



### Possible mechanisms of psychiatric comorbidity in AD

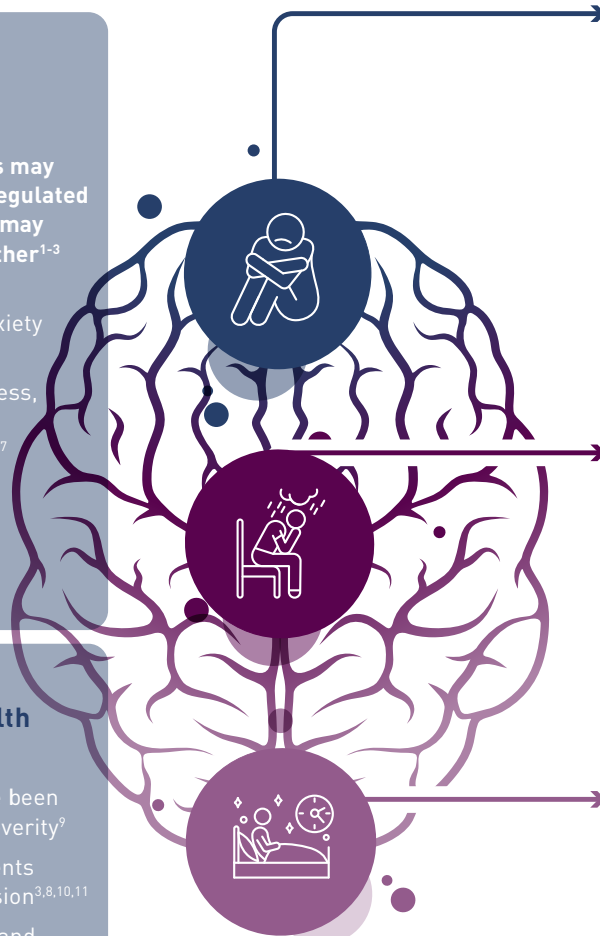
AD and psychiatric conditions may arise from overlapping, dysregulated inflammatory pathways, and may trigger or exacerbate each other<sup>1-3</sup>

- Proinflammatory cytokines have been associated with anxiety and depression<sup>4,5</sup>
- Neuropeptides involved in stress, anxiety and depression can modulate AD disease activity<sup>6,7</sup>
- Sleep disturbance may partially explain the link between AD and psychiatric disorders<sup>2,4,8</sup>



### Considerations for managing mental health comorbidities in AD

- Mental health symptoms have been shown to correlate with AD severity<sup>9</sup>
- Consider screening your patients with AD for anxiety or depression<sup>3,8,10,11</sup>
- Improved control of AD signs and symptoms may help resolve depressive symptoms; psychiatric comorbidities may warrant a step-up to systemic therapy for some patients<sup>8,10</sup>



Up to **87%** of adults with AD suffer sleep disturbance<sup>17</sup>

### Anxiety and depression

Patients with AD are significantly more likely to self-report symptoms or receive a clinical diagnosis of anxiety or depression<sup>10,12,13</sup>.



Patients with moderate-to-severe AD are significantly **more likely to medicate** for their anxiety/depression<sup>13</sup>

- **Anxiolytics** HR (95% CI): **1.7 (1.6-1.9)** vs. general population
- **Antidepressants** HR (95% CI): **1.2 (1.2-1.3)**



1 in 4 AD patients **report depressive symptoms**<sup>10</sup>



1 in 6 AD patients **have clinical depression**<sup>10</sup>

### Suicidal ideation and behavior

The risk of suicide in AD patients is low<sup>13</sup>. Nevertheless, patients with AD are more likely to experience suicidal ideation and are at higher risk of suicidal behaviors and self-harm<sup>14,15</sup>.



Compared with non-AD controls, AD patients are **significantly more likely to experience suicidal ideation**, OR (95% CI): **1.4 (1.3-1.7)**<sup>14</sup>



AD patients are also **significantly more likely to self-harm**, RR (95% CI): **1.4 (1.3-1.5)**<sup>15</sup>

### Sleep disturbance

Patients with AD often have impaired sleep, resulting in fatigue, daytime sleepiness, irritability, disturbed cognition, and decreased motor performance<sup>16</sup>.



Itch due to AD is a major cause of **impaired sleep**, although other factors, such as disrupted circadian rhythm, allergens, and cytokine dysregulation, may also be involved<sup>16,17</sup>



Sleep disturbance may also **worsen AD** by increasing inflammation, pain perception, itching and scratching, and chronic stress<sup>17,18</sup>

Sleep disturbance worsens quality of life and overall health in AD patients<sup>16</sup>



### Useful resources

#### Anxiety and Depression Association of America

Includes a wealth of information and educational materials for both clinicians and patients

[Visit website](#)



Find out more about mental health comorbidity in AD in our video with Dr. Valerie Callender

[Click here to watch the video](#)  
or scan the code using the camera on your mobile device



## References

1. Yaghmaie P, Koudelka CW, Simpson EL. Mental health comorbidity in patients with atopic dermatitis. *J Allergy Clin Immunol* 2013;131(2):428-33.
2. Laird M and Lo Sicco K. Defining and measuring the scope of atopic dermatitis. *Adv Exp Med Biol* 2017;1027:93-104.
3. Hong CH, Sussman G, Turchin I, Wiseman M, Gooderham MJ. Approach to the assessment and management of adult patients with atopic dermatitis: a consensus document. Section III: Evaluation of atopic dermatitis patients for comorbidities. *J Cutan Med Surg* 2018;22(Suppl 1):17S-20S.
4. Brunner PM, Silverberg JI, Guttman-Yassky E et al. Increasing comorbidities suggest that atopic dermatitis is a systemic disorder. *J Invest Dermatol* 2017;137(1):18-25.
5. Kage P, Simon JC, Treudler R. Atopic dermatitis and psychosocial comorbidities. *J Dtsch Dermatol Ges* 2020;18(2):93-102.
6. Lönn Dahl L, Rasul A, Lonne-Rahm S-B et al. Tachykinin upregulation in atopic dermatitis. *Immunopharmacol Immunotoxicol* 2019;41(1):117-22.
7. Salomon J and Baran E. The role of selected neuropeptides in pathogenesis of atopic dermatitis. *J Eur Acad Dermatol Venereol* 2008;22(2):223-8.
8. Silverberg JI. Comorbidities and the impact of atopic dermatitis. *Ann Allergy Asthma Immunol* 2019;123(2):144-51.
9. Simpson EL, Guttman-Yassky E, Margolis DJ et al. Association of inadequately controlled disease and disease severity with patient-reported disease burden in adults with atopic dermatitis. *JAMA Dermatol* 2018;154(8):903-12.
10. Patel KR, Immaneni S, Singam V et al. Association between atopic dermatitis, depression, and suicidal ideation: a systematic review and meta-analysis. *J Am Acad Dermatol* 2019;80:402-10.
11. Silverberg JI, Gelfand JM, Margolis DJ et al. Symptoms and diagnosis of anxiety and depression in atopic dermatitis in U.S. adults. *Br J Dermatol* 2019;181(3):554-65.
12. Eckert L, Gupta S, Amand C et al. Impact of atopic dermatitis on health-related quality of life and productivity in adults in the United States: an analysis using the National Health and Wellness Survey. *J Am Acad Dermatol* 2017;77(2):274-9.e3.
13. Thyssen JP, Hamann CR, Linneberg A et al. Atopic dermatitis is associated with anxiety, depression, and suicidal ideation, but not with psychiatric hospitalization or suicide. *Allergy* 2018;73(1):214-20.
14. Sandhu JK, Wu KK, Bui T-L, Armstrong AW. Association between atopic dermatitis and suicidality: A systematic review and meta-analysis. *JAMA Dermatol* 2019;155(2):178-87.
15. Singhal A, Ross J, Seminog O, Hawton K, Goldacre MJ. Risk of self-harm and suicide in people with specific psychiatric and physical disorders: comparisons between disorders using English national record linkage. *J R Soc Med* 2014;107(5):194-204.
16. Silverberg JI, Garg NK, Paller AS, Fishbein AB, Zee PC. Sleep disturbances in adults with eczema are associated with impaired overall health: A US population-based study. *J Invest Dermatol* 2015;135(1):56-66.
17. Chang Y-S and Chiang B-L. Sleep disorders and atopic dermatitis: A 2-way street? *J Allergy Clin Immunol* 2018;142(4):1033-40.
18. Yu SH, Attarian H, Zee P, Silverberg JI. Burden of sleep and fatigue in US adults with atopic dermatitis. *Dermatitis* 2016;27(2):50-8.