

# Singing During Pregnancy May Be Harder Due To Hormones

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The question of how hormones affect a woman's voice is relevant to professional singers because hormonal fluctuations may place them at risk of injury. Knowing when the risks are greatest would help singers avoid performing at those times -- in the same way that a track star with a bad knee will sit out a competition.

One of the most dramatic hormonal fluctuations occurs during pregnancy, and many professional singers have experienced difficulty singing while pregnant. However, scientists do not know if this effect is due to hormones or to some other cause, such as decreased lung capacity as the baby grows.

In order to assess the effect of hormones on a pregnant singer's voice, Filipa Lã of Aveiro University in Portugal followed a professionally-trained Portuguese singer through 12 weeks of pregnancy and for 12 weeks after birth. Once a week -- including just two days after the baby was born -- Lã recorded the singer reading and singing into a device that measures the pressure exerted to make each sound. Then Lã collaborated with Johan Sundberg of KTH in Stockholm, Sweden to reconcile the data with measurements of the singer's [hormone](#) levels.

This was the first longitudinal study of the effect of hormones on a singer's voice during pregnancy, and Lã and Sundberg found that the increased levels of hormones correlated with changes to the singer's vocal folds. Though temporary, the changes forced the singer to exert more pressure from her lungs to make the same notes.

"It seems that it's harder work during pregnancy to sing," says Lã. She adds, however, that this is preliminary research based on a single case study and that larger studies would be needed before doctors could give solid advice to professional singers.

These findings will be discussed at the 158th meeting of the Acoustical Society of America (ASA), which convenes from October 26-30, 2009 at the Hyatt Regency in San Antonio, Texas. The talk "Observations of the singing [voice](#) during [pregnancy](#). A case study" (3aMU7) by Filipa Lã is at 11:15 a.m. on Wednesday, October 28.

Abstract: [asa.aip.org/web2/asa/abstracts ... ch.oct09/asa355.html](http://asa.aip.org/web2/asa/abstracts...ch.oct09/asa355.html)

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