

## Date Juice Accelerates Labor in the First Stage

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### ABSTRACT

Labor is a normal process characterized by uterine contractions that cause significant cervical dilatation accompanied by expulsion of the fetus and placenta from the woman's body. The progress of labor in the first stage is the most tiring, strenuous, and most mothers begin to feel pain or pain, in this phase most mothers feel severe pain because uterine activities begin to be more active. The active phase of the first stage of labor involves a lot of energy, so the nutritional needs of the first stage need special attention from the labor manager. One of the fruits that contain considerable energy is the date palm which contains fructose and glucose, all of which are energy sources that are easily absorbed by the body. Dates contain lots of carbohydrates, affect the progress and spontaneity of labor and reduce postpartum hemorrhage. Dates contain saturated and unsaturated fatty acids such as oleic, linoleic, and linolenic acids. Fatty acids in addition to providing and ordering energy, contribute to the delivery of prostaglandins. Therefore, dates can help in saving energy and strengthening the uterine muscles.

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### INTRODUCTION

Labor is a normal process characterized by uterine contractions that cause significant cervical dilation accompanied by expulsion of the fetus and placenta from the woman's body <sup>[1,2]</sup>. At least, the labor process can be classified into four stages, namely "stage I, stage II, stage III, and stage IV". The first stage is also called the opening stage, starting from "0 cm opening to 10 cm opening". The second stage (II) is called "baby expulsion" from complete dilation to the birth of the baby. The third stage begins after the baby is born until the placenta is expelled, while the fourth stage begins when the placenta is born until two hours postpartum <sup>[3]</sup>.

The progress of labor in the first stage is the most tiring, strenuous, and most mothers begin to feel pain or pain, in this phase most mothers feel severe pain because uterine activities begin to be more active. In this phase, adequate contractions (power) are needed to initiate labor. Weakening of uterine contractions or inadequate contractions is the most common cause of prolonged labor <sup>[4]</sup>.

Nutrient intake is prioritized to meet the energy needed for uterine contractions. The active phase of the first stage of labor involves a lot of energy, so the nutritional needs of the first stage need special attention from the labor manager <sup>[5]</sup>. Nutrition for maternity mothers, especially the first stage of labor, can be obtained from foods that contain high enough energy sources <sup>[6]</sup>.

Good nutrition is given before delivery and during delivery as one of the mother's care. Pregnant women who are about to give birth really need drinks and foods that contain lots of sugar, this is because of the more frequent contractions of the uterine muscles, especially if it takes a long time. In addition, at 34-36 weeks of gestation, estrogen and progesterone levels change within 5 weeks. These changes together increase the irritability of the uterus and its responsiveness to contraction-stimulating factors <sup>[7]</sup>.

One of the fruits that contain considerable energy is the date palm which contains fructose and glucose, all of which are energy sources that are easily absorbed by the body <sup>[8]</sup>. Dates contain lots of carbohydrates, affect the progress and spontaneity of labor and reduce postpartum hemorrhage. Dates are a fortifying fruit that is rich in carbohydrates. These carbohydrates are simple sugars, which are absorbed and used by cells as soon as they are consumed. Dates also contain B vitamins, minerals iron, calcium, magnesium, and potassium. Currently, various studies have been carried out on different varieties of date palms and their many nutritional and health benefits have been determined <sup>[7]</sup>.

Dates contain saturated and unsaturated fatty acids such as oleic, linoleic, and linolenic acids. Fatty acids in addition to providing and ordering energy, contribute to the delivery of prostaglandins. Therefore, dates can help in saving energy and strengthening the uterine muscles. It also contains hormones that help stretch the uterus and prepare for the birth of a child <sup>[7]</sup>.

## METHOD

This study is a literature review that tries to dig up date palm juice to speed up the first stage of labor. The sources for conducting this literature review include a systematic search of data bases through Google Scholar media, e-journals, and books. The purpose of this article is to review the issue of date palm juice accelerating the first stage of labor.

## RESULTS AND DISCUSSION

Several studies have shown that date palm juice accelerates the first stage of labor. This can be seen in table 1.

Table 1. Research Results from Literature Review

| No | Article Tittle   | Methods  | Research Result  |
|----|--|--|--|
| 1. | The Benefits of Dates in Accelerating First Stage Labor <sup>[9]</sup> .   | This type of research uses a quasi-experimental design with a pretest posttest control group design. The sample of this study were primigravida 37 weeks pregnant women. The subjects were 30 respondents. Data collection was done by using observation sheets. The progress of labor was measured with a partograph sheet. | Bivariate analysis using independent t-test with the result that the average length of labor in the 1st stage for the control group was 253.67 minutes and for the intervention group was 233.00 minutes. The results of the t-test show that pvalue = 0.020. There is an effect of date palm juice on the progress of labor in the first stage of the active phase of primigravida.   |
| 2. | The Effect of Giving Dates (Poenixdactylifera) on the Second Stage of Long Labor in Primigravida Mothers <sup>[10]</sup> . | The type of research used is Quasy Experiment. There are independent variables, namely dates and the dependent variable, namely the length of the second stage of primigravida mothers. How to collect data using an observation sheet.  | The results showed that some mothers who were given dates experienced a faster second stage of labor and some experienced a normal second stage of labor. With the results of data analysis using the T-test value of $0.182 > 0.05$ value that there is no effect of giving dates to the duration of the second stage of labor. Statistically there was no effect of giving dates, but seen in the duration of the second stage given dates faster than those who were not given dates. |
| 3. | The Effect of Dates Consumption at the End of Pregnancy on   | The design of this study used a quasi-experimental design with a static group comparison   | The results of the hypothesis test regarding the progress of the first stage of labor obtained t count -3.234  |

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|---|---|--|
| the Progress of First Stage of Labor and the Amount of Bleeding During Labor in Primiparas in the Work Area of the South Klaten Health Center <sup>[11]</sup> . | design, the sampling technique used a purposive sampling approach, and the data analysis was Bivariate using the Independent Sample t-test statistical test.  | while the t table in dk n-2 (58) is 2.002 so that Ho is rejected because $-3.234 > 2.002$ means "there is an effect between regular consumption of date palm juice at the end of pregnancy with progress First stage of labor in primiparas at BPM in the South Klaten region, Klaten Regency. In the amount of bleeding, the t count was -3.131 while the t table in dk n-2 (58) was 2.002 so Ho was rejected because $-3.131 > 2.002$ means "there is an influence between regular consumption of date palm juice at the end of pregnancy and the amount of labor bleeding.  |
| 4. Literature Study of the Effect of Dates Extract on the Progress of Childbirth in the Active Phase I in Primiparous Mothers <sup>[12]</sup> .                 | Literature obtained through electronic media with keyword guidance. The selected articles were 5, in which there was one effect of giving date palm juice on the progress of active phase I labor in primiparas.  | In accelerating the labor process, date palm juice is needed to affect the oxytocin receptors and make the uterine muscles respond better to oxytocin, resulting in more effective uterine contractions. In the first stage of labor, adequate contractions (power) are needed to be able to start labor. Weakening of uterine contractions or inadequate contractions is the most common cause of prolonged labor.  |
| 5. Giving Dates to Accelerate the First Stage of Maternity at the Independent Practice Midwife in the East Sleman Region, Yogyakarta <sup>[13]</sup> .          | The design in this study used a quasi-experimental design with a nonequivalent control group design. In this study, subjects whose mothers gave birth were given dates before delivery. Mothers giving birth were divided into 2 groups. The treatment group was given dates while the control group was not. The type of date used in this study is the Rutab Sukary date. | The duration of Kala I in the group that was given dates was 122.68 minutes, while in the control group it was 331.86 minutes. It is recommended to consume dates in the amount of 3-7 grains. Consumption of dates as much as 3-7 grains is more effective in accelerating the length of the first stage of the active phase. Giving dates at the time of delivery did not affect contractions so that although it significantly accelerated the length of the first stage of the active phase, maternal pain did not become higher. The strength of contractions, the estimated weight of the fetus, the level of pain and companions during labor affect the length of the first stage. |
| 6. Giving Dates Juice and Tea With Accelerated Labor  | This study consisted of the first latent pregnant women at the Kajang Health Center with a Post-Test-Only design, and a   | Smooth delivery was then assessed. This study showed that 75% of pregnant women who received date palm juice experienced smooth  |

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| The First Stage of Primigravida <sup>[14]</sup> .  | purposive sampling technique obtained 40 samples. The samples were divided into two groups, pregnant women who received 88.8 ml of date palm juice, and those who received 600 ml of tea during the first stage of labor.  | delivery and 25% experienced non-smooth delivery. In contrast to those who were given tea, 20% experienced smooth delivery and 80% experienced non-smooth delivery.  |
| 7. The benefits of dates for maternity in the Koran: an analysis study of Surah Maryam verse 25 from the perspective of Mustafa al Maraghi <sup>[15]</sup> . | This research is a type of library research, namely research that uses data from the Koran, books and books that are in accordance with the problems studied. This research is descriptive qualitative because the research is verbal and provides a systematic explanation of the facts and characteristics of the object of research carefully. The resulting data shows that Imam al-Maraghi interprets the dates in Surah Maryam as a date palm tree that bears fruit immediately and immediately ripens. This is a miracle of God's power that is offered to Maryam when she is about to give birth. The existence of ripe dates is intended to be eaten by Maryam to facilitate childbirth from internal organs. | The results of this study conclude that based on al-Maraghi's interpretation of the efficacy of dates, it is in accordance with the context of recent research which states that dates have various properties such as: As an anti-toxin, Overcoming dengue fever, Anti-typhoid, Anti-cancer, Preventing uterine bleeding, Streamlining labor. Dates are a fruit that is very privileged in the Koran even from various hadiths, interpretations and the context of modern research state that dates have many extraordinary properties, especially for maternity mothers. |

The results of the literature review of the seven articles above show that date palm juice can accelerate the first stage of labor.

Childbirth is a way of expelling pregnancy (fetus and placenta), namely nine months of pregnancy or being able to survive outside the womb by other means, with or without assistance <sup>[16]</sup>. This process begins with specific labor contractions, characterized by a gradual shift of the cervix and ends with the delivery of the placenta <sup>[17]</sup>.

The smoothness of the first stage of labor is determined by the provision of liquid nutrition obtained from date palm juice containing fructose and glucose as a substitute for the energy source needed by the mother to overcome fatigue due to contractions in the first stage of labor <sup>[18,19]</sup>.

Dates contain a hormone that is often called the hormone potuchin, which according to medical experts, this hormone functions to bind the uterus and uterine muscles so that it can help reduce postpartum bleeding. In addition, there is the hormone oxytocin which can help stimulate contractions in the uterine muscles making it easier for labor <sup>[20]</sup>. The hormone oxytocin is based on its physiological effects, such as accelerating labor by inducing uterine smooth muscle contractions. Oxytocin is what will be released into the blood <sup>[18,19]</sup>.

Dates can help save energy and strengthen the uterine muscles. It also contains hormones that help the uterus stretch and prepare for childbirth, and it was found that eating dates increases pain tolerance and causes a significant increase in plasma antioxidant capacity and for 4 hours after consumption, is absorbed and used by cells immediately after consumption <sup>[21]</sup>.

Oral intake of dates during labor has been suggested as the best and most nutritious food due to the high proportion of glucose. In a recent trial, it was confirmed that consuming three dates (equal to 15

grams of carbohydrates with 60 calories) as a carbohydrate meal with 110 ml of water or light tea during labor <sup>[22]</sup>.

The study from Al-Kuran et al reported that the duration of the latent phase of the first stage of labor was shorter in the group consuming dates and the mean cervical dilation at admission was significantly higher than in the group not consuming dates. Dates affect the oxytocin receptors and make the uterine muscles respond better to oxytocin, resulting in more effective uterine contractions <sup>[23]</sup>.

WHO recommends not to limit food and fluid intake to the mother during labor due to the enormous energy requirements of straining. One of the efforts is by providing good nutrition, both during labor and before delivery <sup>[24]</sup>.

Giving date palm juice is highly recommended as an alternative to energy during the labor process. In addition, there is the hormone oxytocin which can help stimulate contractions in the uterine muscles, making delivery easier.

## CONCLUSION

Giving date palm juice has a good effect on accelerating the progress of the first stage of labor because date palm juice can affect oxytocin receptors and make the uterine muscles respond better to oxytocin, resulting in more effective uterine contractions.

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## REFERENCES

- Al-Dossari R, Eman R, Nourah H. (2020). Effect of Eating Dates and Drinking Water versus IV Fluids during Labor on Labor and Neonatal Outcomes. *Journal of Nursing and Health Science*. <http://www.iosrjournals.org/iosrjournals/papers/vol6issue4/Version-3/L0604038694.pdf>.
- Al-Kuran O, L.Al-Mehaisen, H. Bawadi, S. Beitawi, Z. Amarín. (2011). The Effect Of Late Pregnancy Consumption Of Date Fruit On Labour And Delivery. *Journal of Obstetrics and Gynaecology*. <https://www.ncbi.nlm.nih.gov>.
- Azis, M., Alza, N., Triananinsi, N., Pertiwi, A. Y. D., & Kamaruddin, M. (2020). Efektivitas Senam Hamil terhadap Kelancaran Persalinan Kala II pada Ibu Inpartu di Puskesmas Bulupoddo Kabupaten Sinjai. *Medika Alkhairaat: Jurnal Penelitian Kedokteran dan Kesehatan*, 2(2), 187–191.
- Begley, C. M., Gyte, G. M., Devane, D., McGuire, W., Weeks, A., & Biesty, L. M. (2019). Active Versus Expectant Management For Women In The Third Stage Of Labour (Review). *Cochrane Database of Systematic Reviews*, 2, 142.
- Geltore, T. E., Taye, A., & Kelbore, A. G. (2018). Utilization Of Obstetric Analgesia In Labor Pain Management And Associated Factors Among Obstetric Caregivers In Public Health Facilities Of Kembata Tembaro Zone, Southern Ethiopia. *Journal of Pain Research*, 11, 3089–3097. <https://doi.org/10.2147/JPR.S165417>.
- Chen, H., Cao, L., Cao, W., Wang, H., Zhu, C., & Zhou, R. (2018). Factors Affecting Labor Duration In Chinese Pregnant Women. 97(52), 1–8. <http://dx.doi.org/10.1097/MD.00000000000013901>.
- Jayanti, I. D. (n.d.). (2018). Lama Kala I Fase Aktif Ibu Bersalin yang Mengkonsumsi Asupan Sari Kurma dan Air Gula. 1(1), 13–17.
- Khasanah, N. (2011). Kandungan Buah Buahan Dalam Al Quran Untuk Kesehatan. *Jurnal Phenomenon*, 5-29.
- Kamaruddin, M., Hasrawati, Usmia, S., Jusni, Misnawaty, & Handayani, I. (2019). Korelasi antara Status Gizi dan Kadar Hemoglobin pada Kejadian Anemia Ibu Hamil Trimester III. 1(2), 77–82.
- Kamaruddin, M., Jusni, & Nurul A Sari. (2019). Persepsi dan Pengetahuan Mahasiswa Akademi Kebidanan Tahirah Al Baeti terhadap Gizi Remaja. 1(3), 108–112.

- Kordi M, Fatemeh Ai, Fatemah T, Mohsen N, Mohammad T. (2014). The Effect of Late-Pregnancy Consumption of Date Fruit on Cervical Ripening in Nulliparous Women. *Journal of Midwifery & Reproductive Health*. [http://jmrh.mums.ac.ir/article\\_2772.html](http://jmrh.mums.ac.ir/article_2772.html).
- Kumarawati, E. (2010). Pengaruh Pemberian Pocari Sweat Terhadap Kualitas His Persalinan. Diakses tanggal 15 Oktober 2021. <http://isjd.pdii.lipi.go.id/admin/jurnal/11102529.pdf>.
- Kusmiwiyati, A., & Triningsih, R. W. (2018). Hubungan Pijat Oksitosin Dengan Penurunan TFU dan Pengeluaran Lochea pada Ibu Postpartum Normal. *Jurnal Kebidanan*, X(2), 60–69.
- Lestari Puji Astutti, Shyntia Estika Puri, & Dita Wasthu Prasida. (2018). Manfaat Sari Kurma Dalam Mempercepat Persalinan Kala I. *Jurnal Smart Kebidanan*, Vol 5 No. 1.
- Marmi. (2012). *Intranatal Care Asuhan Kebidanan*. Yogyakarta: Pustaka Pelajar.
- Mugi Rahayu, Ova Emilia, Mohammad Hakimi. (2017). Pemberian Kurma untuk Mempercepat Kala I pada Ibu Bersalin di Bidan Praktik Mandiri Wilayah Sleman Timur Yogyakarta. Tesis, Universitas Gadjah Mada 2017.
- Mutiah Cut. (2018). Pengaruh Pemberian Jus Kurma (Dactylifera Phoenix) Pada Ibu Bersalin Kala I Terhadap Durasi Persalinan Di Wilayah Kerja Puskesmas Langsa Baro. *Jurnal Kesehatan Ilmiah Nasuwakes*. <http://ejournal.poltekkesaceh.ac.id/index./jn/article/view/141>.
- Muyassaroh. (2020). Khasiat Buah Kurma Bagi Ibu Bersalin Dalam Alquran: Studi Analisis Surah Maryam Ayat 25 Perspektif Mustafa Al Maraghi. Undergraduate Thesis, UIN Sunan Ampel Surabaya.
- Nurhidayat Triananinsi, Fadjriah Ohorella, Marlina Azis, Nurfaizah Alza, Jumrah Sudirman, Mudyawati Kamaruddin. (2021). Pemberian Jus Kurma Dan Teh Dengan Percepatan Persalinan Kala I Primigravida. *JKM (Jurnal Kebidanan Malahayati)*, Vol 7, No 3 (2021).
- Pascawati, R., Shahib, N., & Husin, F. (2019). Pengaruh Pemberian Minuman Mix Juice terhadap Kadar Glukosa Darah dan Kebugaran Ibu Bersalin. *Jurnal Kesehatan*, 10(1), 1–9. <https://doi.org/10.26630/jk.v10i1.1181>.
- Rostita. (2012). *Khasiat Dan Keajaiban Sari Kurma*. Bandung.
- Saadah, Aat. (2021). Pengaruh Pemberian Kurma (Poenixdactylifera) Terhadap Persalinan Lama Kala II Pada Ibu Primigravida. Undergraduate thesis, Stikes Ngudia Husada Madura.
- Suroso, Paryono. (2016). Pengaruh Konsumsi Sari Kurma Pada Akhir Kehamilan Terhadap Kemajuan Persalinan Kala I Dan Jumlah Perdarahan Saat Persalinan Pada Primipara Di Wilayah Kerja Puskesmas Klaten Selatan. *Jurnal Ilmu Kesehatan*, Vol 5 No 1.
- Triana Widiastuti. (2021). Studi Literatur Pengaruh Pemberian Sari Kurma Terhadap Kemajuan Persalinan Kala I Fase Aktif Pada Ibu Primipara. *Jurnal Keperawatan Karya Bhakti*, Vol 7 No. 1, Januari 2021 Hal 99-107.