The role of Glucose, Calcium and Oxytocin during Whelping

When a bitch goes into labour/whelp the three main substances that her body uses for delivery are: glucose, calcium and Oxytocin. These three substances are generally naturally produced by the bitch’s body during whelping, and they all work together like a team. Oxytocin which is stored in the pituitary gland produces,starts the contractions and regulates how often they occur - Calcium gives strength to the contractions, and Glucose provides energy and endurance. If there are inadequate levels of one or more of these substances in the bitch's body, whelping may not progress successfully so some may need a little help from us.

Glucose

Many pregnant bitches lose their appetites the day of delivery and some may even refuse meals for up to 24 hours+ prior to whelping. Bitches need a large amount of energy to deliver a litter of puppies, so giving a Glucose supplement to the bitch during whelping will help to ensure that her energy levels are kept up. NutraCal, golden syrup, vanilla ice-cream, honey or sugar mixed with water can be used.

Calcium

When it comes to whelping calcium is not about the bones and teeth. The purpose of calcium during whelping is to give strength and intensity to the contraction. Calcium is stored in the bones; its release is regulated by the parathyroid gland. When the demand for calcium in the blood stream is high (such as during whelping) the parathyroid gland pulls it from the bone in to the blood stream. If it becomes clear that the progression of normal labour is slowing down, Giving an oral calcium supplement (check correct dosage instructions on product) + some glucose can help to strengthen and intensify a bitch’s contractions. When you give calcium orally the bitch’s body will excrete what she does not need, so it is completely safe and does not have any negative side affect's. CALCIUM SUPPLIMENT should ONLY be given AFTER whelping/contractions have begun. Some Oral Calcium products which can be safely used if needed during whelp are Calciboost & Calci-Care; Vanilla Ice-Cream is also very good to use as it has both sugar and calcium in it. Calci-care is a good liquid supplement that can also be given daily after whelping to help prevent eclampsia.


Calciboost - http://www.hyperdrug.co.uk/Calciboost-Liquid-500ml/productinfo/CALCIBS/
IT IS IMPORTANT TO REMEMBER that NO EXTRA CALCIUM should be given to a bitch DURING her pregnancy. If you feed/supplement a pregnant bitch with excess calcium during her pregnancy it can suppress the parathyroid gland, and makes it sluggish. So when the bitch starts whelping the parathyroid gland will not work as efficiently as it should and the bitch’s contractions will be weak and non-productive. A pregnant bitch does of course need calcium in her diet, but most high quality/premium adult dog foods will have more than adequate calcium levels in them for the pregnant bitch. Quantity and frequency of meals should of course be increased, and you can even add a little extra protein or carbohydrate to her food, but NO additional calcium. It is recommended that Calcium tablets, powders or calcium rich foods such as puppy food (which has added calcium in it), extra cheese or milk during pregnancy should be avoided. Especially during the last ten days of pregnancy.

**Oxytocin**

Oxytocin is produced in the part of the brain called the hypothalamus. Oxytocin is a naturally occurring hormone in the bitch during whelping, it induces/starts uterine contractions and controls the rate of oxygen and calcium that is allowed to enter the cells of the uterus via the blood stream. Oxytocin also makes the milk flow to the teats. Puppies Suckling on their mothers teats stimulates the release of more Oxytocin. So, in order to increase contractions and speed-up the progress of labour; it is recommended that the new-born puppies be allowed to suckle in between delivery of each pup. Synthetic Oxytocin is available, but this must ONLY be administered by a qualified Vet it can be given via injection if it is deemed necessary. After whelping has finished an Oxytocin injection can also help clean the uterus out and get it back to pre-pregnancy shape. Oxytocin injection must NEVER be used if the bitch’s cervix is not fully dilated/open as it can rupture the uterus and cause death.

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