

SLEEP DOMAIN (SYMPTOMS)

Category/Concept	Coherence in Measurement & Classification		Adequacy of Data		Relevance of Concept		
	Concerns	Explanation	Tier 1 Grade	Tier 2 & 3 Level	Bothersome mean %	Prevalence mean %	Prevalence [Range]
SLEEP DISTURBANCES							
Reduced sleep quality	Moderate	Inconsistent terms; One Tier 3 study disconfirming elevated presence in early PD	A +	2 -	13%	52%	[13-69%]
Insomnia	-	Limited evidence	D	x	-	16%	-
Difficulty falling asleep	-	Strong evidence for presence in early PD <3YSD	B	3	22%	23%	[5-59%]
Difficulty staying asleep	-	Limited evidence	D	x	2%	-	-
Early morning awakening	-	No issues	C	x	7%	41%	-
Altered sleep duration and efficiency	UA	No evidence in early PD; One Tier 1 study disconfirming presence in early PD <3YSD	X -	x	-	-	-
Sleep walking	UA	One Tier 3 study disconfirming; Unclear terminology; Needs definitions	X	x -	-	-	-
	UA	Limited evidence	D	x	-	5%	-
RSBD							
REM Sleep Behavior Disorder (RBD)	Moderate	May encompass multiple experiences	A +	3	5%	29%	[11-39%]
Vivid dreams	Moderate	Unclear if different from RSBD	B	3	7%	20%	[7-31%]
Unpleasant dreams	Moderate	May or may not be component of RBD; unclear category	D	x	-	14%	-
DAYTIME SLEEPINESS	Moderate	Unclear what level of sleepiness constitutes excessive daytime sleepiness	A +	4	8%	26%	[3-54%]

Notes. PD= Parkinson's disease; UA=Unable to assess due to limited data; YSD=Years since diagnosis of Parkinson's disease; **Tier 1 Grade** A+=100% (Green), A=75-99% (Green), B=50-74% (Yellow), C=25-49% (Orange), D=1-24% (Gray), X=No studies supporting presence in early PD (Black); **Tier 2 & 3 Level** 1=75-100% (Green), 2=50-74% (Yellow), 3=25-49% (Orange), 4=1-24% (Gray), x=No Tier 2 or 3 studies supporting presence in early PD (Black). Minus sign "-" in Grade or Level indicates presence of disconfirming evidence. Color coding is used for visual identification of concepts with greater supporting evidence in Grade and Level. For bothersomeness and prevalence, darker colors indicate higher average frequency in studies reporting.