

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

Lean Body Mass Calculator MCP.

Get exact body composition and protein data for your fitness planning.

Lean Body Mass Calculator MCP gives your AI client the ability to analyze body composition. It calculates fat mass, lean mass, and muscularity relative to height. You can also determine specific daily protein requirements to maintain muscle. It turns raw body metrics into actionable nutritional and physical data.

A+ Quality Score 100/100

body-composition

protein

fitness

health

muscle



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.

Lean Body Mass Calculator MCP

4 tools available

Cloud-hosted on Vinkius

You can stop guessing about body composition and start using hard numbers. This MCP gives your AI agent the tools to break down body mass into its core components. Instead of just looking at weight, you can analyze the relationship between fat, muscle, and height.

When you're planning a nutrition program, you can use this to find the exact protein intake needed to protect lean tissue. If you're tracking athletic progress, you can check how muscularity scales with height. It's a direct way to feed your AI client the math it needs to build better fitness plans or health reports. You just provide the metrics, and the MCP handles the calculations.

Core Capabilities

01 — Body Mass Breakdown

The AI uses this to separate fat mass from lean mass.

02 — Muscularity Assessment

The AI calculates how much muscle a person has relative to their height.

03 — Protein Calculation

The AI determines daily protein targets based on lean mass.

04 — Metric Summarization

The AI pulls all composition data into a single report.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/lean-body-mass-calculator — connect your AI agent in three steps.

- 01 Connect your preferred MCP-compatible client to Vinkius.
- 02 Provide your body metrics like weight, height, and fat percentage to your AI.
- 03 The AI calls the specific tool needed for your calculation.
- 04 The MCP returns the calculated mass or protein data.
- 05 Your AI uses that data to complete your request.

Connect your AI client to Vinkius and start sending body metrics to the tools.

Built For

This MCP is for professionals who need to turn body metrics into specific nutritional or training instructions.

Nutritionists

They hand off client body data to the AI to generate precise protein targets.

Fitness Coaches

They use the muscularity index to track client progress over time.

Health Researchers

They use the tools to quickly process body composition data for analysis.

What Changes When You Connect

- 01 Removes manual math from nutrition planning.
- 02 Provides height-relative muscularity data.

-
- 03 Calculates protein needs based on lean mass rather than total weight.
 - 04 Delivers complete body profiles in a single request.
-

Real-World Applications

Macro Planning

Your AI client calculates protein requirements to help you set daily macro targets.

Athletic Tracking

Use the muscularity index to see if an athlete is gaining muscle relative to their height.

Body Composition Analysis

Break down total weight into fat and lean mass to get a better picture of health.

Client Reporting

Generate a full summary of body metrics for a client profile in one step.

4 Tools Available

#	TOOL	DESCRIPTION
01	calculate_body_composition	This tool breaks down total body mass into fat and lean components. It provides the fundamental split between muscle and fat.
02	calculate_muscularity_index	This tool assesses lean mass in relation to a person's height. It helps determine how much muscle is carried relative to stature.
03	calculate_protein_needs	This tool calculates the daily protein intake required to maintain current lean muscle mass. It's built for dietary planning.
04	get_composition_summary	This tool returns a full profile of all body metrics in one go. It includes lean mass, fat mass, muscularity, and protein needs.

See It in Action

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

U Give me a full body composition summary for a person weighing 85kg, with 15% body fat, 1.8 meters tall, and they are an athlete.



Based on your metrics, your lean body mass is 72.25 kg, your fat mass is 12.75 kg, your muscularity index is 40.14, and your daily protein requirement is 144.5 grams.

U Calculate the protein needs for someone with 60kg of lean body mass.



The daily protein requirement for 60kg of lean body mass is 60.0 grams.

U What is the fat mass for a 70kg person with 25% body fat?



The fat mass is 17.5 kg.

Frequently Asked Questions

01 How does this MCP calculate protein needs?

It determines the daily protein intake required specifically to maintain your current lean muscle mass.

02 Can I get all my body metrics at once?

Yes, you can use the `get_composition_summary` tool to get lean mass, fat mass, muscularity, and protein needs in one call.

03 What clients can I use this with?

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

04 Does this tool account for height?

Yes, the muscularity index tool evaluates lean mass relative to an individual's height.

05 Is this for total weight or lean mass?

The MCP can handle both. It can break down total weight into components or calculate needs based specifically on lean mass.

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>"lean-body-mass-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

Lean Body Mass 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

INDEPENDENT PLATFORM DISCLAIMER

Vinkius is an independent platform and is not affiliated with, endorsed by, sponsored by, verified by, or otherwise authorized by Lean Body Mass Calculator. All third-party trademarks, logos, and brand names are the property of their respective owners. Their use in this document is strictly for informational purposes to identify service compatibility and interoperability.

DOCUMENT INFORMATION

Generated	September 2026
MCP Server	Lean Body Mass Calculator MCP
Server ID	01a0b1d7-9dee-73ab-a323-b038c98686e0
Platform	Vinkius Cloud for AI Agents
Endpoint	<code>https://edge.vinkius.com/{token}/mcp</code>

LICENSE & USAGE

This document is generated automatically by the Vinkius PDF Engine. Content reflects the MCP server configuration at the time of generation and may change as updates are deployed. For the most current information, visit vinkius.com/en/ai-agent-connect/lean-body-mass-calculator.