

PRECISION HEALTHCARE WITH POLYPHARMIC RISK SCORE

INTRODUCING THE POLYPHARMIC RISK SCORE: REVOLUTIONIZING PRECISION HEALTHCARE



IMPORTANCE OF COMBINATION

"One of a Kind"

In the quest for Precision Healthcare, the development of the 'Polypharmic Risk Score' aims to combine polygenic risk scores with the risk score of over-the-counter medication data to enhance healthcare analysis. This integration is crucial for uncovering potential health risks and improving patient outcomes as a ONE-OF-A-Kind solution.

Polypharmic Risk Score (PHRS)

A polypharmic risk score (PHRS) assesses the cumulative risk associated with the repeated use of over-the-counter medications over time. It is determined by evaluating the compounded effects of multiple medication exposures, each contributing to the overall risk based on their potential long-term impacts.

Step 1: Select the over the counter medication. Step 2 Select the Disease

Score based on severity: 0 low, 100 highest

Acetaminophen

Cerebrovascular Disease

R1 Get Risks

R2 Get Score

Risks for Acetaminophen:

- Hepatic Toxicity: Acetaminophen can cause liver damage when taken in high doses or over a prolonged period. Severity: Severe. Frequency: Rare.
- Renal Impairment: Long-term use of acetaminophen may lead to kidney damage, especially in patients with pre-existing kidney disease. Severity: Moderate to Severe. Frequency: Uncommon.
- Gastrointestinal Bleeding: Acetaminophen can irritate the stomach lining and increase the risk of gastrointestinal bleeding, particularly in patients with a history of ulcers or other gastrointestinal disorders. Severity: Moderate. Frequency: Common.
- Hypertension: Regular use of acetaminophen has been associated with an increased risk of developing high blood pressure, which can lead to cardiovascular disease. Severity: Moderate. Frequency: Common.
- Respiratory Depression: In rare cases, high doses of acetaminophen can cause respiratory depression, particularly in patients with pre-existing respiratory conditions. Severity: Severe. Frequency: Rare.
- Anemia: Prolonged use of acetaminophen may lead to a decrease in red blood cell production, resulting in anemia. Severity: Moderate. Frequency: Uncommon.
- Skin Reactions: Acetaminophen can cause various skin reactions, including rash, hives, and itching. Severity: Low to Moderate. Frequency: Common.
- Cognitive Impairment: Long-term use of acetaminophen has been linked to cognitive impairment, particularly in older adults. Severity: Moderate. Frequency: Common.
- Endocrine Disruption: Some studies suggest that acetaminophen may disrupt hormone production and regulation, potentially leading to reproductive and developmental issues. Severity: Moderate. Frequency: Uncommon.
- Increased Mortality Risk: Recent research has found an association between long-term acetaminophen use and increased

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Risks

R2 Get Score

Polypharmic Risk Score for Acetaminophen with Cerebrovascular Disease:

- The polypharmic risk score for Acetaminophen when used by a patient with Cerebrovascular Disease is 75.
- This score was arrived at by considering the risks associated with Acetaminophen, particularly the risk of hypertension and cognitive impairment, which are both relevant to patients with Cerebrovascular Disease. Additionally, the risk of gastrointestinal bleeding is also a concern, as patients with Cerebrovascular Disease may be taking other medications that can increase this risk.
- The specific concern with the use of Acetaminophen in patients with Cerebrovascular Disease is the potential for increased blood pressure, which can exacerbate the underlying condition and increase the risk of stroke. Additionally, the risk of cognitive impairment may be particularly concerning for patients with Cerebrovascular Disease, as they may already be experiencing cognitive deficits.
- Implications with use over time include the potential for long-term use of Acetaminophen to increase the risk of mortality, as well as the potential for chronic use to lead to liver damage or kidney impairment. Patients with Cerebrovascular Disease may also be at increased risk for gastrointestinal bleeding or anemia with prolonged use of Acetaminophen. It is important for healthcare providers to monitor patients closely for any adverse effects and adjust medication regimens as needed.



NAVIGATING
HEALTHCARE DATA
LIMITATIONS TO
ENHANCE PRECISION
HEALTHCARE

**UNLOCKING PRECISION
HEALTHCARE THROUGH COMBINED
SCORES**

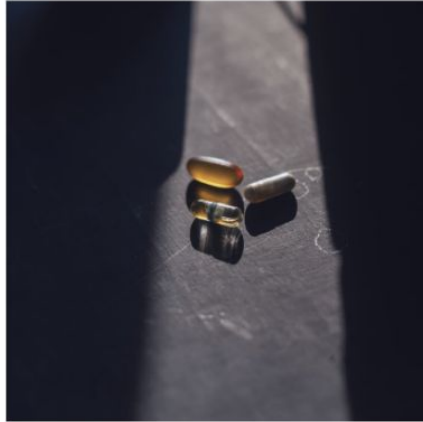


POLYPHARMIC RISK



Impact

Understand the implications of OTC medications.



Risks

Identify potential adverse effects.



Precision

Deliver tailored healthcare analysis.



Data

Overcoming healthcare data hurdles.

BENEFITS



Improved Insights

Enhance healthcare predictions for individual patients.



Personalized Care

Tailored treatment plans for better outcomes.



Data Optimization

Leverage patient data for precise healthcare decisions.



POTENTIAL

Expanding Possibilities

The development of the 'Polypharmic Risk Score' opens up new possibilities in precision healthcare by combining with polygenic risk scores. This innovation aims to address the risks posed by over-the-counter medications over time. The solution is on the horizon, awaiting the alleviation of healthcare data hurdles.

TEAM

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**SPECIAL NOTE OF APPRECIATION TO AI71
AND LABALB.AI FOR THE OPPORTUNITY**