

MCP SERVER

NO CODE

CLOUD HOSTED

Body Fat Percentage Estimator MCP

Get precise body composition data from simple measurements.

Body Fat Percentage Estimator MCP uses the US Navy circumference method to turn physical measurements into actionable health data. Your AI client can calculate fat mass, lean mass, and body fat percentages by processing height, neck, waist, and hip data. It includes built-in validation to ensure all biological inputs stay within realistic human ranges.

A+ Quality Score 100/100

body-fat

us-navy-method

body-composition

fitness-tracking

health-metrics



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.

Body Fat Percentage Estimator MCP

4 tools available

Cloud-hosted on Vinkius

You can give your AI agent the ability to perform professional-grade body composition analysis. Instead of manually running formulas, you provide your agent with anthropometric measurements like height, neck, waist, and hip circumferences. This MCP uses the standardized US Navy method to output specific metrics including fat mass and lean mass. It is built to handle the math and the logic, ensuring that the data your agent works with is biologically plausible through built-in measurement validation. Whether you are tracking fitness progress or managing nutritional data, this tool turns raw measurements into a clear profile of physical composition.

Core Capabilities

01 — Body Composition Calculation

Your agent uses this to derive fat and lean mass from circumference data.

02 — Data Validation

The agent checks measurements against biological limits to prevent errors.

03 — Fitness Categorization

Your agent compares calculated percentages against standard fitness category bounds.

04 — Metric Summarization

The agent converts complex percentages into easy to read summaries.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/body-fat-percentage-estimator — connect your AI agent in three steps.

- 01 Connect the MCP to your preferred client like Claude or Cursor via Vinkius.
- 02 Provide your agent with the user's physical measurements.
- 03 The agent uses the validation tool to ensure the data is realistic.
- 04 The agent runs the estimation tool to calculate mass and percentages.
- 05 The agent delivers a summary or category report to you.

Connecting this MCP to your client gives your agent immediate access to body composition math.

Built For

This MCP is designed for anyone building health-focused agents that require accurate physical metric processing.

Fitness Coaches

They hand off client measurements to an agent to track body composition changes over time.

Nutritionists

They use the agent to calculate lean mass to better inform dietary recommendations.

Health App Developers

They integrate this logic into agentic workflows to handle user physical data.

What Changes When You Connect

- 01 Uses the standardized US Navy method for consistent results.
- 02 Prevents data errors by validating measurements against biological realities.

-
- 03** Converts raw percentages into weight-based mass metrics.
-
- 04** Provides clear fitness category context for every calculation.
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Real-World Applications

Progress Tracking

An agent compares monthly measurements to show changes in fat mass versus lean mass.

Client Reporting

An agent generates a human-readable summary of a user's body composition for a report.

Nutritional Planning

A nutritionist uses lean mass data to set precise protein requirements.

Data Cleaning

The agent uses validation tools to catch typos in user-entered height or waist measurements.

4 Tools Available

#	TOOL	DESCRIPTION
01	get_composition_summary	This tool provides a simplified, human-readable summary of a user's body composition metrics.
02	get_fitness_category_bounds	This tool returns the specific numerical ranges used to define various fitness categories.
03	estimate_body_composition	This tool calculates a full body composition profile including fat percentage, fat mass, and lean mass using the US Navy method. Note that hip circumference is required for female profiles.
04	validate_anthropometric_measurements	This tool checks if the provided physical measurements fall within realistic human biological ranges.

See It in Action

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

U Calculate my body composition. I am a male, 85kg, 180cm tall, with a 40cm neck and 90cm waist.



Your body fat percentage is 18.5%. Your fat mass is 15.7kg and your lean mass is 69.3kg. Your fitness category is 'Fitness'.

U What is the body composition summary for a 20% body fat and 70kg weight?



With 20% body fat at 70kg, your fat mass is 14kg and your lean mass is 56kg.

U I am a female, 60kg, 165cm tall, 32cm neck, 70cm waist, and 95cm hips. What is my body fat?



Your body fat percentage is 28%. Your fat mass is 16.8kg and your lean mass is 43.2kg. Your fitness category is 'Acceptable'.

Frequently Asked Questions

01 What method does this MCP use for calculations?

This MCP uses the standardized US Navy circumference method to estimate body composition.

02 What measurements are required for a female profile?

For female profiles, the user must provide height, neck, waist, and hip circumferences.

03 Can the agent check if my measurements are realistic?

Yes, the `validate_anthropometric_measurements` tool checks if inputs fall within realistic human biological ranges.

04 What kind of output can my AI agent provide?

Your agent can provide body fat percentage, fat mass, lean mass, and fitness category information.

05 How do I use this with Claude or Cursor?

You connect to the Vinkius hosted MCP once, and it becomes available as a tool in any compatible client.

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>"body-fat-percentage-estimator": { "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

Body Fat Percentage Estimator 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

Generated	September 2026
MCP Server	Body Fat Percentage Estimator MCP
Server ID	01a0b4b6-db51-71cb-8b1a-d85a42eb4f4a
Platform	Vinkius Cloud for AI Agents
Endpoint	https://edge.vinkius.com/{token}/mcp

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