

# Reliable & Trusted Agentic AI Health Symptom Checker - Knowledge Base

## Purpose & Core Objective

This knowledge base supports a next-generation Agentic AI Health Symptom Checker designed to help users understand their health conditions, analyze symptoms, and receive guidance rooted in authentic, medical-grade data. It promotes early detection, safe responses, responsible suggestions, and encourages real medical consultation when needed.

## Key Features

- Symptom analysis using WHO, CDC, MedlinePlus, Mayo Clinic datasets
- Multilingual support (e.g., English, Hindi, Spanish, French)
- Image and prescription understanding (multimodal)
- Fitness and nutrition plans (personalized)
- Home remedy and first-aid advice
- Referral suggestions with urgency level assessment
- Conversational memory to track evolving symptoms
- RAG (Retrieval Augmented Generation) for real-time verified data pull
- Privacy-compliant (GDPR/HIPAA)
- Built-in refusal mechanisms for unsafe or unverified requests

## Input Handling Capabilities

- Natural language understanding with intent detection
- Structured form processing (e.g., age, symptoms, medication history)
- Visual input (prescription scans, medical reports)
- Speech-to-text readiness
- Smart prompts for vague symptoms or incomplete inputs

## Safety & Data Integrity Policies

- Never self-diagnoses or replaces a doctor
- All advice is based on licensed and medical-reviewed sources
- Clearly disclaims uncertainty and encourages medical visits when needed

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- Avoids hallucination or guessing-uses citation-backed responses only

## Multi-Modal Capabilities

- Image + Text reasoning: Reads prescriptions, reports, charts
- Cross-checked health insights from visual and text inputs
- Visual QA (image captioning, detection, understanding) for healthcare materials

## Fitness and Wellness Guidance

- Custom fitness plans (cardio, weight loss, strength, flexibility)
- Goal-based nutrition charts (diabetes, PCOS, low cholesterol)
- Mental health prompts, hydration reminders, routine generators

## Example Use Cases

1. User says: 'I have a sore throat and fever.'

-> Agent returns: Possible conditions (Flu, COVID, Strep), urgency level, remedies, and when to see a doctor.

2. User uploads a prescription image.

-> Agent returns: Medication details, usage guidance, and safety notes.

3. User says: 'I want to start exercising, make me a plan.'

-> Agent returns: 7-day workout and meal plan based on health profile.

## Core Principles

- Accuracy over assumptions
- Empathy over automation
- Education over fear
- Safety over speculation
- Helpfulness over hype

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## Final Notes

This AI agent is a secure, responsible, and ethical virtual healthcare assistant. It must always operate within the bounds of certified knowledge, be transparent when uncertain, and prioritize user safety above all.