MCP SERVER | NO CODE | CLOUD HOSTED

Pediatric Growth Calculator MCP

Instant Z-Scores, Percentiles, and Clinical Status Checks.

The Pediatric Growth Percentile Calculator determines growth percentiles and Z-scores for infants and children using established WHO (0-60m) and CDC (61-216m) standards. You enter age, sex, and specific measurements—like weight, height, or head circumference—and the tool instantly calculates where those numbers fall against global clinical benchmarks.

A+ Quality Score 100/100

pediatrics | growth | z-score | who | cdc | clinical

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vinkius.com/mcp/pediatric-growth-percentile-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.

Pediatric Growth Percentile Calculator MCP

3 tools available
Cloud-hosted on Vinkius

This MCP is a specialized calculation engine built for pediatric health professionals. It lets you analyze growth data by comparing a child's current physical metrics to globally accepted standards. Whether you're working with WHO guidelines for younger children or CDC charts for older ones, the system handles the complex calculations so you don't have to. You input three key measurements—weight, height, and head circumference—along with age and sex. The tool then runs multiple analyses: it determines precise growth percentiles, calculates Z-scores, and provides a clear clinical classification of the status. Everything is designed to give clinicians reliable data points immediately. Finding this specialized functionality in Vinkius makes sure you have access to high-quality tools without needing custom API builds.

Core Capabilities

01 — Determine specific growth percentiles

You input a measurement, and the tool calculates its exact percentile ranking against age and sex standards.

02 — Calculate Z-scores for measurements

The system runs a calculation to give you the Z-score, which measures how far a specific physical metric deviates from the average.

03 — Provide clinical growth status descriptions

Using all calculated metrics, the tool delivers a plain-language description of the child's overall growth classification.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/pediatric-growth-percentile-calculator** — connect your AI agent in three steps.

01 Start by providing the core data: the child's age, biological sex, and the specific measurements (weight, height, or head circumference).

02 Run the calculations using the appropriate standards (WHO for 0-60 months; CDC for 61-216 months) through our dedicated tools.

03 The MCP returns a comprehensive result set including percentile rankings, Z-scores, and a final clinical growth classification.

The bottom line is that you give it the data points, and you get back standardized, actionable clinical metrics instantly.

Built For

This MCP is essential for pediatricians, nurses in well-child clinics, and public health researchers who frequently assess child development. If your job requires cross-referencing physical measurements against age-specific growth charts—and you're tired of manual chart lookups—you need this.

Pediatrician

You use the MCP to validate a child's current weight or height measurement, quickly determining if it falls outside normal parameters using both WHO and CDC standards.

Registered Nurse (Well-Child Clinic)

You run the growth status classification tool every time a child is seen to document their development record accurately and flag potential concerns for follow-up care.

Pediatric Researcher

You use this MCP to process large datasets of measurements, enabling bulk calculation of Z-scores across different age cohorts for research analysis.

What Changes When You Connect

01 Stop cross-referencing multiple printed growth charts. The tool runs complex WHO (0-60m) and CDC (61-216m) calculations in one step, giving you instant percentile data for weight, height, and head circumference.

02 Get precise Z-scores without manual calculation. Use the calculate_zscore function to quantify exactly how far a measurement deviates from average growth lines for any given age.

03 Instantly understand clinical status. Running identify_growth_classification gives you a clear 'Normal,' 'Low,' or other classification, saving time compared to interpreting multiple data points yourself.

04 Handle diverse populations easily. The MCP adjusts standards based on the child's age and sex, ensuring your results are always relevant whether you're using WHO or CDC benchmarks.

05 Document better care records. By getting a standardized growth status description right when you enter the data, your patient files stay accurate and consistent.

Real-World Applications

A child's weight seems low compared to last visit

The nurse wants to know if the 15kg weight measurement is genuinely concerning. They call calculate_percentile, inputting age and sex data. The MCP returns that the weight falls at the 3rd percentile, immediately alerting the pediatrician to potential nutritional issues.

Comparing growth across two different standards

A researcher needs to compare a dataset using both WHO (0-60m) and CDC (61-216m). They run calculate_zscore twice, once for each standard. This allows them to quantify the deviation of the same measurement under two separate global guidelines.

Determining if a head circumference is within normal range

A pediatrician needs a quick check on a 3-month-old's measurements. They use identify_growth_classification with the head circumference and age data. The MCP returns 'Normal,' giving immediate clinical reassurance.

Initial assessment of a full set of metrics

The clinic staff enters height, weight, and head circumference for an infant. They run all three tools —calculate_percentile, calculate_zscore, and identify_growth_classification—together. The MCP provides the complete picture in one go.

Patterns to Avoid

Treating percentile as a pass/fail test

✗ AVOID

Assuming that if a weight is below the 50th percentile, it automatically means the child has a serious problem. This ignores age variability and measurement error.

✓ INSTEAD

Always use identify_growth_classification after running calculate_percentile and calculate_zscore. The classification tool puts all metrics together to give you the true clinical context.

Using a single standard for all ages

✗ AVOID

Applying CDC growth charts to a 3-month-old because it's easier than switching standards.

✓ INSTEAD

Be precise with your input. The MCP handles the complexity, ensuring you select the correct WHO or CDC benchmarks based on age range.

Copying data manually for comparison

✗ AVOID

Writing down a child's weight today and then having to re-reference complex charts weeks later to compare it.

✓ INSTEAD

Use the calculate_zscore tool. You can run the same measurement through the Z-score calculator across different time points, giving you a quantifiable trend over time.

The Right Fit

Use this MCP if your clinical workflow requires standardized growth analysis for pediatrics—specifically when you need to compare weight, height, and head circumference against established global benchmarks (WHO or CDC). If you are assessing relative deviation from the average, run calculate_zscore. If you just need a quick visual check on where a number falls among peers, use

calculate_percentile. However, don't use this if your goal is simply to measure something absolute, like calculating BMI using only weight and height without factoring in age or sex; for that, you might need a different foundational metric calculator.

Manual Growth Assessment: The Time Sink You Fight Every Day

Right now, assessing growth requires jumping between multiple charts and standards. You record the measurements in one system, then pull up a different resource to check if that weight or height is within acceptable limits for that specific age. Then you have to manually cross-reference WHO vs. CDC rules depending on months elapsed. It’s slow, it's prone to lookup errors, and it takes time away from patient care.

With this MCP, the entire process runs in your agent. You feed the system the raw data, and it handles all the complex logic—the right charts, the correct standards, the necessary calculations. You get a single, clear report showing the percentile rank, the Z-score, and a final clinical assessment.

Achieving Clinical Precision with calculate_percentile

The most time-consuming part is ensuring you’re reading the right chart for the right month. You'd have to switch between different weight/height/head circumference charts, each one having slightly different reference points.

Now, running calculate_percentile automates that entire process. It gives you an immediate, accurate percentile number without you ever opening a physical or digital growth chart again. It just works.

Pediatric Growth Percentile Calculator (3 Tools)

These tools provide specialized functions to analyze physical measurements against international pediatric growth standards.

#	TOOL	DESCRIPTION
01	`calculate_percentile`	Determines the specific growth percentile for a given physical measurement based on established standards.
02	`calculate_zscore`	Calculates the Z-score, providing a standardized measure of how far the physical measurement falls from the average.
03	`identify_growth_classification`	Provides a clinical description of growth status after analyzing multiple measurements against age and sex standards.

See It in Action

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

U What is the percentile for a 24-month-old male weighing 12kg?

A weight of 12kg for a 24-month-old male falls at approximately the 50th percentile.

U Calculate the Z-score for a 72-month-old female with a height of 115cm.

The calculated Z-score for a height of 115cm at 72 months for a female is approximately 0.5.

U Is a head circumference of 33cm normal for a 3-month-old male?

A head circumference of 33cm for a 3-month-old male is within the 'Normal' growth classification.

Frequently Asked Questions

01 **How do I use the Pediatric Growth Percentile Calculator with WHO standards?**

You must specify that the child's age falls within the 0 to 60-month range when calling calculate_percentile. The MCP automatically adjusts its calculations using the correct WHO benchmarks for those measurements.

02 **Do I need to use all three tools, calculate_zscore and identify_growth_classification?**

No, you only run the tool needed. If you just want a standardized deviation number, call calculate_zscore alone. You'll only combine them if you need the full clinical picture.

03 **What data is required for identify_growth_classification?**

To get a classification, you must provide age, biological sex, and at least two physical measurements (e.g., weight and height). The tool uses all inputs to determine the overall status.

04 **Can I calculate percentile for different metrics in one request?**

Yes. You can bundle requests for multiple metrics—like running both calculate_percentile on weight and then on head circumference—to compare them side-by-side.

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 `"pediatric-growth-percentile-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

Pediatric Growth Percentile 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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