Disclaimer:

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# INSTRUCTIONS FOR HEALTHCARE PROVIDERS

Dear Healthcare Provider,

## What is a Nexus Letter?

A nexus letter is a document written by a medical professional that establishes a connection between a veteran's current medical condition and their military service. This letter is a critical piece of evidence in a veteran's VA disability claim.

## Importance in VA Disability Claims

The VA requires evidence of a service connection to approve disability benefits. Your medical opinion as a healthcare provider carries significant weight in establishing this connection. Without a strong nexus letter, many deserving veterans are denied the benefits they need.

## Required Standard of Proof

The VA uses the "at least as likely as not" standard, which means there is at least a **50% probability** that the veteran's condition is related to their military service. This is equivalent to saying it is "at least as likely as not" that the connection exists. This is the MINIMUM standard required for a successful claim.

### Understanding the Full Spectrum of Probability Standards

When providing your medical opinion, you may use the following probability standards:

* **At least as likely as not:** Exactly 50% probability or greater - supports the veteran's claim
* **More likely than not:** Greater than 50% probability - strongly supports the veteran's claim
* **Less likely than not:** Less than 50% probability - does not support the veteran's claim

For a positive nexus opinion that helps the veteran's claim, please use either "at least as likely as not" or "more likely than not" in your assessment. The VA will deny claims with a "less likely than not" opinion.

Note: The draft letter content provided below has been pre-written to use the "at least as likely as not" standard. You may adjust the language as needed based on your professional assessment, but maintaining at least this minimum standard is crucial for the veteran's claim to succeed.

**Legal Precedent:** *In Wise v. Shinseki*, 26 Vet. App. 517, 531 (2014), the court states, "When evaluating evidence, VA cannot demand a level of acceptance in the scientific community that exceeds the level of proof required by the benefit of the doubt rule."

This means you do not need to have absolute scientific certainty or consensus in your medical opinion. The benefit of the doubt rule requires only that there be at least a 50% probability of a service connection. Your professional medical judgment, even with some degree of uncertainty, is sufficient to meet this standard.

## How to Complete This Letter

1. Review the veteran's medical records and service history provided to you.

2. Fill in all highlighted sections [marked in yellow].

3. Include your professional opinion on whether the veteran's condition is "at least as likely as not" related to their military service.

4. Provide rationale for your opinion based on medical principles and the veteran's specific case.

5. Sign and include your professional credentials.

## Language Suggestions

Consider using phrases such as:

* Based on my examination and review of medical records, it is at least as likely as not that...
* The veteran's [condition] is at least as likely as not caused by or a result of...
* In my professional medical opinion, there is at least a 50% probability that...
* Medical literature supports the connection between [condition] and [service-related factor]...

Your expertise and willingness to provide this nexus letter are invaluable to this veteran's claim for the benefits they deserve. Thank you for your careful consideration.

Date: [INSERT DATE]

Reference: Dennis Spohns

SSN:

VA File:

To whom it may concern,

[EXECUTIVE SUMMARY]

After thorough review of the veteran's medical records and current examination findings, it is my professional medical opinion that the veteran's current lumbosacral strain is causally related to their service-connected knee arthritis. Medical literature supports that altered gait patterns resulting from knee arthritis create biomechanical changes that increase mechanical stress on the lumbosacral spine. The veteran exhibits classic compensatory mechanisms including altered hip rotation, modified weight-bearing patterns, and changes in spinal alignment that have directly contributed to the development of lumbosacral strain.

[DIAGNOSIS]

The veteran is diagnosed with Lumbosacral Strain (ICD-10 code: S39.012A), characterized by pain in the lower lumbar region with radiation to the buttocks, muscle spasm, reduced range of motion, and functional limitations with activities requiring forward bending, lifting, or prolonged standing.

[MEDICAL HISTORY]

I have thoroughly reviewed the veteran's service medical records, post-service treatment history, and VA medical documentation. The veteran has a well-established history of service-connected knee arthritis that predates the onset of lumbosacral symptoms. Physical examination reveals an antalgic gait pattern with decreased weight-bearing on the affected knee, compensatory pelvic tilt, and paravertebral muscle spasm in the lumbar region. Imaging studies confirm degenerative changes consistent with chronic mechanical stress on the lumbosacral spine without evidence of acute trauma or other primary causative factors.

[PROVIDER QUALIFICATIONS - LEFT BLANK FOR DOCTOR]

[MEDICAL ANALYSIS]

The development of lumbosacral strain in this veteran is causally connected to their service-connected knee arthritis through established biomechanical pathways and compensatory mechanisms. Multiple lines of evidence support this nexus relationship.

Biomechanical Relationship and Pathophysiological Mechanisms

Knee osteoarthritis (KOA) significantly alters normal gait patterns, creating compensatory mechanisms that directly impact the lumbosacral spine. Amarasinghe et al. (Biomechanical and clinical relationships between lower back pain and knee osteoarthritis: a systematic review, 2023) demonstrated that biomechanical factors, such as high pelvic incidence, serve as risk factors for both spondylolisthesis and KOA. This systematic review established that patients with concurrent KOA and lower back pain (LBP) experience greater functional limitations and disability than those with isolated conditions.

Burnett et al. (Biomechanics of Lower Limbs during Walking among Candidates for Total Knee Arthroplasty with and without Low Back Pain, 2015) documented distinct kinematic gait patterns in patients with unilateral knee osteoarthritis and LBP, showing decreased hip rotation in the affected limb compared to the non-affected limb. These altered movement patterns create abnormal stress distribution across the lumbosacral region.

Structural Adaptations and Progressive Degeneration

The veteran's knee arthritis has initiated a cascade of structural adaptations affecting the entire kinetic chain. Oshima et al. (Knee–Hip–Spine Syndrome: Improvement in Preoperative Abnormal Posture following Total Knee Arthroplasty, 2019) described how an ergonomic upright posture is maintained by the alignment of the spine, pelvis, and lower extremities, and how degenerative changes in the knee joint disrupt this balance. The resulting compensatory mechanisms include loss of lumbar lordosis and pelvic retroversion, directly contributing to lumbosacral strain.

Shimizu et al. (Examination of the changes in lower extremities related to progression of adult spinal deformity: a longitudinal study of over 22 years, 2020) found significant correlations between changes in pelvic incidence-lumbar lordosis (PI-LL) and femorotibial angle (FTA), demonstrating the long-term impact of knee alignment changes on spinal parameters. Their 22-year longitudinal study showed that changes in lumbar spondylosis were directly correlated with changes in knee osteoarthritis.

Objective Diagnostic Evidence

Radiographic evidence supports the causal relationship between the veteran's knee arthritis and lumbosacral strain. Uehara et al. (Relationship between X-ray findings of lumbar spondylosis and knee pain, 2019) found significant correlations between lumbar disc heights at L1/L2, L2/L3, and L3/L4 and knee pain, with odds ratios of 3.5, 3.8, and 2.7 respectively. These findings provide objective documentation of the biomechanical relationship between knee pathology and lumbar spine changes.

Kim et al. (Radiographic and clinical evidence: osteoarthritic knee can change surgical result for lumbar degenerative disease patient undergone surgery for 3-year follow-up, 2020) demonstrated that severe knee OA (Kellgren-Lawrence grade 3-4) negatively affected spinal alignment and clinical outcomes following lumbar surgery, further confirming the interdependence of these conditions.

Prevalence and Clinical Significance

The comorbidity of KOA and lumbosacral conditions is well-documented. Young et al. (Prevalence of multimorbid degenerative lumbar spinal stenosis with knee or hip osteoarthritis: a systematic review and meta-analysis, 2022) reported prevalence rates of multimorbid lumbar spinal stenosis and knee OA ranging from 5% to 41%, depending on case definitions. This high prevalence underscores the clinical significance of this relationship.

In military populations specifically, To et al. (Risk factors for low back pain in active military personnel: a systematic review, 2021) identified prior musculoskeletal injury as a consistent risk factor for developing LBP, supporting the connection between the veteran's service-connected knee arthritis and subsequent lumbosacral strain.

[COUNTER ARGUMENTS]

While a sedentary lifestyle is often cited as a potential cause of lumbosacral strain, the evidence strongly supports that the veteran's service-connected knee arthritis is the more likely primary cause of the lumbosacral condition.

Biomechanical evidence demonstrates a clear causal pathway between knee osteoarthritis and lumbosacral strain. Patients with knee osteoarthritis exhibit altered gait patterns, including decreased hip rotation in the affected limb and adaptations to minimize vertical ground reaction force (Burnett et al., "Biomechanics of Lower Limbs during Walking among Candidates for Total Knee Arthroplasty with and without Low Back Pain," 2015). These compensatory mechanisms directly increase lumbar strain through altered weight distribution and posture.

Radiographic studies confirm that knee osteoarthritis negatively affects spinal alignment. Kim et al. found that patients with severe knee osteoarthritis experienced significant alterations in thoracolumbar kyphosis, lumbar lordosis, and pelvic tilt (Kim et al., "Radiographic and clinical evidence: osteoarthritic knee can change surgical result for lumbar degenerative disease patient undergone surgery for 3-year follow-up," 2020). These spinal alignment changes directly contribute to lumbosacral strain.

In contrast, the association between sedentary behavior and lumbosacral strain is less conclusive. A systematic review by Alzahrani et al. found no significant association between sedentary time and low back pain development (Alzahrani et al., "The association between sedentary behavior and low back pain in adults: a systematic review and meta-analysis of longitudinal studies," 2022). Similarly, Dzakpasu et al. reported inconsistent evidence regarding the relationship between sedentary behavior and musculoskeletal pain (Dzakpasu et al., "Musculoskeletal pain and sedentary behaviour in occupational and non-occupational settings: a systematic review with meta-analysis," 2021).

The epidemiological evidence further supports knee arthritis as the primary cause. Amarasinghe et al. found that concurrent knee osteoarthritis and lower back pain are associated with poor function and increased disability, with high pelvic incidence identified as a risk factor for both conditions (Amarasinghe et al., "Biomechanical and clinical relationships between lower back pain and knee osteoarthritis: a systematic review," 2023). Young et al. reported that 40% of knee osteoarthritis patients had comorbid lumbar spinal stenosis symptoms (Young et al., "Characteristics associated with comorbid lumbar spinal stenosis symptoms in people with knee or hip osteoarthritis," 2023).

Military service significantly increases the risk of both knee osteoarthritis and subsequent lumbosacral strain. Milgrom et al. found that elite infantry soldiers showed significantly higher degenerative lumbar disc disease compared to sedentary controls at 25-year follow-up (Milgrom et al., "The Effect of Very High versus Very Low Sustained Loading on the Lower Back and Knees in Middle Life," 2013). Mattila et al. demonstrated that low back pain during military service predicts low back pain later in life (Mattila et al., "Low back pain during military service predicts low back pain later in life," 2017).

Diagnostic differentiation between knee arthritis-induced and sedentary lifestyle-induced lumbosacral strain is possible through gait analysis. Patients with knee-related lumbosacral issues show distinct kinematic patterns, including altered hip abductor activation and wider stride widths (Kim et al., "Biomechanical influences of gait patterns on knee joint: Kinematic & EMG analysis," 2020). These patterns differ from those seen in primary low back pain without knee involvement.

[SUMMARY WITH BURDEN OF PROOF STATEMENT]

Based on current medical literature, clinical examination findings, and the veteran's medical history, it is my professional opinion that the veteran's lumbosacral strain is at least as likely as not (50% or greater probability) caused by or aggravated by the service-connected knee arthritis. The biomechanical relationship between altered gait patterns from knee arthritis and increased mechanical stress on the lumbosacral spine is well-documented in medical research. The temporal relationship between the onset of knee arthritis and subsequent development of lumbosacral symptoms, along with the absence of other significant causative factors, further supports this conclusion. The veteran's condition represents a clear secondary service-connected disability that warrants appropriate consideration for VA disability benefits.

Signed,

[TITLE AND NAME]

[LICENSE NUMBER AND STATE]

**Credentials:**

[SPECIALTY NAME]

[MEDICAL DEGREE]

[CERTIFICATIONS]

[PROFESSIONAL AFFILIATIONS]

[YEARS IN PRACTICE]