

M C P S E R V E R

N O C O D E

C L O U D H O S T E D

Cholesterol Risk Calculator MCP

Get clinical cardiovascular risk assessments and LDL targets instantly.

Cholesterol Risk Calculator MCP gives your AI client the ability to run ASCVD risk calculations and determine lipid targets. It handles the math for 10-year cardiovascular risk, evaluates risk enhancers like family history, and provides high-level clinical considerations for medical discussions based on patient demographics and lipid profiles.

A+ Quality Score 100/100

cardiovascular

cholesterol

ascvd

lipid-profile

health-risk



SCAN TO VIEW

The connectivity layer between AI and the world's software.

Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest
managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.

— Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256

Encryption at rest

Ed25519

PKI vault signatures

24h TTL

Ephemeral session keys

V8 Isolate

Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT`https://edge.vinkius.com/{token}/mcp`

Claude



Cursor



VS Code



Windsurf



Grok



Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

06 — Honeypot Trap System

Phantom credentials are injected into isolated environments. If a honeypot is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1)
Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

Get started at cloud.vinkius.com — connect your AI agent in under 60 seconds.

Cholesterol Risk Calculator MCP

4 tools available

Cloud-hosted on Vinkius

You can use this MCP to bring clinical-grade cardiovascular risk assessment directly into your AI-driven workflows. Instead of manually calculating risk scores, you let your agent handle the ASCVD algorithm using patient data like cholesterol levels, blood pressure, and age. It doesn't just stop at a single percentage; it helps you look at the bigger picture by evaluating secondary risk factors that might push a patient into a higher risk category. You can quickly determine specific LDL targets to help guide lipid management conversations. It's built to act as a clinical reasoning partner, providing the necessary data points and treatment considerations you need to support medical decision-making. Whether you are looking for baseline risk or specific cholesterol goals, this MCP provides the specific outputs required for informed clinical discussion.

Core Capabilities

01 — ASCVD Risk Scoring

Your agent calculates the 10-year cardiovascular risk percentage using the ASCVD algorithm.

02 — LDL Target Determination

The MCP identifies specific cholesterol goals based on a patient's risk profile.

03 — Risk Enhancer Analysis

Your AI client evaluates secondary factors that elevate baseline risk scores.

04 — Clinical Guidance Generation

The tool produces high-level considerations for medical discussions.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/cholesterol-risk-calculator — connect your AI agent in three steps.

- 01 Connect your preferred MCP-compatible client to Vinkius.
- 02 Provide the patient's lipid profile and demographic data to your agent.
- 03 The agent invokes the necessary tools to calculate risk or targets.
- 04 Receive the calculated risk percentages and clinical guidance directly in your chat.

Connecting this MCP to your AI client gives you immediate access to clinical risk tools.

Built For

This MCP is designed for healthcare professionals who want to integrate clinical risk assessment into their digital workflows.

Clinicians

Use the tool to quickly get risk scores and LDL targets during patient consultations.

Medical Researchers

Apply the ASCVD algorithm to datasets to analyze population risk.

Health Informatics Specialists

Integrate these risk calculation tools into larger clinical decision support systems.

What Changes When You Connect

- 01 Automates ASCVD risk math for faster assessments.
- 02 Provides specific LDL targets based on individual patient risk.
- 03 Identifies secondary risk enhancers to prevent underestimating patient risk.

- 04** Generates clinical considerations to support medical discussions.
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Real-World Applications

Patient Risk Assessment

A clinician uses the MCP to find a patient's 10-year cardiovascular risk score during a checkup.

Clinical Decision Support

A user generates treatment guidance considerations for a patient with specific lipid profiles.

Lipid Management Planning

An agent determines the appropriate LDL target for a patient with high cardiovascular risk.

Risk Factor Evaluation

A professional checks how family history or other enhancers change a baseline risk score.

4 Tools Available

#	TOOL	DESCRIPTION
01	calculate_ascvd_risk	This tool calculates the primary 10-year cardiovascular risk percentage and assigns a risk category.
02	evaluate_risk_enhancers	Use this to analyze secondary factors that might increase a patient's risk beyond the standard ASCVD score.
03	generate_treatment_guidance	This tool provides high-level clinical considerations to assist in medical discussions.
04	get_ldl_targets	This tool determines the specific recommended LDL cholesterol targets for a patient.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

- U** Calculate the ASCVD risk for a 55-year-old male with total cholesterol 200, HDL 50, LDL 120, triglycerides 150, and systolic blood pressure 130.



The estimated 10-year ASCVD risk is 5.2%, which falls into the Borderline risk category.

- U** What is the target LDL for a patient with a 15% ASCVD risk and diabetes?



For a patient with a 15% risk and diabetes, the recommended target LDL is below 70 mg/dL.

- U** Provide treatment guidance for a patient with 12% risk and a target LDL of 70.



Based on a 12% risk, primary recommendations include lifestyle modifications and discussing statin therapy with a physician to reach the target LDL of 70 mg/dL.

Frequently Asked Questions

01 What algorithm does this MCP use for risk calculation?

This MCP uses the ASCVD algorithm to estimate 10-year cardiovascular risk.

02 Which AI clients can use this MCP?

You can use this MCP with any MCP-compatible client, including Claude, Cursor, Windsurf, and VS Code.

03 Can it help determine LDL goals?

Yes, the `get_ldl_targets` tool determines recommended LDL cholesterol targets for specific patients.

04 Does it account for factors beyond basic cholesterol levels?

Yes, the `evaluate_risk_enhancers` tool analyzes secondary factors that may increase risk beyond the baseline score.

05 How do I get treatment suggestions?

You can use the `generate_treatment_guidance` tool to get high-level clinical considerations for medical discussions.

Go Live in 60 Seconds

Get your connection token from cloud.vinkius.com, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

`https://edge.vinkius.com/[TOKEN]/mcp`

CLIENT	WHERE TO CONFIGURE
 Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
 Cursor	Settings → Features → MCP Servers → "+" Add New MCP Server" → Type: SSE → Paste endpoint
 VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add <code>"cholesterol-risk-calculator": { "url": "..." }</code>
 Windsurf	MCP Settings → <code>mcp_settings.json</code> → Add endpoint URL
 ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
 Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

-  **Ask ChatGPT** 
-  **Ask Claude** 
-  **Ask Perplexity** 
-  **Ask Gemini** 
-  **Ask Grok** 

READY TO CONNECT

Cholesterol Risk Calculator is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and
start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

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DOCUMENT INFORMATION

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Platform	Vinkius Cloud for AI Agents
Endpoint	<code>https://edge.vinkius.com/{token}/mcp</code>

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