

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

Heart Rate Recovery Calculator MCP

Turn your post-workout heart rate data into actionable fitness insights.

Heart Rate Recovery Calculator MCP lets your AI client analyze how quickly your heart rate drops after intense exercise. It calculates recovery metrics, evaluates your cardiovascular fitness and mortality risk based on age, and provides specific training recommendations to help you improve your aerobic base.

A+ Quality Score 100/100

heart-rate

cardio

fitness-assessment

health-metrics

recovery



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.

Heart Rate Recovery Calculator MCP

4 tools available

Cloud-hosted on Vinkius

You can use this MCP to turn raw heart rate numbers into a clear picture of your cardiovascular health. Instead of just looking at peak heart rate, you can focus on how your body recovers, which is a much better indicator of fitness. You start by providing your peak heart rate and your heart rate at specific intervals after stopping. The MCP handles the math to find your 1-minute and 2-minute recovery drops. From there, your AI client can interpret those numbers to categorize your fitness level and estimate mortality risk relative to your age. It even checks if your workout was intense enough to make the data meaningful. If your recovery numbers are low, your agent can suggest specific training adjustments, like building a better aerobic base, to help you get back on track.

Core Capabilities

01 — Recovery Math

Your agent calculates the exact BPM drops for 1 and 2 minute intervals.

03 — Intensity Validation

Your AI checks if your peak heart rate was sufficient for a reliable reading.

02 — Risk Assessment

The MCP translates recovery speed into fitness categories and mortality risk indicators.

04 — Training Guidance

The tool generates exercise advice tailored to your specific recovery profile.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/heart-rate-recovery-calculator — connect your AI agent in three steps.

- 01
- Connect the MCP to Claude, Cursor, or Windsurf via Vinkius.
- 02
- Provide your peak heart rate and recovery heart rate numbers to your agent.
- 03
- The agent uses the MCP to calculate recovery drops and validate intensity.
- 04
- The agent interprets these metrics into fitness levels and risk assessments.
- 05
- Receive specific training recommendations based on the results.

Connect the MCP to your AI client and start feeding it heart rate data.

Built For

This MCP is built for anyone tracking cardiovascular health through wearable data or manual heart rate monitoring.

Fitness Enthusiasts

Users who want to turn heart rate data from their workouts into fitness categories.

Athletic Coaches

Professionals who need to validate if an athlete's training intensity is sufficient.

Health Researchers

Individuals tracking cardiovascular risk indicators over time.

What Changes When You Connect

- 01
- Converts raw BPM data into standardized fitness categories.
- 02
- Identifies mortality risk based on recovery speed and age.

-
- 03** Validates workout intensity to ensure data accuracy.
-
- 04** Provides specific training advice to improve cardiovascular efficiency.
-

Real-World Applications

Post-Workout Analysis

Input your peak and recovery heart rates to see how well your heart recovered from a session.

Training Adjustment

Get advice on building an aerobic base when your recovery numbers indicate low fitness.

Fitness Progress Tracking

Monitor how your fitness category changes as your recovery speed improves over weeks of training.

Data Validation

Check if your heart rate reached a high enough level to make your recovery metrics useful.

4 Tools Available

#	TOOL	DESCRIPTION
01	assess_fitness_and_risk	This tool converts your recovery numbers into specific fitness categories and mortality risk levels.
02	calculate_recovery_metrics	Use this to get your raw 1-minute and 2-minute heart rate recovery drops.
03	generate_training_recommendations	This tool provides specific exercise advice based on your unique recovery profile.
04	validate_exercise_intensity	This tool checks if your peak heart rate was high enough to provide a valid assessment.

See It in Action

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

U Calculate my recovery metrics. My peak HR was 170, my 1-min HR was 145, and my 2-min HR was 135.



Your 1-minute recovery is 25 BPM and your 2-minute recovery is 35 BPM.

U I am 35 years old. My 1-min recovery was 30 BPM and my 2-min recovery was 45 BPM. What is my fitness level and risk?



Your cardiovascular fitness is categorized as Good, and your mortality risk is Low.

U My 1-min recovery was 15 BPM and my fitness category is Poor. What should I do?



Your primary training focus should be building a steady aerobic base. You should engage in consistent, moderate-intensity aerobic exercise to improve your cardiovascular efficiency.

Frequently Asked Questions

01 How do I use this MCP with my AI?

You connect it once through Vinkius. After that, any MCP-compatible client like Claude or Cursor can use the tools directly.

02 What data do I need to provide?

You typically need your peak heart rate and your heart rate at 1-minute and 2-minute intervals after exercise.

03 Can this MCP tell me if my workout was hard enough?

Yes, the `validate_exercise_intensity` tool checks if your peak heart rate was sufficient for a meaningful assessment.

04 Does age affect the results?

Yes, the `assess_fitness_and_risk` tool uses your age to help translate recovery numbers into risk indicators.

05 What kind of training advice does it give?

It provides actionable advice, such as focusing on building a steady aerobic base, based on your recovery profile.

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>"heart-rate-recovery-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

Heart Rate Recovery 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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