

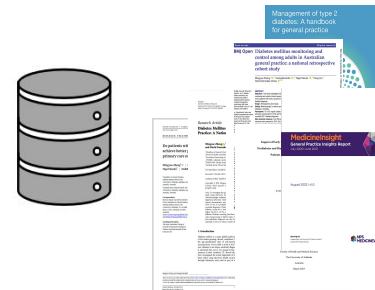


- Building LLM Models from Scratch
- Fine-Tuning Pre-existing Models
- **Retriever-Augmented Generation (RAG)**

General Knowledge



My documents/database





Retriever-Augmented Generation (RAG)

Strengths of the PDF Chatbot compared to ChatGPT:

1. Topic Specificity
2. Reading latest papers
3. Preventing hallucinations



LangChain

Insert Q&A pairs



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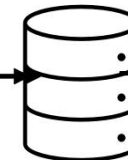
Questions



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Question embedding

Similarity search



Vector store (knowledge base)

Ranked results



Answers



I have diabetes and kidney disease, what medications are helpful?

Topic Specificity



Demo



I'm not a doctor, but I can offer some general information about medications that are commonly used to manage diabetes in individuals with kidney disease. It's crucial to consult

Diabetes ChatBot

PDF Chatbot

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Browse files



prediabetes and metformin.pdf 0.5MB



Management-of-type-2-diabetes-A-handbook-for-general-practice.pdf 1.1MB



PhD thesis Mingyue Zheng ID 1756368 - Final.pdf 6.3MB



Showing page 1 of 2



Done

Question

I have diabetes and kidney disease, what medicines are helpful?

Based on the context information, it is recommended that people with type 2 diabetes and chronic kidney disease consider use of an SGLT2 inhibitor or GLP-1 RA to reduce risk of CKD progression, cardiovascular events, or both. Additionally, adults with diabetes and CKD should be given a 'sick-day' medication list that outlines which medications should be withheld during times of acute illness. All people with diabetes and CKD should be offered a comprehensive, multifaceted program to reduce cardiovascular risk (refer to the section 'Type 2 diabetes and cardiovascular risk'). People with diabetes should also be informed that smoking increases the risk of CKD and that ACE, angiotensin-converting enzyme; ACR, albumin-to-creatinine ratio; ARB, angiotensin receptor blocker; CKD, chronic kidney disease; may be used to help manage their condition. Additionally, it is important to note that ACE inhibitors and angiotensin receptor blockers (ARBs) may be used to help manage CKD. Furthermore, consider referral to a credentialled diabetes educator or accredited practising dietitian for advice on nutritional adjustments in advanced diabetic kidney disease.



I have prediabetes, what should I do?

Reading latest papers



I'm not a doctor, but I can offer some general advice on what you might consider doing if you've been diagnosed with prediabetes. Prediabetes is a condition where your blood sugar levels are higher than normal but not yet high enough to be classified as type 2 diabetes. It's a warning sign that you're at risk of developing diabetes in the future. Here are some steps you can take:

1. Consult a healthcare professional: The first and most important step is to speak with a healthcare provider, such as a primary care physician or endocrinologist, who can provide personalized advice and a treatment plan based on your specific situation.
2. Lifestyle changes:
 - Diet: Focus on a balanced, healthy diet rich in fruits, vegetables, whole grains, lean protein, and healthy fats. Limit your intake of sugary foods, processed carbohydrates,



Management-of-type-2-diabetes-A-handbook-for-general-practice.pdf 1.1MB



Done

Question

I have prediabetes, what should I do?

If you have prediabetes, it is important to take steps to reduce your risk of developing type 2 diabetes. You should focus on lifestyle changes such as eating a healthy diet, increasing physical activity (Smith et al., 2016; Cranney et al., 2019; Bian et al., 2017), and maintaining a healthy weight (Bian et al., 2017). Additionally, you should talk to your doctor about any medications that may be appropriate for you. You may also want to consider participating in a diabetes prevention program, such as the Get Healthy Service in Australia (Cranney et al., 2019), which provides telephone-based coaching for adults at risk of diabetes. Furthermore, you should be aware of the potential benefits of physical activity for reducing the risk of type 2 diabetes (DeFronzo & Abdul-Ghani, 2011). You should also consider referring to lifestyle



I have prediabetes, can I take metformin?



The decision to take metformin for prediabetes should be made in consultation with a healthcare provider. Metformin is sometimes prescribed for individuals with prediabetes, but it is not always the first-line treatment. Here are some considerations:

1. **Consult Your Healthcare Provider:** If you have prediabetes, it's important to speak with your healthcare provider about your treatment options. They can assess your specific situation, including your blood sugar levels, overall health, and any other medical conditions you may have.
2. **Lifestyle Changes:** In many cases, lifestyle changes such as a healthy diet and regular physical activity are the first recommended approach for managing prediabetes. These changes can be highly effective in improving blood sugar control and preventing the

Preventing hallucinations



Done

Question

I have prediabetes, can I take metformin?

It is not possible to answer this question without further information. Metformin is a medication used to treat type 2 diabetes, and it may be prescribed for people with prediabetes. A recent study (Diabetic Medicine. 2023;40

) has suggested that patients with prediabetes managed with metformin may achieve better glycaemic control, with higher HbA1c and FBG baseline levels among participants with 'incident' prediabetes improving after 6–12 months of starting pharmacological management, and the effect persisting for up to 24 months (95% CI –0.25; 0.12). Management with metformin could prevent further deterioration of glycaemic levels. However, the decision to prescribe metformin should be made by a healthcare professional after a thorough evaluation of your medical history and current health status, taking into