

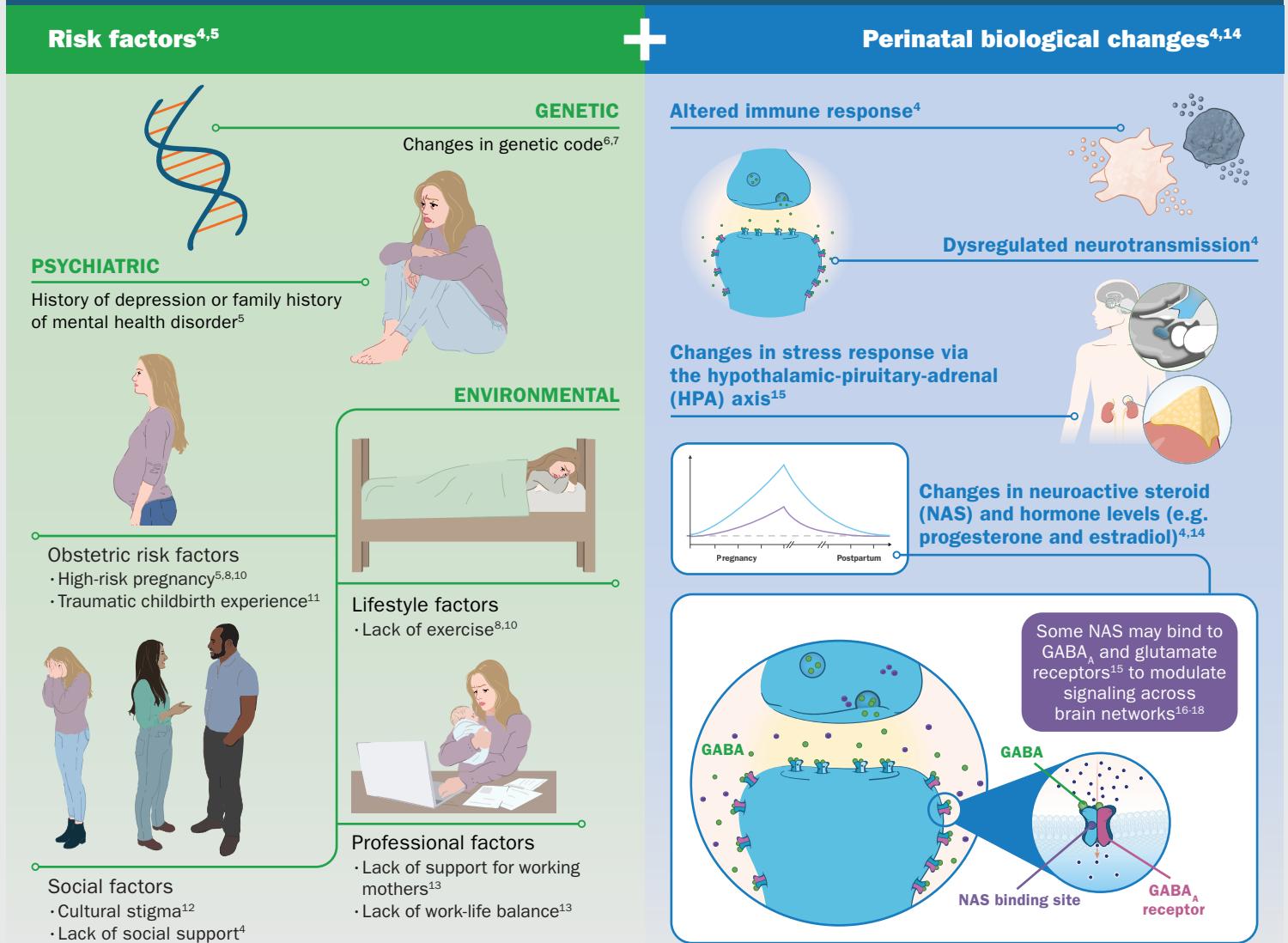
POSTPARTUM DEPRESSION MECHANISMS OF DISEASE



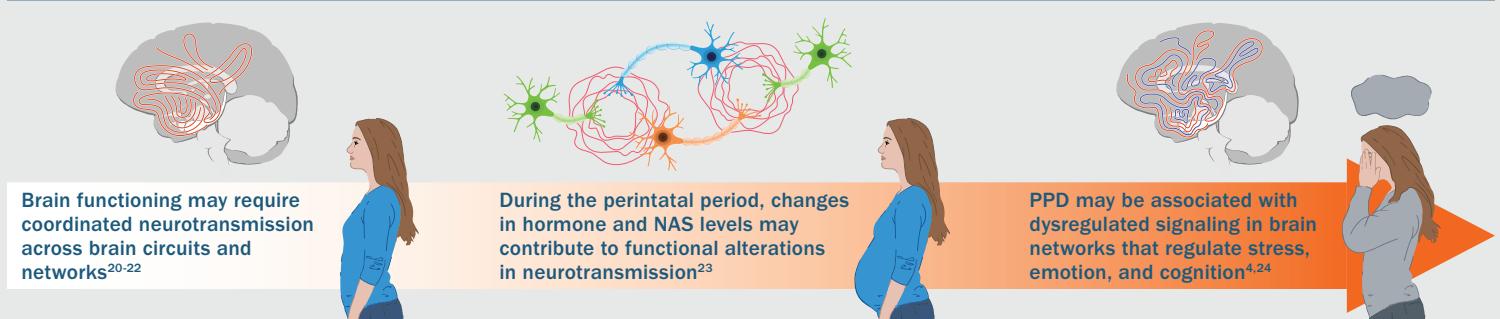
For more information on PPD symptoms and diagnosis, please scan this QR code

PPD is a serious medical condition that is among the most common perinatal complications,^{1,2} affecting ~1 in 8 mothers with a recent live birth³

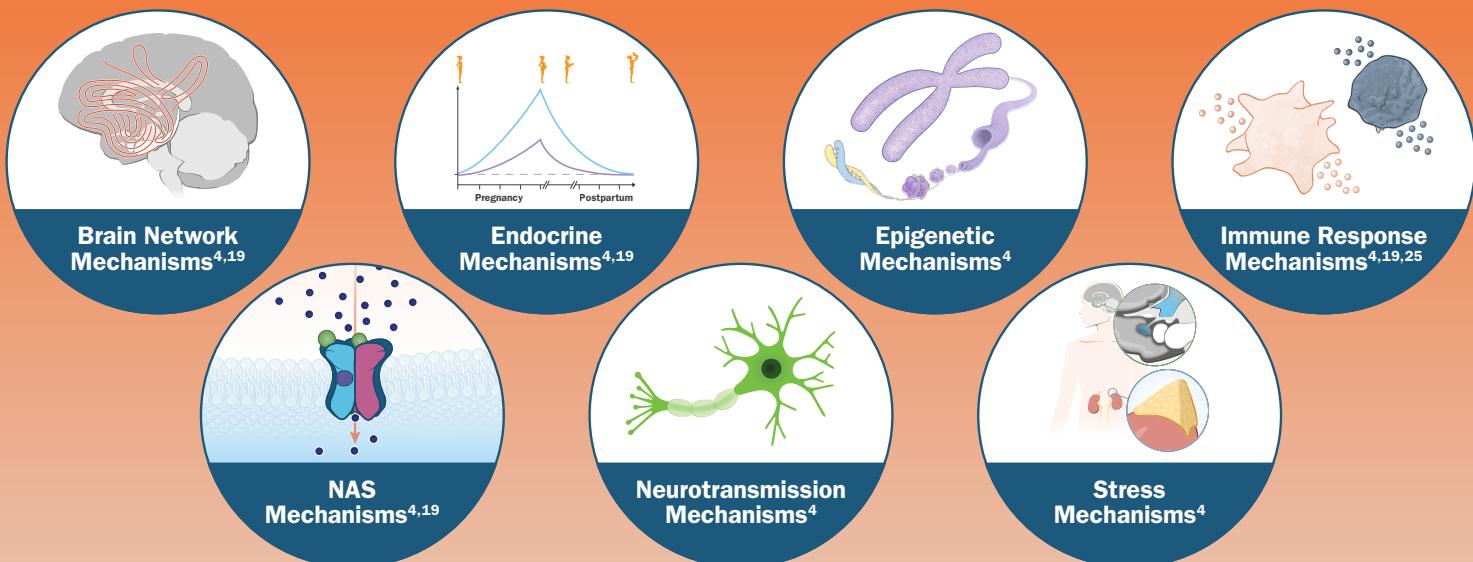
The pathogenesis of PPD involves an interplay of risk factors with perinatal biological changes⁴



Both perinatal hormones and stress may dysregulate brain networks, contributing to PPD^{4,19}



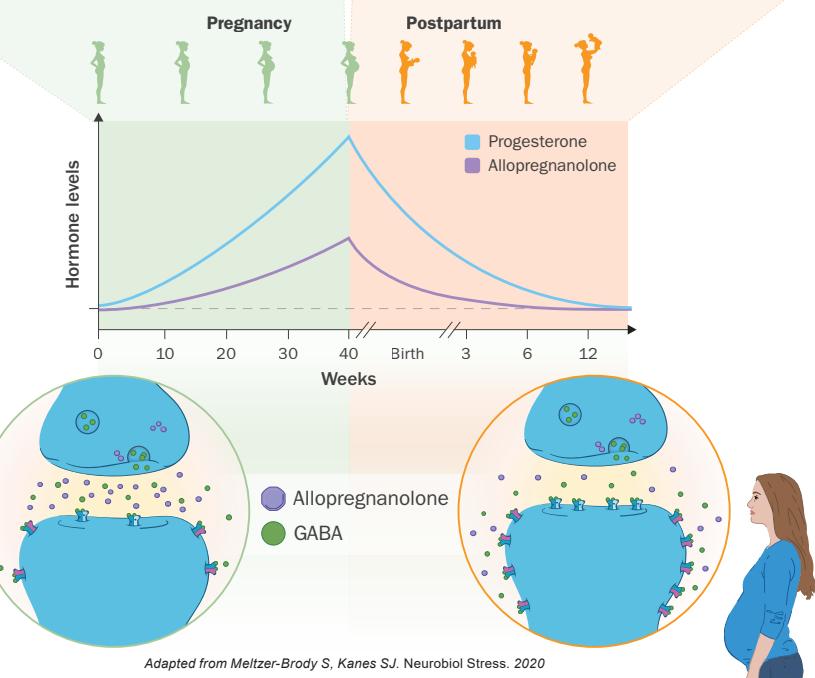
Although the mechanism of disease of PPD is not fully understood, several hypotheses have been proposed, including¹⁹:



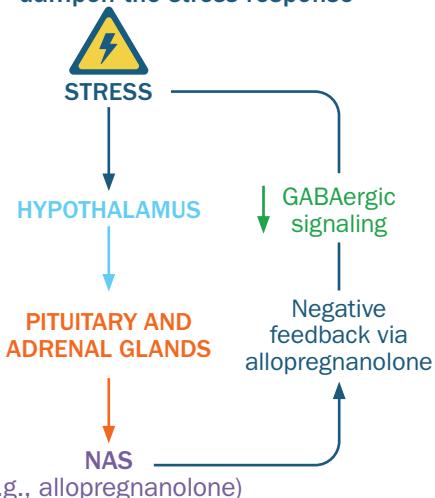
One hypothesized mechanism of PPD includes an impaired ability of the GABAergic system to adapt to changes in allopregnanolone levels during the peripartum period^{15,19,26}

- Allopregnanolone is a NAS and GABA_A receptor positive allosteric modulator²⁷
- During pregnancy, GABA_A receptors are downregulated in response to increased allopregnanolone^{18,26,28}

- At childbirth, allopregnanolone levels rapidly decrease^{27,29,30}
- Subsequently, surface expression of GABA_A receptors typically return to prepregnancy levels^{26,27,29}



In response to stress, GABA_A receptors are thought to regulate a negative feedback loop via allopregnanolone to dampen the stress response^{15,31}



If GABA_A receptors remain downregulated during the postpartum period, the ability to respond to stress may be impacted and this may result in PPD symptoms^{15,26,27,31,32}

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