Phonak Fast Facts

Lithium-ion batteries

What is it?

Lithium-ion battery (Li-ion) is the most popular rechargeable battery technology used in rechargeable consumer electronics. The lightest of all rechargeable compounds, it creates energy by moving lithium ions from the negative electrode to the positive electrode during discharge and back when charging.

Why use it?

Li-ion is a low-maintenance battery with a high battery capacity, an advantage that most other rechargeable technologies cannot claim. With a low self-discharge compared to Nickel-Metal Hydride, Li-ion is ideally suited for everyday rechargeable electronics. There is no memory effect so there is no need for the battery to completely discharge before recharging. In addition, it can be charged and discharged multiple times without any effect on battery performance. Li-ion cells are ecologically friendly when disposed correctly.

How to use it?

Like all rechargeable batteries, correct handling of the battery is required. Electronics with a Li-ion battery should be placed in the correct charger with the correct electric voltage. It should not be charged in extremely high or low temperatures which can cause it's performance to degrade faster than normal. If the battery is not going to be charged for an extended period of time (e.g. longer than 2 months) , performance can be maintained by charging it to 50% and then storing it in a cool place. Again like all rechargeable batteries, a completely depleted battery will decrease the overall lifespan of the battery.

For more information on the Phonak rechargeable hearing aids. go to www.phonakpro.com/audeo-b or contact your local Phonak representative.

Reference:
http://batteryuniversity.com/learn/article/is_lithium_ion_the_ideal_battery

Frequently asked questions about lithium-ion (Li-ion) batteries in hearing aids

Is a Li-ion battery safe in hearing aids?

Li-ion is the popular rechargeable battery choice that is used in many everyday consumer electronics such as cellular phones and tablets. It is also the rechargeable solution for cochlear implants. Currently, it is the fastest growing and most promising battery technology and has been thoroughly tested.

Has Li-ion ever been used in a hearing aid before?

Yes. Li-ion technology has been available as a direct to consumer solution but this is the first rechargeable Li-ion battery cell that provides 24 hours* of hearing with a simple charge of just 3 hours. Additionally, lithium-ion batteries will last the lifetime of a hearing aid, with several years of repeated charging.

*Expected results when fully charged, and up to 80 minutes wireless streaming time. Please refer to www.phonakpro.com/evidence

How many hours per day can hearing aids with Li-ion give on a single charge?

This depends on the hearing loss, the power of the receiver used and the amount of streaming. With the Phonak rechargeable hearing aids, end users with a moderate hearing loss and a standard receiver will have 24 hours* of wearing time with up to 80 minutes of streaming. For 5 hours of streaming, the end user will have 20 hours of battery.

Will the performance of Li-ion deteriorate after one year and require replacing?

No. With Phonak rechargeable hearing aids, the electronics surrounding the Li-ion have been specially designed so that the battery performance will last up to 4 years. After 4 years, the performance of the battery may decrease slightly. If the device is not used frequently it should be stored in the charger within the stated operating temperature range: 0° to +40° Celsius (33° to 104° Fahrenheit) as stated in the User Guide.

Are Li-ion batteries safe to be used in hearing aids for children?

Yes. Children use many every day electronics such as laptops, cellphones and electronic tablets. Also children as young as 6 months who have been implanted with a cochlear implant already use Li-ion.

Is my Li-ion hearing aid safe to be used for air travel?

Yes. Airline rules state that Li-ion batteries less than 25 grams may be brought onto the plane as carry-on luggage. Our Phonak rechargeable hearing aid batteries are less than 1 gram and the Power Pack is 15 grams, therefore below the dangerous goods level and does not require to be registered.

How can I ship my Li-ion hearing aids?

There are new rules and regulations that are applicable for shipping devices with a Li-ion battery. For more information please contact your local post office or the International Air Transport Association (IATA) website for further information.

How do I dispose of my Li-ion hearing aid?

Li-ion batteries are 100% recyclable and can be used to create new products. The Li-ion battery in Phonak rechargeable hearing aids is also recyclable. Please return the hearing aid to your hearing care professional or contact Phonak for more information.

Is my Li-ion hearing aid safe and stable?

Yes. The circuitry surrounding the Li-ion battery in the Phonak rechargeable hearing aids, as well as the battery chemistry are designed to be safe and stable. To ensure safe conditions, the hearing aids should be charged and used within the operating temperature range: 0° to +40° Celsius (33° to 104° Fahrenheit) as stated in the Phonak rechargeable hearing aid User Guide.