

Q: What is AMTAS[™]?

A: AMTAS stands for the “Automated Method for Testing Auditory Sensitivity” and was developed by Dr. Robert Margolis. It is a self-administered hearing assessment tool, designed to enhance efficiency and workflow for audiologists by obtaining a diagnostic or screening audiogram. The diagnostic audiogram may include air and bone conduction thresholds (with masking) as well as speech audiometry. The AMTAS software is a patient-friendly program that connects to a GSI audiometer used to complete the evaluation.

Q: Which tests does AMTAS Pro[™] perform?

A: AMTAS Pro obtains air conduction thresholds from 250 Hz – 8000 Hz . Bone conduction thresholds are obtained at 500 Hz, 1 kHz, 2 kHz, and 4 kHz. Speech Reception Thresholds and Word Recognition Scores are determined by utilizing a forced-choice method. The methodology and validity have been verified in published studies.

Q: What equipment do I need to use AMTAS Pro?

A: AMTAS Pro requires the use of an approved GSI audiometer, compatible computer, bone conductor with AMBANDS for forehead placement, and circumaural (DD450, HDA280) headphones. A USB cable is required to connect the audiometer to the computer.

Q: Why does AMTAS use forehead bone placement?

A: AMTAS Pro utilizes forehead bone placement to eliminate the need to switch transducers during the evaluation. Masking is always applied to isolate the test ear.

Q: How is the speech testing performed?

A: Speech testing is performed through a forced choice method. After a speech stimulus is presented, four words will appear and the patient is instructed to select the correct word. Forced choice speech testing has been validated and a peer reviewed article is available for more information.

Q: How does AMTAS handle conductive components and asymmetries?

A: Masking is applied throughout the entire evaluation. Proprietary algorithms based on research and evidence based practices ensure the masking levels are appropriate. Over or under masking will be noted in the quality indicators and the audiologist will determine the appropriate next step for testing.

Q: Which patient populations can use AMTAS?

A: Research indicates that over 80% of patients will be able to successfully complete the AMTAS evaluation. If a patient is unable to perform the self-evaluation, the test may be aborted and manual testing administered.

Q: How long does the testing take?

A: The test is self-paced so patients may proceed at a rate that is comfortable for them. Typically, a full diagnostic evaluation will take 15-20 minutes to complete. AMTAS is configurable, so it is possible to perform only air conduction thresholds or a very basic air conduction screening which would significantly decrease test times.

Q: How does AMTAS Pro fit into my current practice?

A: AMTAS Pro is designed to save time and improve efficiency. It fits well in any practice that does routine audiometric testing. From ENT offices, the VA, and private practices to dispensing offices, AMTAS Pro can be used to deliver validated test results so that the audiologist can spend more time connecting, counseling, and coordinating patient care.

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Q: How can I be confident in the testing results?

A: AMTAS Pro assigns up to nine quality indicators to provide insight into the behavior of the patient during the test and aides in interpretation. AMTAS methodology and validity has been documented with over 10 years of research and publications in international peer reviewed journals.

Q: What are the nine quality indicators with AMTAS Pro?

A: The quality indicators are as follows:

1. **Predicted Accuracy** - A summary measure of test accuracy labeled as good, fair, or poor. If poor, a re-assessment may be necessary.
2. **Predicted Average Absolute Difference** - Difference in dB between AMTAS obtained thresholds and manual thresholds obtained by an expert audiologist.
3. **Masker Alerts** - Thresholds where masking levels may have been too high or too low.
4. **Time per Trial** - The average time it took the patient to respond to the stimulus.
5. **False Alarm Rate** - The number of times the patient responded "yes" when no stimulus was presented, divided by the total number of times no stimulus was presented.
6. **Average Test-Retest Difference** - Average difference between 1 KHz test and retest in right and left ear.
7. **Quality Check Fail Rate** - Number of times patient did not respond to stimulus above threshold, divided by number of measured thresholds.
8. **Number of Air/Bone Gap > 35 dB** - The number of air/bone gaps that exceed 35 dB.
9. **Number of Air/Bone Gap < -10 dB** - The number of air/bone gaps that are less than -10 dB.

Q: How does AMTAS benefit audiologists?

A: AMTAS was designed to be a tool that is used by audiologists and clinicians to help maximize their time and manage busy schedules.

Q: I have a GSI AudioStar Pro, does my audiometer need to be calibrated differently?

A: AMTAS Pro utilizes the circumaural headphones that are used to perform high frequency and full frequency audiometry. If your compatible GSI audiometer is equipped with these headphones, simply obtain an AMTAS license and additional calibration is not required.

Q: How can I get AMTAS Pro?

A: If you have an AudioStar Pro or Pello, your device may be easily updated in your office. Contact your local GSI distributor for pricing and installation.