

# The Villages Health®

AUDIOLOGY PATIENT NEWSLETTER  
March 2023



## Hear Us Out-Kidneys and Auditory Function

What do highways, education, finance, electrical power and healthcare have in common? Each exemplify **system types**. Personally, human body systems are complex groups of organs and tissues interacting to perform important functions. Primary systems include nervous, muscular, respiratory, circulatory and digestive. Throughout life's journey, savvy healthcare consumers learn why and how each contributes to enhancing quality of life.

Located below the rib cage, on each side of your spine, kidneys are two bean-shaped organs about the size of a fist. They remove wastes, extra fluids and acids from your body, while helping to maintain ideal balances of water, salts and minerals in your blood. Without this **continuous cleansing process**, nerves, muscles and other tissues may not function normally, leading to Chronic Kidney Disease (CKD).



The essential point is, when approximately 1 in 7 Americans have CKD, sooner awareness can promote better outcomes.



Most people may not experience any severe symptoms until kidney disease advances. However, they may notice having:

- less energy
- trouble concentrating
- a poor appetite
- trouble sleeping

- muscle cramping at night
- swollen feet and ankles
- need to urinate more often, especially at night

Realizing healthy kidney function is essential to our body's filtration system, many are surprised to discover how it may relate to hearing function by **disrupting auditory capabilities** of your inner ear's minuscule cochlea.

Chronic kidney disease also increases heart and blood vessel disease risks. These problems may gradually worsen over a long timeframe and if kidneys do not effectively remove impurities or toxins from bloodstreams, then sensorineural hearing loss is more likely to occur, with estimates ranging from 36% to 77%.<sup>2</sup>

As peer-reviewed research states:

*"The odds of hearing impairment were greater with lower eGFR than with normal eGFR. Our conclusion is that CKD combined with hypertension may be an important factor in disturbing hearing thresholds."*<sup>3</sup>

*"We recommend that screening the hearing of patients with CKD to provide earlier identification of hearing impairment and earlier intervention, thereby preventing progression of hearing impairment and providing appropriate treatment strategies."*<sup>3</sup>

<sup>1</sup> <https://www.niddk.nih.gov/health-information/health-statistics/kidney-disease>

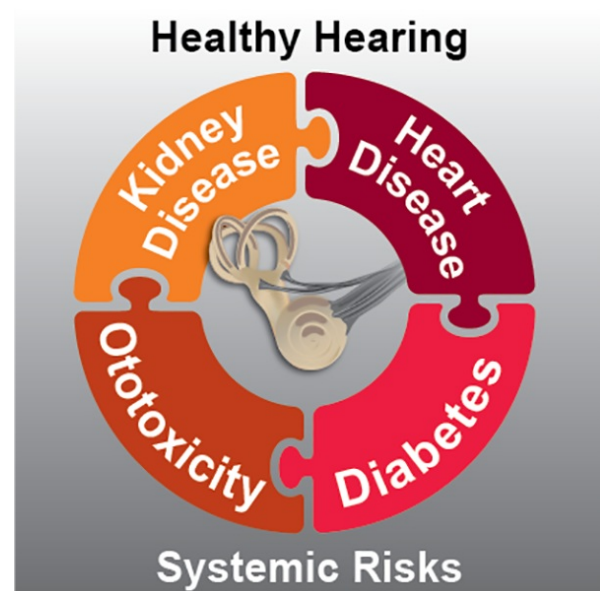
<sup>2</sup> Gupta S, Curhan SG, Cruickshanks KJ, Klein BEK, Klein R, Curhan GC. Chronic kidney disease and the risk of incident hearing loss. *Laryngoscope*. 2020 Apr;130(4):E213-E219. doi: 10.1002/lary.28088. Epub 2019 May 28. PMID: 31135964; PMCID: PMC6881518.

<sup>3</sup> Seo YJ, Ko SB, Ha TH, Gong TH, Bong JP, Park DJ, Park SY. Association of hearing impairment with chronic kidney disease: a cross-sectional study of the Korean general population. *BMC Nephrol*. 2015 Sep 16;16:154. doi: 10.1186/s12882-015-0151-0. PMID: 26377178; PMCID: PMC4574145.

With healthy hearing in mind, a circulatory system-focused **Circle of Concern** is comprised of CKD, heart disease, diabetes and ototoxicity.

Be aware each concern may **negatively impact the quantity, quality or purity of blood flow** required for peak body system performance.

Without ideal blood flow to the heart, we know acute consequences may result and with CKD, **a cochlea deprived of optimal inputs** can present auditory challenges.



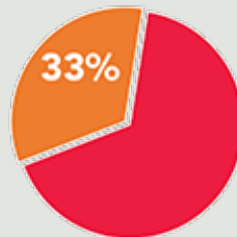
Reputable data indicates CKD, also called chronic renal disease, affects 1 in 7 Americans, approximately **37 million people**, noting these remarkable estimates:

- **90%** are unaware, with early stage disease typically having few symptoms
- **1 in 3** people with diabetes will develop

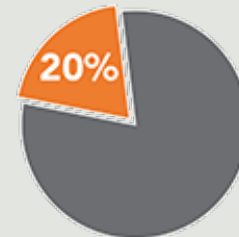
- 1 in 5 people with high blood pressure (hypertension) will develop<sup>1</sup>



**Kidney Disease**



**Diabetes**



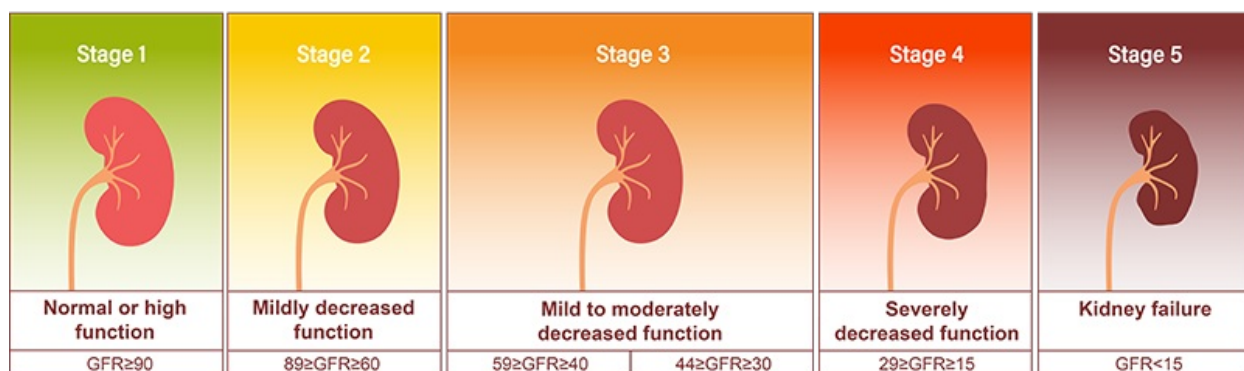
**Hypertension**

As with most chronic medical conditions, increased awareness should **encourage preventative efforts**. Case in point, while many people track weight, blood pressure and cholesterol levels, few know their kidney numbers. To learn more, this useful (2:26) [video](#) explains why:

- eGFR (estimated glomerular filtration rate) is considered to be a highly reliable baseline test to measure kidney function.
- uACR (Urine albumin-creatinine ratio) reveals whether albumin, a type of protein normally found in blood, is in your urine.

In addition, as indicated, ultrasound tests or kidney biopsy may be performed to further evaluate kidney function with respect to this continuum.

### 5 STAGES OF CHRONIC KIDNEY DISEASE



[View larger](#)

*While we take your hearing care seriously, a little laughter goes a long way.*

## Good Humor, Healthy Hearing



***“Hearing my best feels empowering.”***

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With daily struggles associated with having CKD or associated caregiving, effective communication abilities are crucial. Importantly, those not hearing their best may become socially isolated in stressful ways that are mentally or physically detrimental.

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*Now that you know, who do you know?*

Do you have chronic kidney disease or know anyone who should be tested? Please see us or encourage them to get periodic evaluations to accurately assess type and

degree of hearing loss. In close coordination with other medical specialists such as nephrologists (kidney doctors), we will suggest healthy options to improve your quality of life and awareness of hearing-related CKD risk factors.

## VISIT OUR WEBSITE

[LEARN MORE](#)

Schedule an appointment for you or your loved ones.  
**(352) 674-1799**



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**Audiology Department**

*The information contained herein is provided for general educational purposes.  
Regarding specific questions, please talk to your Doctor.*

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