# GOUT AND ACTIVTIES OF DAILY LIVING





### October 2024

Gout is a form of arthritis that occurs when too much uric acid builds up in the joints. Symptoms most commonly present in the large toe, but can be present in other joints, and include a sudden onset of severe pain, redness, and swelling. Gout attacks often happen at night, as the body's temperature lowers, allowing uric acid to more quickly crystallize in the joints to cause the onset of an attack. With proper treatment, gout and its painful attacks can be successfully managed<sup>1</sup>.

TREND is a community-powered digital analytics company that turns the conversations of rare and chronic disease communities into actionable insights that spark broader understanding and therapeutic progress. The aim of this research is to gain a deeper understanding on the impact of gout on activities of daily living with a focus on professional activities. We have been partnering with the Gout Support Group of America (GSGA) for this important work.

#### **FACEBOOK**

# **DATA SOURCES**

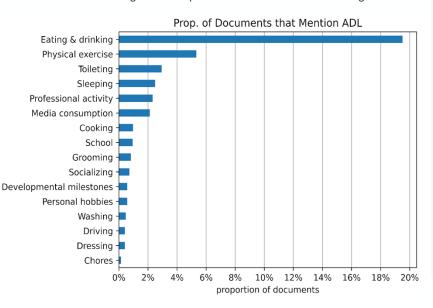
### REDDIT

Group: Gout Support Group of America
Posts & Comments Analyzed: 114,016
Time Range: 2021-2024

**Group:** r/gout **Posts & Comments Analyzed:** 217,967

**Time Range:** 2011-2024





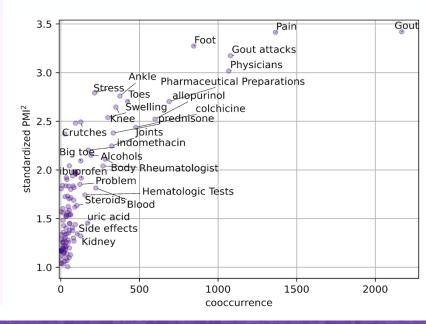
The bar chart in Figure 1 displays the percentage of documents that mention different Activities of Daily Living (ADL), with bars representing the proportion of documents mentioning each category, ranging from ~0% to ~20%. We found:

- Eating & drinking is the most frequently mentioned ADL, appearing in over 20% of documents.
- Physical exercise, toileting, and sleeping are the next most common ADLs.
- Professional activity is mentioned in 2.3% of the analyzed documents, making it the fifth (5<sup>th</sup>) most frequently mentioned ADL category.
- Basic self-care activities like grooming, washing, and dressing are mentioned less frequently, each appearing in less than 2% of documents.

The scatter plot in Figure 2 displays the relationship between co-occurrence frequency and standardized PMI<sup>2</sup> (Pointwise Mutual Information) for various concepts related to professional activities. Each point represents a concept, with its position indicating its co-occurrence frequency (x-axis) and standardized PMI<sup>2</sup> value (y-axis). We found:

- "Gout," "Gout attack," "Pain," and "Foot" have the highest standardized PMI<sup>2</sup> values and high co-occurrences, suggesting strong association with Professional activities.
- Treatment-related terms and medications like "allopurinol," "colchicine," and "prednisone" appear in the mid-range, reflecting their importance in managing gout in professional settings.
- Body parts like "Ankle," "Toes," "Knee," and "Joints" are prominently featured, highlighting the physical impact of gout on work activities.

Figure 2: Standardized PMI<sup>2</sup> vs. Co-occurrence of Professional Activity and Other Concepts



# **GSGA Q3 REPORT: GOUT AND ADL**





Figure 3 shows the proportion of the top 10 most prevalent topics within discussions of professional activities, with bars representing the percentage of paragraphs mentioning each topic, ranging from 0% to 25%. We found:

- "Gout Flare-Ups and Diet" is the most prevalent topic, appearing in 22.9% of paragraphs, indicating a strong focus on dietary management associated with professional activities.
- "Workplace accommodations" is the second most common topic (10.3%), highlighting the significant need for adaptations in work environments for individuals living with gout.
- "Foot Swelling and Pain", "Gout Flare-Ups and Walking", and "Gout Flare-Ups and Treatment" are the next most prevalent topics, suggesting ongoing management of the condition is a notable concern in work contexts and likely impact work productivity.

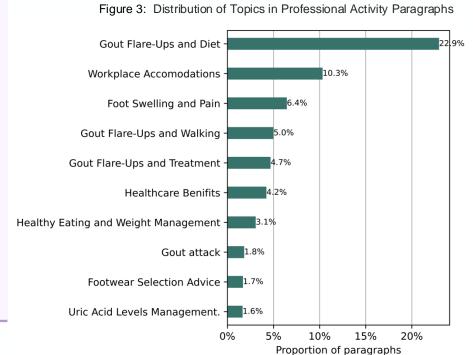




Figure 4: Job-Related Issues in Gout Community

The word cloud to the right visualizes key phrases and terms related to job and career challenges extracted from the professional activity discussions. The size of each word or phrase represents its frequency. Job loss, performance issues, career changes, and financial impact were mentioned in the conversations. The findings are detailed below:

- **Job Loss:** "Out of work", "fired", "lost my job", and "unemployed" are most prominent, indicating a high prevalence of job loss.
- Performance issues: Words like "demanding job", "missing work", and "productivity" imply that managing gout symptoms may impact job performance.
- Career changes: Phrases such as "career change", "changing jobs", and "switch careers" suggest that many community members are experiencing or considering professional transitions to find something more suitable to balance work and the condition.
- Financial impact: Terms like "cannot afford", "financial situation", and "pay my bills" are less frequent terms used but still indicate the financial challenges when living with a chronic condition like gout.

# CONCLUSION



In conclusion, the findings highlight the significant impact of gout on professional activities, with a notable correlation between the condition and job loss, reduced productivity, and career changes. The prevalence of terms related to unemployment and performance issues underscores the difficulties individuals face in maintaining their roles due to symptoms like foot swelling and pain. Dietary management is a critical focus, revealing the need to adapt lifestyles to meet work demands. Additionally, the necessity for workplace accommodations points to the importance of organizational support for employees managing gout. While financial concerns are less frequently mentioned, they remain a crucial consequence of job loss and decreased productivity. Overall, these insights emphasize the need for both personal and institutional strategies and resources to address the challenges posed by living with gout while working.