

Sasha ( Alexander Stalmatski) spoke about pregnancy and delivery on a couple of occasions when I was assisting him in New York back in the late 90s and you can see these in detail in his book Freedom from Insomnia (2001) pages 114-117. Learn to check your CP and get it over at least 30 seconds slowly and maintain this as best possible without stressing your self.

basically until the 3rd trimester: during the first 2 trimesters, nothing to prevent doing reduced calm meditative breathing and slowly moving into reduced breathing practicing 30 to 40 minutes a day. Learning to always nose breath during walking and mild exercise, Avoid overeating, and be very aware of any signs of over breathing and take time to then relax and do some meditative into reduced breathing. Sleep on left side always Taping mouth to sleep, and always breathing through the nose. NO DEEP BREATHING and no puffing !!! Lamaz must have some rational, possibly a kind of really complex Placebo given the whole routine.

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Relaxed breathing rather than Reduced breathing is in order.

The main danger (miscarriage) is due to the cleansing reaction, while it is true that only hypoxic fetuses can be miscarried.

Focus is on prevention of CP losses (episodes of hyperventilation) due to overeating, mouth breathing, poor posture, morning hyperventilation, etc. The rate of CP progress should be limited:

- for women who used medical drugs or were exposed to toxic chemicals by 2 seconds in one week;
- for other pregnant women by 3 seconds in one week.

One zone in a month is slow enough (ie CP 10 to CP20).

Absolutely no extended or maximum pauses

For those of you who are less experienced Buteyko educators, you should work with a seasoned one in such cases. I recommend that a woman in her first tri-mester focus on nosebreathing only and do Buteyko during the second tri-mester or later. You don't want a miscarriage on your hands.

It is better for a pregnant woman to be on more steroids than usual than to be taking ventolin more frequently. Having said that, struggling through asthma symptoms and NOT taking ventolin could be a worse stressor on the baby and the uterus than the side effects from the ventolin. Side-step the issue with more steroids and more steroids, NOT more combination drug such as Advair. As ALWAYS, she should do this in consultation with her doctor.

This is from Sarah Wheeler, a seasoned Buteyko educator and mother living in Australia

Well , I taped up at night for my first trimester with extra pillows to reduce hyperventilation . I did not try to reduce breathing but just be vigilant as to not over breathe ... I had three very good pregnancies..

In retrospect my first very long labour was exacerbated by hyperventilation and mouth breathing... Natural birth and very healthy baby .

2nd baby I nose breathed through a shorter much more manageable labour.

3rd baby I was very clear and confident to nose breathe till the urge to push... I managed all contractions confidently till last half hour became very strong , still nose breathing in shower , then 20 minutes in birthing pool and 2 big mouth breathes and jemima born in water at home:.. All were natural births with no intervention or pain relief . I was 37,39 and 44 ... Buteyko method was a great help during each pregnancy... Any symptoms I experienced improved when I checked in with my breathing ...

Last birth left me really confident to encourage nose breathing through contractions until pushing baby out ....

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Gotta get kids to school now , feel free to ask any more questions,

Kind regards

Sarah

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Protective CO2 and Aging, by Dr. Ray Peat:

".....In ancient China the Taoists were concerned with longevity, and according to Joseph Needham (Science and Civilization in China) their methods included the use of herbs, minerals, and steroids extracted from the urine of children. Some of those who claimed extreme longevity practiced controlled breathing and tai chi (involving imagery, movement, and breathing), typically in the early morning hours, when stress reduction is most important. As far as I know, there are no studies of carbon dioxide levels in practitioners of tai chi, but the sensation of warmth they typically report suggests that it involves hypoventilation.

In the 1960s, a Russian researcher examined hospital records of measurements of newborn babies, and found that for several decades the size of their heads had been increasing. He suggested that it might be the result of increasing atmospheric carbon dioxide.

The experiences and nutrition of a pregnant animal are known to affect the expression of genes in the offspring, affecting such things as allergies, metabolic rate, brain size, and intelligence. Miles Storfer (1999) has reviewed the evidence for epigenetic environmental

control of brain size and intelligence. The main mechanisms of epigenetic effects or “imprinting” are now known to involve methylation and acetylation of the chromosomes (DNA and histones).

Certain kinds of behavior, as well as nutrition and other environmental factors, increase the production and retention of carbon dioxide. The normal intrauterine level of carbon dioxide is high, and it can be increased or decreased by changes in the mother’s physiology. The effects of carbon dioxide on many biological processes involving methylation and acetylation of the genetic material suggest that the concentration of carbon dioxide during gestation might regulate the degree to which parental imprinting will persist in the developing fetus. There is some evidence of increased demethylation associated with the low level of oxygen in the uterus (Wellman, et al., 2008). A high metabolic rate and production of carbon dioxide would increase the adaptability of the new organism, by decreasing the limiting genetic imprints.

A quick reduction of carbon dioxide caused by hyperventilation can provoke an epileptic seizure, and can increase muscle spasms and vascular leakiness, and (by releasing serotonin and histamine) contribute to inflammation and clotting disorders. On a slightly longer time scale, a reduction of carbon dioxide can increase the production of lactic acid, which is a promoter of inflammation and fibrosis. A prolonged decrease in carbon dioxide can increase the susceptibility of proteins to glycation (the addition of aldehydes, from polyunsaturated fat peroxidation or methylglyoxal from lactate metabolism, to amino groups), and a similar process is likely to contribute to the methylation of histones, a process that increases with aging. Histones regulate genetic activity.

With aging, DNA methylation is increased (Bork, et al., 2009). I suggest that methylation stabilizes and protects cells when growth and regeneration aren’t possible (and that it’s likely to increase when CO<sub>2</sub> isn’t available). Hibernation (Morin and Storey, 2009) and sporulation (Ruiz-Herrera, 1994; Clancy, et al., 2002) appear to use methylation protectively.

Parental stress, prenatal stress, early life stress, and even stress in adulthood contribute to “imprinting of the genes,” partly through methylation of DNA and the histones.

Methionine and choline are the main dietary sources of methyl donors. Restriction of methionine has many protective effects, including increased average (42%) and maximum (44%) longevity in rats (Richie, et al., 1994). Restriction of methyl donors causes demethylation of DNA (Epner, 2001). The age accelerating effect of methionine might be related to disturbing the methylation balance, inappropriately suppressing cellular activity. Besides its effect on the methyl pool, methionine inhibits thyroid function and damages mitochondria.

The local concentration of carbon dioxide in specific tissues and organs can be adjusted by nervous and hormonal activation or inhibition of the carbonic anhydrase enzymes, that accelerate the conversion of CO<sub>2</sub> to carbonic acid, H<sub>2</sub>CO<sub>3</sub>. The activity of carbonic anhydrase can determine the density and strength of the skeleton, the excitability of nerves, the accumulation of water, and can regulate the structure and function of the tissues and organs.

Ordinarily, carbon dioxide and bicarbonate are thought of only in relation to the regulation of pH, and only in a very general way. Because of the importance of keeping the pH of the blood within a narrow range, carbon dioxide is commonly thought of as a toxin, because an excess can cause unconsciousness and acidosis. But increasing carbon dioxide doesn’t necessarily cause acidosis, and acidosis caused by carbon dioxide isn’t as harmful as lactic acidosis....."

