Sound Beginnings
Illinois Newborn Hearing Program

PROCESSING IN HEARING AIDS

Conventional or Analog Hearing Aids	The most basic of the three levels of hearing aid technology. The audiologist determines the specifications a patient needs in the hearing aid, and then a manufacturer builds the aid to meet those specifications. The audiologist has limited flexibility to make adjustments after the hearing aid is returned from the manufacturer. The user is involved in how the hearing aid performs. The user adjusts the volume to suit the environment. Most of the adjust-ments are based on the volume setting that is selected for a specific environment.
Programmable (Analog)	The audiologist uses a computer to program more precisely the hearing aid. Adjustments can be easily done in the office. Your audiologist will set the appropriate amount of amplification suited for your hearing loss and hearing sensitivity to soft and loud sounds. Some programmable hearing aids offer the option of having multi-programs for situations that require different amplification needs.
100% Digital Hearing Aids	The difference between analog and digital is similar to a tape deck (analog) and CD player (digital). With digital hearing aids sound is processed in 0's and 1's making it easier to analyze the incoming signal and make fine changes that closely match the needs of individuals' hearing loss. The audiologist programs the hearing aid with a computer and can adjust the sound quality and response time on an individual basis. Digital hearing aids also have numerous channels of amplification compared to one to three in conventional and programmable devices. It is like having an equalizer in your hearing aid. Digital circuitry provides the most flexibility for the audiologist to make adjustments for the hearing aid 100% digital hearing aids provide clearer sound quality than most analog hearing aids. Although no hearing aid can completely eliminate background noise, digital hearing aids have the ability to suppress (make softer) the background noise and amplify direct speech.

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