**PROCEEDINGS CONFERENCE SISI INDONESIA IV**
***Knowledge, Innovation, and Global Impact***
**https://conference.sinesia.id/ncrcs-sinesia | E-ISSN: 3110-1062 |**
**https://doi.org/10.69836/ncrcs-sinesia**

# Intervention Effectiveness Of Virgin Coconut Oil (VCO) In Reducing Uremia Pruritus: Literatur Review

*Efektivitas Intervensi Pemberian Virgin Coconut Oil (VCO) Dalam Mengurangi Pruritus Uremia: Literatur Review*

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**Info Article**
**Submitted**: 24 September 2026 | **Revised**: 20 October 2026 | **Accepted**: 1 November 2026
**How to cite**: Tahratul Yovalwan, etc.,, "Intervention Effectiveness Of Virgin Coconut Oil (VCO) In Reducing Uremia Pruritus: Literatur Review", *Proceedings Conference Sisi Indonesia IV*, 2026, P. 922-930.

***ABSTRACT***

Uremic pruritus is a frequent complaint It is especially suitable for patients with chronic renal failure a feeling of discomfort or itching and may be uncomfortable during the day or at night and sleep disturbances may occur during the day such as depression and complications. on the skin which can reduce the patients quality of life chronic renal failure. The research method uses PRISMA. A systematic approach and selection process was used in this literature review. Library sources are obtained from national and international databases including Google Scholar. The keywords used in the search (Intervention AND "virgin coconut oil" AND Reducing AND pruritus OR pruritis OR inching AND uremia OR uremias). This literature review aims to investigate the effects of virgin coconut oil (VCO) interventions in reducing uremia pruritus. The inclusion criteria used to determine which articles are eligible for inclusion in the review are as follows : patients with uremic pruritus, CKD patients, and journal publications for the last 5 years (2019-2023). Results Of the 7 articles reviewed, the results show that Topical application of virgin coconut oil as a skin moisturizer can reduce uremic pruritus. Findings of this systematic review administration of Virgin Coconut Oil ( VCO ) had an effect on reducing uremia pruritus, supported by several supporting journals.
**Keyword**: *Virgin Coconut Oil, Pruritus, Uremia*

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***ABSTRAK***

Pruritus uremik merupakan salah satu keluhan yang sering terjadi pada pasien gagal ginjal kronik yangmerupakan sensasi tidak nyaman atau rasa gatal dan dapat menyebabkan gangguan pada siang atau malamhari bahkan dapat terjadi sepanjang hari seperti gangguan tidur, beraktifitas, depresi dan komplikasi pada kulit yangdapat menurunkan kualitas hidup pasien gagal ginjal kronik. Metode penelitian menggunakan PRISMA. Tinjauan pustaka ini menggunakan pendekatan dan proses seleksi yang sistematis. Sumber pustaka ditelusur dari *database* nasional dan internasional antara lain Google Schoolar. Kata kunci yang akan digunakan didalam pencarian yaitu (Intervention AND "virgin coconut oil" AND Reducing AND pruritus OR pruritis OR intching AND uremia OR uremias). *Literatur review* ini bertujuan untuk menelaah efektifitas intervensi Virgin Coconout Oil (VCO) dalam mengurangi pruritus uremia. Oleh karena itu kriteria inklusi yang digunakan untuk menentukan bahwa suatu artikel layak untuk dimasukkan kedalam review adalah sebagai berikut: pasien yang mengalami pruritus uremik, pasien CKD, dan terbitan jurnal 5 tahun terakhir (tahun 2019-2023). Hasil dari 7 artikel yang direview menunjukkan hasil bahwa Virgin Coconut Oil aplikasi topikal sebagai pelembab kulit yang dapat mengurangi pruritus uremik. Kesimpulan h-asil dari Systematic Review ini didaptakan hasil bahwa pemberian Virgin Coconut Oil (VCO) berpengaruh dalam mengurangi pruritus uremia didukung dengan beberapa jurnal pendukung.
**Kata Kunci**: *Virgin Coconut Oil, Pruritus, Uremia*

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## INTRODUCTION

Chronic renal failure is a public health issueworldwide. Chronic kidney disease (CKD) is when kidney function is reduced or less than glomerular filtration rate 60mL/minute/1.73 m $^2$ 3 months or more (Hasan & Obeed, 2021; Saodah et al., 2020).

The existence of comorbidities after experiencing kidney disorders in CRF patients undergoing hemodialysis cannot be avoided, where these complications can cause discomfort. Pruritus is a form of discomfort in CRF patients caused by toxic uremics. Corrosion intensity and distribution that occurs in patients will increase significantly over time (Mahardian, Ariyani and Solihatin, 2021).

Urea Itching is one of the most common symptoms in people with chronic kidney failure systemic discomfort pruritus inability to care for oneself day and night sleep disturbance and complications of active depression present throughout the day. Skin It can reduce the patients quality of life. Chronic renal failure (Sembiring, Nasution and Ariani, 2020) . Uremic pruritus (UP) which is an uncomfortable sensation that is most often felt by patients as a complication of chronic kidney failure. Uremic pruritus can cause disturbances during the day and at night, depression, sleep disturbances, anxiety and skin complications and reduce the patient's quality of life (Sembiring, Anggraini and Tiansa, 2020) .

There is no specific cause of uremic pruritus but several factors have been identified as contributing to pruritus including: Dry skin Elimination of pruritus factors Hyperparathyroidism Elevated levels of histamine Malignant skin cell proliferation and elevated levels of calcium and magnesium high. Non-phosphate pharmacological interventions have been studied to reduce urinary itching including acupuncture and the use of virgin coconut oil. (VCO) (Pitriani et al., 2020).

Coconut oil (virgin coconut oil or VCO) is pure coconut oil that has been processed with little or no heat. The use of virgin coconut oil as a skin and hair care ingredient has been practiced by Indonesians for generations. The uses of virgin coconut oil can be found in the health sector (Syaputra et al., 2021).

Given the high incidence of uremic pruritus and complications caused by uremic pruritus in CKD patients, and seeing the causes and effects caused by pruritus, the researchers were interested in examining journals related to the effectiveness of interventions by administering Virgin Cocout Oil (VCO) in reducing uremic pruritus.

## METHODS

The research method uses PRISMA (Uly & Anwar, 2026). This literature review uses a systematic literature selection process. Selected resources come from national and international databases including Google Scholar. The keywords used in the search are: (Intervention AND "virgin coconut oil" AND Reducing AND pruritus

OR pruritis OR inching AND uremia OR uremias). This literature review aimed to assess the effectiveness of (VCO) interventions to reduce uremic pruritus. The inclusion criteria used to determine whether an article was suitable for inclusion in the review were as follows: patients with uremic pruritus, CKD patients, and journal publications for the last 5 years (2019-2023).

## RESULTS

Based on the results of searching articles through the database, namely , *Pubmed, Science Direct & Google Scholar* totaling 3022 articles . After completing title screening 3022 articles entered the next stage as full text and selected studies according to inclusion and exclusion criteria defined by the researcher. Seven relevant research articles were reviewed for quality and included in the final literature review this

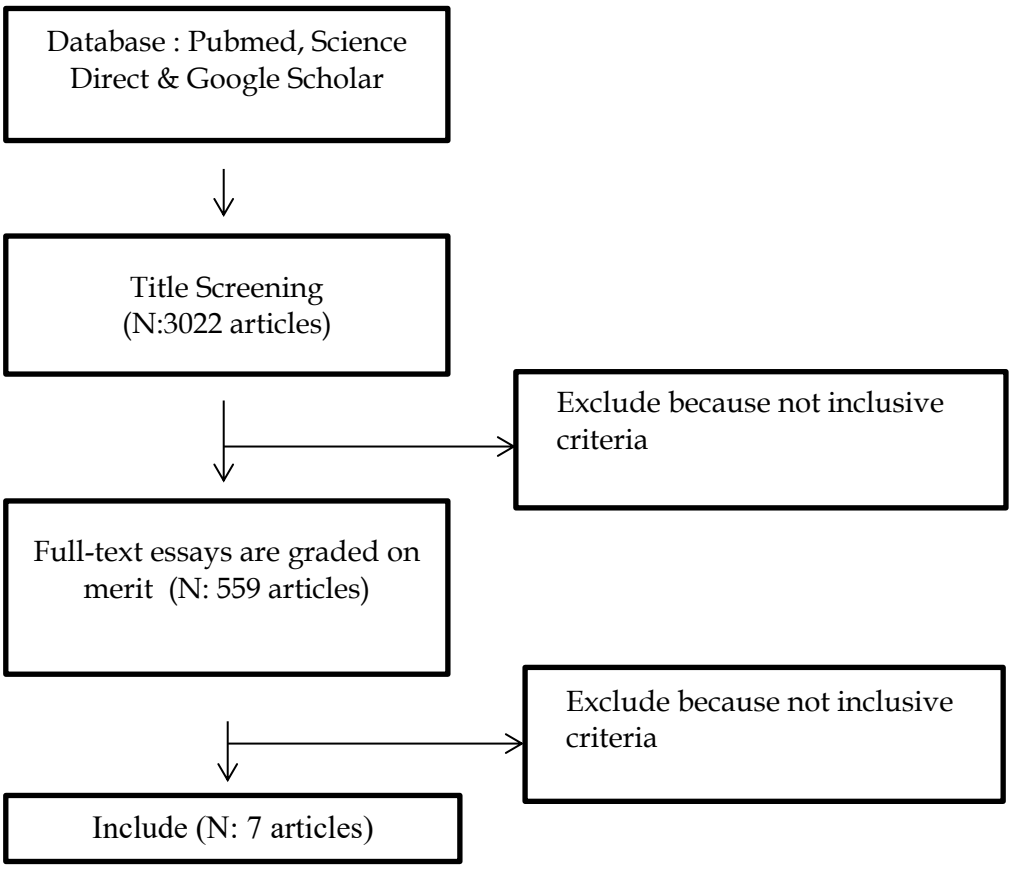



**Chart 1.**Prisma Diagram

**Table 1** List of research articles in Literatur Review on *Virgin Coconut Oil* (VCO) in Reducing Uremia Pruritus

| No | Author (Year) | Title | Sample | Effectiveness |
|---|---|---|---|---|
| 1 | (Muliani et al., 2021) | Effectiveness of Olive Oil with Virgin Coconut Oil on Pruritus Grade Scores Among Hemodialysis Patients | 72 Patients | The results showed that administration of VCO with olive oil was effective in assessing patients pruritus levels. The VCO is very effective in reducing the patients level of itching. For nurses to use VCO as an alternative intervention for the treatment of pruritus during hemodialysis |
| 2 | (Desnita & Sapardi, 2020) | Effectiveness Of Virgin Coconut Oil To Xerosis In Hemodialysis Patients | 11 Patients | Virgin coconut oil (VCO) is effective in treating Xerosis in hemodialysis patients RS III Dr Reksodiwiryo Padang. Virgin coconut oil (VCO) is used in skin care to treat cirrhosis in patients with chronic renal failure. |
| 3 | (Saodah et al., 2020) | The Effect of Virgin Coconut Oil (VCO) with Lotion on Skin Moisture among Uremic Patients Undergoing Hemodialysis in Hospital Binjai City, Indonesia | 80 Patients | As a result it was found that there was a significant effect of skin moisture in the intervention group versus the control groupreceiving the intervention. It is recommended that healthcare professionals accurately and precisely |

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| | | | | implement the method of administering Virgin coconut oil (VCO) in uremic patients undergoing home hemodialysis. |
| 4 | (Pitriani et al., 2020) | The Effect of VCO (Virgin Coconut Oil) Therapy for Skin Moisture in Chronic Kidney Client | 52 Patients | The results showed that there was a statistically significant difference between the control and intervention groups before and after the intervention. This can be used as an alternative treatment to VCO (Virgin Coconut Oil) for dry skin especially for clients with chronic kidney disease who are on hemodialysis. |
| 5 | (Abbasi et al., 2022) | The Effect of Topical Chia Oil and Coconut Oil on Pruritus and Laboratory Parameters in Hemodialysis Patients | 105 Patients | Tea coconut oil is also effective for soothing the itch in those who suffer with ESRD. Tea tree oil and coconut oil are cost-effective and can be used to reduce itching without major complications. |
| 6 | (Syaputra et al., 2021) | Effect of Using Virgin Coconut Oil Against Itching on the skin in patients with chronic renal failure with hemodialysis | 15 Patients | The results were significant difference in the reduction of itching among the respondents after the intervention. This can be used as an alternative treatment for those who experience skin problems such as |

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|---|---|---|---|---|
| | | | | itching while using virgin coconut oil. |
| 7 | (Verma & Gota, 2021) | Assessment of Efficacy of Liquid Paraffin in Comparison with Coconut Oil on CKD associate Pruritus | 60 Patients | Results of this study coconut oil made a significant difference in reducing uremia pruritus in terms of pruritus scores. |

## DISCUSSION

Uremia pruritus or CKD *associated prutitus* is itching associated with kidney disease in the absence of other comorbid conditions (Verduzco & Shirazian, 2020). Patients with chronic renal failure can be said to have pruritus if they have one of the three criteria, namely pruritus occurs immediately No active disease before or at any time before starting dialysis that causes 3 or more episodes of pruritus in less than 2 weeks with symptoms occurring for several minutes several times a day, and bothering the patient and pruritus occurring in a regular pattern over a six-month period, but less frequently than in a granular state (Mettang & Kremer, 2015).

A very significant effect is also seen on the physical, social and psychological status that can occur in patients undergoing hemodialysis therapy as a result of the pruritus they experience, causing excoriasis due to constant scratching, infection, chronic skin lesions to chronic fatigue associated with good sleep patterns. Day and night can also negatively affect mental and physical aspects of patients with chronic kidney failure (Abdelghfar et al., 2017).

Virgin Coconut Oil (VCO) a product processed coconut meat into a clear odorless liquid with a distinctive coconut aroma. Virgin Coconut Oil is rich in short and medium chain saturated fatty acids (Santosa et al., 2020). VCO is used as a humectant in Indonesia. VCO from fresh and ripe coconuts seeds (contains triglycerides and medium chain fatty acids in VCO lauric acid with caprylic and myristic acids) replaces lost lipids in the skin barrier. In addition VCO also has a latent and moisturizing mechanism of action. a thin film on the surface of the skin to soften the skin. The stratum encapsulation a method of temporarily increasing the water content of the skins surfacethe moisturizing mechanism allows water to bind by pulling it into the stratum corneum thereby reducing sensitivity (Desnita & Sapardi, 2020).

## CONCLUSIONS

Based on the findings of this systematic literature review, the administration of Virgin Coconut Oil (VCO) has demonstrated potential benefits in reducing uremic pruritus among patients with chronic kidney disease (CKD), particularly those undergoing hemodialysis. The seven reviewed studies indicate that topical application of VCO can help alleviate itching, improve skin moisture, and manage skin dryness (xerosis), which are commonly associated with uremic pruritus. Its moisturizing properties may contribute to maintaining the skin barrier by replenishing skin lipids and reducing moisture loss, thereby improving patient comfort and supporting better skin condition.

The findings further suggest that VCO can be considered a complementary nursing intervention for managing skin discomfort in patients experiencing uremic pruritus. Its topical application offers a practical approach to skin care and may support routine nursing interventions, particularly in maintaining skin hydration and reducing itching symptoms. The reviewed studies also indicate positive outcomes from interventions involving coconut oil, either independently or in combination with other topical ingredients. However, the effectiveness of these interventions should be interpreted in accordance with the specific methods, populations, and treatment formulations used in each study.

Despite these promising findings, further research involving larger sample sizes, standardized VCO application procedures, and more rigorous study designs is necessary to establish its effectiveness and determine the optimal frequency and duration of application. Future studies should also evaluate long-term outcomes and potential adverse skin reactions in patients with CKD. Overall, VCO represents a promising complementary option for managing uremic pruritus through topical skin care, with the potential to improve skin comfort and quality of life among patients undergoing hemodialysis.

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