturer.*



Less comprehensive training may put more officers on the street, but, would you want your partner to only undergo one week?

Training

MYTH: Polygraph training takes too long.

TRUTH: Training is more than six days long. However, this training is necessary to produce a competent examiner. There are no short cuts to training — it must be all-inclusive. Not only does the training help produce court defensible techniques, it leads to better results and more confessions.

POLYGRAPH

- Scientific History of Polygraph
 - Instrumentation
 - Test Question Construction
 - Polygraph Techniques
 - Test Data Analysis
 - Interviewing/Post-Test Procedures
 - Ethics
 - Development of Student Skills
 - Legal Issues
 - Psychology
 - Physiology
 - Student Performance Evaluation
 - Countermeasures and Examiner Precautions
 - Computer Polygraph Testing
 - Communications and Cultural Diversity
- (There may be up to 8 specialized instructors per school.)*
Total Classroom Time - 320 Hours (minimum)

VOICE STRESS¹

- Device Training
 - Interviewing/Interrogation
 - Kinesics
- Total Classroom Time - 6 Days**

For more information on detection of deception devices, please visit the following websites:

**www.voicestress.org
www.polygraph.org
www.wordnet.net/aapp/**

or you may contact:

**Robbie Bennett
APA National Office Manager
1-800-APA-8037
APABENNETT@aol.com**

**Bruce Robertson
Vice President, AAPP
1-937-433-7661
brucer@erinet.com**

Footnotes:

¹ Information taken from www.cvs1.com (06/04/02)



Provided By:
The American Polygraph Association and
The American Association of Police Polygraphists

