

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

Metabolic Age Calculator MCP

Compare your metabolic efficiency against demographic benchmarks.

Metabolic Age Calculator MCP lets your AI client calculate your metabolic age by comparing your Basal Metabolic Rate (BMR) to statistical averages. You can get a full metabolic profile, verify if your BMR data is realistic, and receive specific lifestyle recommendations to close the gap between your actual age and your metabolic age.

A+ Quality Score 100/100

metabolism

health

fitness

bmr

wellness



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.

Metabolic Age Calculator MCP

4 tools available

Cloud-hosted on Vinkius

You can use this MCP to turn raw physical data into a clear picture of your metabolic health. Instead of just looking at a single BMR number, your agent can compare that number against demographic benchmarks to determine your metabolic age and percentile ranking. If you're unsure if your input data is accurate, the MCP can check if your BMR falls within a physiologically plausible range. Once you have your profile, you can ask your agent to generate a specific plan to improve your metabolic efficiency, focusing on areas like muscle mass or nutrition. It's a direct way to move from basic health metrics to actionable lifestyle adjustments through your preferred AI interface.

Core Capabilities

01 — Metabolic Age Calculation

Your agent uses this to find your metabolic age and percentile ranking.

02 — BMR Validation

Your agent checks if your BMR input is physiologically plausible.

03 — Lifestyle Planning

Your agent generates actionable plans to improve metabolic efficiency.

04 — Demographic Comparison

Your agent compares your metrics against statistical averages.

One Click on Vinkius — From Prompt to Execution

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

- 01
- Connect the MCP to Claude, Cursor, or Windsurf via Vinkius.
- 02
- Provide your physical data like age, weight, and BMR to your agent.
- 03
- The agent uses the MCP tools to calculate your profile or validate data.
- 04
- Receive your metabolic age and a personalized improvement plan.

Connect the MCP to your AI client and start querying metabolic data immediately.

Built For

This MCP is built for anyone tracking metabolic health through an AI-driven interface.

Fitness Enthusiasts

Users who want to track how their training affects their metabolic age over time.

Health Coaches

Professionals who use AI to quickly generate metabolic profiles and improvement plans for clients.

Data-Driven Athletes

Individuals who want to validate their physiological data against demographic benchmarks.

What Changes When You Connect

- 01
- Converts BMR into a meaningful metabolic age metric.
- 02
- Identifies the gap between chronological age and metabolic efficiency.

- 03

Provides specific lifestyle adjustments to improve metabolic health.
- 04

Validates input data to prevent inaccurate metabolic assessments.

Real-World Applications

Tracking Progress

You can check your metabolic age every month to see if your fitness routine is working.

Customized Nutrition

Get specific protein and training recommendations based on your metabolic profile.

Data Verification

Use the validation tool to ensure your wearable device's BMR reading is realistic.

Benchmarking

Compare your metabolic efficiency against statistical averages for your age and gender.

4 Tools Available

#	TOOL	DESCRIPTION
01	get_demographic_benchmarks	This tool pulls the statistical BMR averages used to compare your data against your demographic group.
02	get_improvement_plan	This tool generates specific lifestyle and nutrition recommendations based on your metabolic gap.
03	get_metabolic_profile	This tool calculates your metabolic age, age difference, and percentile ranking using your physical data.
04	validate_bmr_range	This tool checks if your entered BMR is within a realistic physiological range for your profile.

See It in Action

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

U Calculate my metabolic profile. I am a 35-year-old male, 180cm tall, weighing 85kg, with a BMR of 1850 calories.



Your metabolic age is 32, which is 3 years younger than your chronological age. You are in the 65th percentile for metabolic efficiency. Your assessment status is 'Excellent'.

U What is a good improvement plan for a 45-year-old female with a metabolic age of 50?



To improve your metabolic efficiency, your primary focus should be Muscle Mass Accretion. We recommend increasing protein intake and starting a regular resistance training program. Your target metabolic age is 42.

U Is a BMR of 1200 calories realistic for a 25-year-old male?



The BMR value of 1200 is within the plausible range for your demographic, though it is on the lower end of the expected spectrum.

Frequently Asked Questions

01 How do I use this MCP with Claude?

You connect to the MCP through the Vinkius platform. Once connected, you can simply ask Claude to calculate your metabolic age or check your BMR.

02 What is metabolic age?

It is a metric that compares your Basal Metabolic Rate to demographic benchmarks to estimate your metabolic efficiency relative to your actual age.

03 Can I get a diet plan from this?

Yes, the `get_improvement_plan` tool provides actionable lifestyle and nutrition recommendations based on your metabolic results.

04 Does this MCP require me to host anything?

No, Vinkius hosts and manages the MCP for you. You just connect your client and start using the tools.

05 How accurate is the BMR validation?

The tool checks if your BMR is within physiologically plausible limits based on your demographic data.

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>"metabolic-age-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

Metabolic Age 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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