

Hawaiian Rehabilitation Services, Inc.

Hawaiian Rehab News

Redefining Abnormal Lindsey Levanen, SPT

It's no longer a surprise to any clinician in the medical field that low back pain (LBP) is an exceedingly prevalent complaint among patients. Current research is reporting up to two-thirds of adults will experience LBP at some point during their lifetime.¹ Reports about the economic effects of LBP due to medical costs and loss of work productivity are also becoming common knowledge. This information is all great incentive to reduce the prevalence of LBP and help guide patients towards better outcomes, but where should a clinician start? For many years, it's been common practice for patients to receive MRIs and other advanced imaging after seeing their primary care physician, or other practitioner, for complaints of LBP. Recent research is showing this may not be the most cost efficient or productive first step for all LBP patients because of the high rate of incidental findings from age-related changes that may not be causal of the patient's symptoms. These incidental degenerative or "abnormal" imaging findings have a high prevalence even among asymptomatic individuals. Fig 1 shows the prevalence of spinal pathology found on MRIs in asymptomatic patients categorized by age in decades (Brinjikji, et al., 2015). This suggests findings of disk degeneration, signal loss, height loss, bulge, etc. are largely part of the typical aging process rather than pathological processes that require intervention in both older and younger populations. MRI has been proven to be highly sensitive in detecting degenerative changes, but MRI findings are not necessarily associated with the presence or level of LBP experienced by the patient.¹ "Abnormal" findings may actually be "normal".

"This picture leads to questioning the specificity of MRI despite its high sensitivity".² It's important to be aware of the array of findings in the pain-free "normal" population to aid in correctly interpreting MRI results in patients presenting with spinal pathology and then determining their subsequent course of treatment.³ Unnecessary invasive treatment is bad, especially in the

older population. But it is equally as bad to withhold non-invasive treatment from patients without neurological compromise because of incidental findings.³ This is where physical therapy (PT) can help patients and physicians alike. Patients with acute, uncomplicated LBP experienced better outcomes when being referred to PT right away than receiving an MRI or receiving PT after an extended period. The likelihood of undergoing a subsequent surgery or a lumbar injection was significantly reduced when patients received PT while in the acute or subacute phase of LBP versus those in the

bottom line is the importance of understanding the rate of "abnormal" findings in the age matched pain-free population when interpreting the clinical significance of MRI results of LBP patients. Continued research needs to be done to establish diagnostic criteria to help differentiate normal age-related changes from pathologic and pain causing degenerative changes.¹

¹Brinjikji, W., Leutner, P., Comstock, B., Bresnahan, B., Chen, L., Deyo, R., ... Jarvik, J. (2015). Systematic Literature Review of Imaging Features of Spinal Degeneration in Asymptomatic Populations. *American Journal of Neuroradiology*, 811-816.
² Acar Sivas, F., Ciliz, D., Erkol Inal, E., Ozoran, K., &

Imaging Finding	20	30	40	50	60	70	80
Disk Degeneration	37%	52%	68%	80%	88%	93%	96%
Disk signal loss	17%	33%	54%	73%	86%	94%	97%
Disk height loss	24%	34%	45%	56%	67%	76%	84%
Disk bulge	30%	40%	50%	60%	69%	77%	84%
Disk protrusion	29%	31%	33%	36%	38%	40%	43%
Annular fissure	19%	20%	22%	23%	25%	27%	29%
Facet degeneration	4%	9%	18%	32%	50%	69%	83%
Spondylolisthesis	3%	5%	8%	14%	23%	35%	50%

chronic phase.⁴ Those patients also reduced their frequency of physician office visits for LBP related complaints compared to their counterparts in the chronic phase of LBP. PT not only provides helpful interventions for LBP patients, but also provides patient education and reassurance about what to expect with LBP.⁴ By using evidence-based practices, PT is able to boost "patients' perceived ability to self-manage their condition"⁵ and equip them with the tools to independently manage future recurrences of LBP.

On the flip side of the coin, there's no denying the utility of MRI in more complex cases of LBP and should by no means be ignored by clinicians. Patients who don't respond to conservative treatment, have a disk herniation requiring urgent surgery, history of trauma, present with rapidly progressing neurological deficits, or present with suspicion of neoplasm, tumor, or infection are all candidates for immediate MR imaging.^{2,5} The

Sakman, B. (2009). Abnormal Lumbar Magnetic Resonance Imaging in Asymptomatic Individuals. *Turkish Journal of Physical Medicine and Rehabilitation*, 73-77.
³ Tong, H. C., Carson, J. T., Haig, A. J., Quint, D. J., Phalke, V. R., Yamakawa, K. S., & Miner, J. A. (2006). Magnetic resonance imaging of the lumbar spine in asymptomatic older adults. *Journal of Back and Musculoskeletal Rehabilitation*, 67-72.
⁴ Gellhorn, A. C., Chan, L., Martin, B., & Friedly, J. (2012). Management Patterns in Acute Low Back Pain: the Role of Physical Therapy. *Spine*, 775-782.
⁵ Fritz, J. M., Brennan, G. P., & Hunter, S. J. (2015). Physical Therapy or Advanced Imaging as First Management Strategy Following a New Consultation for Low Back Pain in Primary Care: Associations with Future Health Care Utilization and Charges. *Health Services Research*, 1927-1940.

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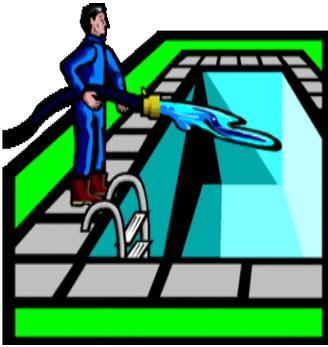
Clinic and Insurance Update

Our Keiki Gym has been re-done to allow for more diversified activities and to assist our children in focusing on their structured treatment session.

HRS is accepting UHC Dual Complete, Corvel and Multiplan patients. In addition, we have been seeing more of our neighbour Canadians who re-

quest rehab services. We assist them with providing information needed to file their claims in Canada. Our policy with any insurance patient is to verify their enrollment and benefits before admission, and inform the patient of any co-pay, deductible and visit limitations according to their individual policy. We submit required pre-

authorization forms needed, along with their primary care provider referral if necessary. Our goal is to provide our patients with a comfortable, private, stress free experience while receiving the best rehabilitation care in Kona.



We recently refinished our solar heated exercise pool, and it looks great!

Staff Profiles

Mindi Bachand was recently promoted to Administrative Assistant. She started with Hawaiian Rehabilitation Services in 2014 as a Therapy Coordinator. She continues to assist with patient care coordination and also handles the accounting/ordering for Hawaii Home Therapy Supplies, credentialing of professionals, and maintaining HR records.

When not working at HRS, Mindi runs her own business "Painted Hearts". She has been very successful in

bringing her art work to life, painting people with "soul portraits", fun art for kids' faces, and customizing clothing items. In her spare time, she enjoys relaxing with husband Simon and daughters Ambriel and Hannah.

Binti Bailey, licensed Physical Therapist Assistant, has been with HRS since 2010. Her enthusiasm and skills with patient care and education motivate the patients to return to active lifestyles. When not at HRS, Binti has become a familiar

sight at performance venues throughout the islands. Her unique fusion of singing styles makes her a popular entertainer at such places as Huggos, Resorts, LavaLava Beach Club, and private functions. In addition, Binti teaches Zumba classes weekly. When she is not treating patients, Binti is passionate about cultivating community support for various organizations and public events.

Hawaiian Rehab has everything from BioFreeze to foam rollers for purchase as part of our Hawaii Home Therapy Supplies

Treating Vertigo with Acupuncture by Paul Thompson LAc.

Chinese medicine differentiates three kinds of vertigo. One is related to hyperactive liver Yang, where the individual feels that they are on a ship, walking unsteadily. The second is associated with wind and phlegm, and everything seems to be spinning around. In the third, vertigo is caused by insufficient blood and qi and is characterized by dizziness, unclear vision, and a ringing in the ears.

During the interview and investigation process, and acupuncturist records the patient's symptoms, checks the tongue and pulse, and selects a treatment protocol. Treatment is directed toward clearing and draining the wind, while spending and regulating the qi in the channels. Patients are advised to reduce water and salt intake during an attack, and appropriate herbal prescriptions are suggested. Intradermal acupuncture, where

very small needles are inserted at a slant and taped down, has been shown to be very effective. Chinese medicine offers a multi-pronged approach to the treatment and prevention of vertigo.

