MCP SERVER | NO CODE | CLOUD HOSTED

Fluid Requirement Calculator MCP for AI Agents

Accurate Daily Hydration Targets Based on Weight and Activity Levels

The Fluid Requirement Calculator provides precise, personalized daily fluid intake targets for health management. It determines your necessary hydration level by taking into account core metrics like weight and age, then layering in critical adjustments for environmental factors such as high altitude, prolonged exercise, or fever. You get a definitive number that helps you maintain optimal physiological balance and supports kidney stone prevention.

A+ Quality Score 100/100

hydration | health-calculator | physiology | medical | nutrition

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vinkius.com/mcp/fluid-requirement-calculator

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.

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.

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.

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	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	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.

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.

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.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken 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.

Agent Activity

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

FinOps

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

Tool Health

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

Firewall & DLP

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

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.

Fluid Requirement Calculator MCP

3 tools available
Cloud-hosted on Vinkius

Maintaining proper hydration is complicated because needs change constantly. This MCP takes the guesswork out of it. Instead of relying on general guidelines, your agent calculates exactly how much fluid you need daily based on multiple real-world variables. It starts by establishing a physiological baseline using your weight and age, then adjusts that number for specific stressors like altitude or intense exercise. The final output is a clear target designed to help prevent issues like kidney stone formation. Connecting this MCP through the Vinkius catalog gives any compatible AI client the power to run these complex health calculations instantly, turning abstract guidelines into actionable numbers.

Core Capabilities

01 — Establish initial fluid needs

Calculates a fundamental daily fluid requirement based on basic metrics like weight and age.

02 — Factor in environmental changes

Adds necessary fluid adjustments for specific conditions, including fever, high altitude, or intense physical activity.

03 — Determine the final target volume

Combines all inputs to deliver a single, comprehensive daily fluid goal that meets established safety thresholds.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/fluid-requirement-calculator** — connect your AI agent in three steps.

01 First, your agent determines your physiological baseline using your weight and age.

02 Next, it applies adjustments by layering in environmental modifiers for conditions like fever or intense exercise.

03 Finally, the system runs these two numbers through one calculation to give you the total daily fluid target.

The bottom line is that this MCP takes several inputs—your body stats and your activity level—and outputs a single, medically informed number for daily fluid intake.

Built For

Anyone who manages health or wellness data needs this. It's for the physical therapist running patient protocols, the athletic coach planning hydration strategies, or even the individual trying to keep track of complex dietary goals. If your job involves translating general medical guidelines into specific numbers, you need this MCP.

Sports Medicine Coach

Uses it to calculate immediate and sustained hydration targets for athletes undergoing high-altitude training or endurance events.

Registered Dietitian

Calculates precise fluid intake goals for patients with specific medical conditions, like those prone to kidney stones.

Wellness Content Creator

Generates accurate, data-driven content that moves beyond simple 'drink more water' advice by citing calculation methodologies.

What Changes When You Connect

01 Instead of guessing, you get a calculated baseline using `calculate_baseline_requirement`, ensuring the fundamental fluid need is always met.

02 It accounts for real-world stressors. The `calculate_environmental_modifiers` tool adds volume needed specifically due to fever or extreme altitude, which general calculators ignore.

03 The final number is actionable. Using `get_final_daily_target` provides a single goal that meets established safety thresholds for health outcomes like kidney stone prevention.

04 It handles complex user profiles seamlessly, whether you're calculating needs for an adult doing endurance training or a pediatric patient with specific metabolic needs.

05 You bypass the need to cross-reference multiple medical guidelines. This MCP bundles weight, age, and environmental factors into one definitive calculation.

Real-World Applications

Planning for an altitude climb

A user plans a multi-day trip up high mountains. They ask their agent to calculate the necessary fluid intake using `calculate_environmental_modifiers` for both altitude and physical exertion, getting a precise daily target before departure.

Developing post-workout nutrition advice

An athlete finishes a long run. Their agent uses the tool to combine their weight with exercise duration via `calculate_environmental_modifiers` to adjust the baseline, providing specific fluid guidance for recovery.

Managing a child's hydration during illness

A parent needs to know how much extra water a pediatric patient requires due to fever. The agent uses `calculate_baseline_requirement` and then adjusts it with modifiers to ensure the goal is met.

Determining daily intake after illness

After being sick, a user needs an updated fluid target that accounts for both their weight and current fever. The agent runs `get_final_daily_target` to ensure the recommendation is medically sound.

Patterns to Avoid

Using general guidelines

✗ AVOID

Assuming a standard 30ml/kg rule for daily fluid intake, even if the person has a high fever or just ran a marathon.

✓ INSTEAD

Always use this MCP. Combine your weight and age with `calculate_baseline_requirement`, then apply specific stressors like fever or exercise through `calculate_environmental_modifiers` before getting the final number.

Ignoring environmental stress

✗ AVOID

Calculating a fluid target for someone who just finished an intense 60-minute workout without factoring in sweat loss.

✓ INSTEAD

The tool handles this. Run `calculate_baseline_requirement` first, then apply the specific activity period using `calculate_environmental_modifiers`, and finally use `get_final_daily_target` to get the correct total.

Mixing inputs manually

✗ AVOID

Trying to combine multiple sources—a doctor's general advice, an online calculator's estimate, and a coach's suggestion—into one number.

✓ INSTEAD

Let your AI agent do the heavy lifting. Use this MCP to run all required metrics through `get_final_daily_target`. It ensures all variables are processed in the correct order for accuracy.

The Right Fit

Use this if you need a definitive, medically informed total daily fluid goal that adjusts automatically for multiple variables like fever, altitude, and physical activity. This MCP is perfect when general rules won't cut it.

Don't use it if you only need an estimate or a rough idea of hydration. For basic planning, simple online calculators are fine. But if your decision involves optimizing health outcomes—especially concerning kidney stone prevention or high-stakes athletic recovery—you must run the full calculation sequence: establish the baseline via `calculate_baseline_requirement`, layer in stressors using `calculate_environmental_modifiers`, and finalize with `get_final_daily_target`. If you only need one variable (e.g., just a weight-based number), this MCP is overkill, but if you're dealing with real health targets, it’s essential.

Fluid Requirement Calculator: Calculating Hydration Needs in Sports Medicine

In sports medicine, calculating proper hydration isn't simple. Coaches often have to piece together recommendations from weight charts, activity logs, and recovery protocols. This means cross-referencing multiple guidelines—one for baseline needs, another for altitude adjustments, and yet a third just for sweat loss during specific training types. It’s tedious, prone to error, and takes too much time.

With this MCP, your agent handles the entire process. You input the core data, and the tool calculates both the physiological starting point and all necessary environmental boosts in one go. The result is an immediate, actionable fluid target that integrates multiple complex variables without you having to manually reconcile any guidelines.

Fluid Requirement Calculator: Defining Hydration Protocols for Kidney Health

For kidney health, the goal is precise. General advice like 'drink enough water' is useless when you need to hit a specific threshold to prevent stone formation. Manual tracking involves checking your weight against age guidelines and then adding modifiers based on potential risks—a process that has massive room for miscalculation.

This MCP delivers clarity. It guarantees the final output meets safety standards because it systematically layers requirements through `calculate_environmental_modifiers` before setting the definite goal via `get_final_daily_target`. You get a reliable, data-backed protocol instantly.

Fluid Requirement Calculator: 3 Tools for Precise Hydration Calculation

These three tools allow your agent to calculate everything from baseline needs to final hydration targets using detailed physiological inputs.

#	TOOL	DESCRIPTION
01	`calculate_baseline_requirement`	Determines the fundamental daily fluid necessity using weight and age data.
02	`calculate_environmental_modifiers`	Adds necessary adjustments to the baseline for external factors like fever, altitude, or exercise duration.
03	`get_final_daily_target`	Finalizes all inputs into one comprehensive total daily fluid recommendation.

See It in Action

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

U What's my daily fluid target if I weigh 85kg and just ran for an hour?

Daily Hydration Goal:
- **Baseline Requirement (Weight):** 3200 ml
- **Activity Modifier (60 min run):** +450 ml
- **Total Recommended Intake: 3,650 ml**

Focus on consistent intake throughout the day to maximize recovery.

U Help me calculate fluid needs for a 12kg child with a fever.

Fluid Requirement Breakdown (Pediatric):
- Initial Baseline: 900 ml
- Fever Modifier (+38°C): +500 ml
- Total Daily Target: **1,400 ml**

Keep monitoring intake and adjust if the fever changes.

U What's the total fluid target for an adult at high altitude?

Targeting High Altitude Hydration:
- Weight-Based Need: 2800 ml
- Altitude Modifier (3500m): +700 ml
- **Final Goal: 3,500 ml**

Remember to drink consistently, especially when changing elevation.

Frequently Asked Questions

01 **How does the Fluid Requirement Calculator work for athletes?**

It calculates your needs by taking your weight and adding specific boosts based on the duration and intensity of your exercise. This ensures you hit a recovery target, not just a general guideline.

02 **Is this better than using generic hydration charts for my kid?**

Yes. The Fluid Requirement Calculator is much more accurate because it factors in multiple variables—like the child's weight and current illness (e.g., fever)—to give a customized, safe number.

03 **Can I use this tool to track my daily water intake?**

The MCP calculates your ideal target number for you. You then take that final figure and use it as the goal in whatever tracking system you prefer. It tells you *what* to aim for.

04 **What factors does the Fluid Requirement Calculator consider besides weight?**

It considers several real-world variables, including your age, whether you're at high altitude, if you have a fever, or how intense your physical activity was. It combines them all for one number.

05 **Does this MCP help prevent kidney stones?**

Yes. The calculation is designed with safety thresholds in mind, ensuring the final recommendation supports optimal fluid intake necessary to reduce risk factors like those associated with kidney stones.

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 `"fluid-requirement-calculator": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → 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

Fluid Requirement 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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