



Important Battery Facts

FOR TODAY'S HEARING INSTRUMENTS



There are many factors that affect how long a hearing aid battery lasts.

AN INDIVIDUAL'S HEARING LOSS

As severity increases...



Increased amplification is required

Increasing current

Reducing battery life

AN INDIVIDUAL'S HEARING AID USAGE

2 things to take into account:



How many days a week do they wear their hearing aid?



How many hours a day do they wear their hearing aid?

THE BATTERY SIZE / BATTERY LIFE

As the physical size of the batteries decrease, the amount of ingredients needed to power the battery also decreases, making the battery life shorter for smaller batteries and longer for bigger batteries.

Battery size	Life expectancy
10	3 - 10 days
312	3 - 12 days
13	6 - 14 days
675	9 - 20 days

*Cochlear implant devices normally require a specially formulated battery and they may last as little as one day.



LOW HUMIDITY

As humidity is reduced...

- Batteries may dry out, reducing the battery life.
- This can be an issue if:
 - Users are indoors during winter months in northern climates
 - Use of wood burning to heat homes
 - Keeping battery in dry aid kits in an already dry environment
 - Intermittent user
 - If normal service life is more than 7 days



HIGH HUMIDITY

As humidity increases...

- Batteries may take on moisture, interfering with the natural discharge expansion, resulting in swelling/leakage and reducing battery life.
- This can be an issue if:
 - Users work outdoors for extended periods in high temp / high humidity areas.
 - Live in a non air conditioned environment in high humidity areas
 - Intermittent user
 - If normal service life is more than 7 days



ALTITUDE

As altitude increases...

- Percentage of Oxygen level in the air is reduced, lowering the hearing aid battery voltage, causing the battery to reach the endpoint earlier and reduces battery life.
- This can be an issue if:
 - Individuals live in areas at high altitude
 - Flying in a plane when battery is late in discharge



TEMPERATURE

As temperature is reduced...

- Hearing aid battery voltage is lowered and reaches functional end point earlier, reducing battery life.
- This can be an issue if individuals are working outside in the winter or in a refrigerated environment.

INSTRUMENT DIFFERENCES

Features in today's digital instruments, like:



Noise cancellation



Multi-channel processing

May reduce battery life by 20%



With and without interface units

When in use, can increase the current up to 300%, further reducing battery life

PREMIUM FEATURES

- FM (looping)
- Generation of sound with tinnitus patients

WIRELESS / BLUETOOTH FEATURES

OEM SETTINGS

- low battery warnings can result in perceived short life.

THE BOTTOM LINE...

There is no one answer that is going to work for all hearing aid wearers. The best way for a patient to understand the battery life that they can expect, is to benchmark their individual battery performance over time.

Source: *The Hearing Review*

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