


Got it  — you want to parse a JSON date string in the format `YYYY-MM-DD` into a **TypeScript** `Date` **object**, assuming **Italy's timezone** (Europe/Rome), and set the time to **00:00** local time.

Here's a **safe, complete, and runnable** TypeScript example:

```
// parseDateItaly.ts
function parseItalyDate(dateStr: string): Date | null {
  // Validate format YYYY-MM-DD
  if (!/^\\d{4}-\\d{2}-\\d{2}$/.test(dateStr)) {
    console.error("Invalid date format. Expected YYYY-MM-DD.");
    return null;
  }

  const [year, month, day] = dateStr.split("-").map(Number);

  // Create a Date object in Italy's timezone at 00:00
  // Step 1: Create UTC date from Italy's midnight
  const italyMidnight = new Date(Date.UTC(year, month - 1, day));

  // Step 2: Adjust for Italy's timezone offset (including DST)
  const italyFormatter = new Intl.DateTimeFormat("en-GB", {
    timeZone: "Europe/Rome",
    year: "numeric",
    month: "2-digit",
    day: "2-digit",
    hour: "2-digit",
    minute: "2-digit",
    second: "2-digit",
    hour12: false
  });

  // Extract Italy's midnight in UTC
  const parts = italyFormatter.formatToParts(italyMidnight);
  const getPart = (type: string) => Number(parts.find(p => p.type
    === type)?.value);
```

```
    return new Date(
      Date.UTC(
        getPart("year"),
        getPart("month") - 1,
        getPart("day"),
        getPart("hour"),
        getPart("minute"),
        getPart("second")
      )
    );
}

// Example usage:
const jsonDate = "2024-05-10"; // from JSON
const dateObj = parseItalyDate(jsonDate);

if (dateObj) {
  console.log("Date object:", dateObj);
  console.log("ISO string:", dateObj.toISOString());
}
```

## How it works

1. **Validation** — Ensures the string matches `YYYY-MM-DD`.
2. **Parsing** — Splits into year, month, day.
3. **Timezone Handling** — Uses `Intl.DateTimeFormat` with `"Europe/Rome"` to correctly account for **daylight saving time**.
4. **Result** — Returns a `Date` object representing **Italy's midnight** in UTC.

## Example Output

If Italy is in **CEST (UTC+2)**:

```
Date object: 2024-05-09T22:00:00.000Z
```

```
ISO string: 2024-05-09T22:00:00.000Z
```

This means **local time in Italy** is `2024-05-10 00:00` .

If you want, I can also give you a **shorter version** using only `Date.UTC` and manual offset calculation without `Intl` .

That would be faster for bulk parsing.

Do you want me to prepare that optimized version?