Joi doesn’t explicitly call them **"sanitizers"**, but many of its **methods perform data transformation or normalization**, which are effectively *sanitization operations*.

Here is a **comprehensive list of all Joi "sanitizer"-like methods**, categorized by data type:

**🔹 Global (All Types)**

|  |  |
| --- | --- |
| **Method** | **Description** |
| .default(value) | Sets a default value if input is undefined |
| .empty(schema) | Replaces specific values with undefined (e.g., '', null, etc.) |
| .strip() | Removes the key from the output if present |
| .custom(fn) | Applies a custom transform/sanitizer |

**🔹 String Sanitizers**

These are the most common sanitizers used in Joi.

|  |  |
| --- | --- |
| Method | Description |
| .trim() | Removes leading and trailing whitespace |
| .lowercase() | Converts to lowercase |
| .uppercase() | Converts to uppercase |
| .normalize([form]) | Normalizes Unicode (e.g., NFC, NFD) |
| .replace(pattern, replacement) | Replaces matched parts of string |
| .hex() | Sanitizes input to ensure it's valid hexadecimal |
| .token() | Sanitizes string to only include alphanumeric and underscores |

**🔹 Number Sanitizers**

|  |  |
| --- | --- |
| Method | Description |
| .precision(limit) | Rounds the number to a fixed decimal precision |
| .unsafe() | Allows coercion of numbers outside JavaScript’s safe integer range |

**🔹 Boolean Sanitizers**

|  |  |
| --- | --- |
| Method | Description |
| .truthy(...values) | Custom values that will be coerced to true |
| .falsy(...values) | Custom values that will be coerced to false |
| .insensitive() | Makes truthy/falsy string values case-insensitive |

**🔹 Array Sanitizers**

|  |  |
| --- | --- |
| Method | Description |
| .single() | Allows single values to be converted to arrays |
| .unique() | Filters out duplicate values |
| .sort() | Sorts the array |

**🔹 Object Sanitizers**

|  |  |
| --- | --- |
| Method | Description |
| .rename(from, to, [options]) | Renames a key in the object |
| .unknown(true) | Allows and retains unknown keys |
| .unknown(false) | Removes unknown keys from the output |
| .stripUnknown() *(via .prefs())* | Globally remove unknown keys |

**🔹 Date Sanitizers**

|  |  |
| --- | --- |
| Method | Description |
| .timestamp([type]) | Converts input to a JS Date from Unix timestamp |
| .iso() | Parses ISO 8601 strings into JS Date objects |

**🔹 Binary Sanitizers**

|  |  |
| --- | --- |
| Method | Description |
| .encoding(encoding) | Specifies string encoding for binary input |

**🔹 Custom Sanitizers (All Types)**

You can define **custom sanitizers** using:

Joi.any().custom((value, helpers) => {

// transform value

return sanitizedValue;

});

**🔸 Note:**

Some transformations (like .lowercase()) **change the output**, while others (like .valid()) only **validate without modifying**.