**Goals**

* Collect key risk & financial inputs (DOB, gender, medical conditions, habits, job, income, liabilities, term length, etc.).
* Compute **recommended term coverage** (family protection need) and **estimated monthly premium**.
* Support **USA / Canada** toggle that switches currency, base rate tables, and “top 5 insurers” set.
* Show a **breakdown by insurer** + **average**, plus **low–high range**.
* Be fast, accessible, and **light theme**. State should be shareable via URL.

**Layout & UX**

* **Header:** Title “Term Insurance Premium Calculator” + subtitle “Estimate coverage & monthly premium.”
* **Country toggle:** **USA** / **Canada** (switches currency symbol and base rate tables).
* **Form sections (cards)**:
  1. **Basics**
     + **Date of birth** (date input → auto-compute **Age**)
     + **Gender** (Female, Male, Other/Prefer not to say)
     + **Term length** (radio: 10 / 20 / 30 years; custom number allowed 5–40)
  2. **Health & Habits**
     + **Pre-existing conditions** (checkboxes): Hypertension (controlled), Type 2 Diabetes (controlled), Asthma, High cholesterol, Depression/Anxiety (stable), Heart disease, Cancer (5+ yrs remission)
     + **Smoking**: Never, Former (>12 months), Current
     + **Alcohol use**: None, Moderate, Heavy
  3. **Occupation**
     + **Job category** (select): Low risk (Office/IT/Teacher), Medium (Driver/Sales/Light manual), High (Construction/Law enforcement/Firefighting), Very High (Aviation/Mining/Offshore)
  4. **Income & Liabilities**
     + **Present monthly income** (number, currency changes with toggle)
     + **Liabilities** (numbers, all optional):
       - Mortgage
       - Auto loan
       - Personal loan
       - Credit card debt
       - Line of credit
     + **Existing life insurance** (optional)
  5. **Planner dial (optional)**
     + **Income replacement years** (slider 1–20; default: min(10, term length))
* **Results (sticky on desktop)**:
  1. **Recommended Coverage** (large number)
  2. **Estimated Monthly Premium (Average of Top 5)** (large number)
  3. **Range** (Low–High across 5 insurers)
  4. **Table**: Insurer A–E with per-insurer premium
  5. **Overall assumptions** (age band, risk multipliers, term)
* **Controls:** “Reset to defaults” and “Copy inputs as link”.
* **Accessibility:** Proper labels, keyboardable controls, aria-live="polite" on results, high contrast.

**Calculations (document in code comments & tooltips)**

**1) Coverage needed (DIME-style simplification)**

swift

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Liabilities\_total = Mortgage + Auto + Personal + CreditCard + LineOfCredit

Income\_replacement = Monthly\_income × 12 × Income\_replacement\_years

Final\_expenses (default):

USA: $15,000

Canada: $18,000

Recommended\_coverage =

max(0,

Liabilities\_total

+ Income\_replacement

+ Final\_expenses

- Existing\_life\_insurance)

* Clamp to reasonable bounds (e.g., 0 – 20,000,000).
* Allow user to adjust **Income\_replacement\_years**; default = min(10, selected term).

**2) Base premium model (per $100k of coverage per month)**

Use **age bands** and **term** to look up a **base monthly rate per $100k** for **Standard Non-Smoker**. Provide **editable JSON tables** for USA and Canada; example defaults:

js

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const baseRates = {

USA: {

"10": { "25-34": 8, "35-44": 12, "45-54": 22, "55-60": 45 },

"20": { "25-34": 10, "35-44": 18, "45-54": 35, "55-60": 70 },

"30": { "25-34": 15, "35-44": 28, "45-54": 55, "55-60": 115 }

},

CAN: {

"10": { "25-34": 9, "35-44": 13, "45-54": 24, "55-60": 48 },

"20": { "25-34": 12, "35-44": 20, "45-54": 38, "55-60": 74 },

"30": { "25-34": 18, "35-44": 31, "45-54": 60, "55-60": 120 }

}

};

Determine **age band** from DOB:

* 18–24 (use 25–34 band), 25–34, 35–44, 45–54, 55–60, 61–70 (extrapolate using last band × 1.25), 71–75 (×1.6). If out of range, show a friendly note.

**3) Risk multipliers (combined multiplicatively)**

js

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const risk = {

gender: { female: 1.00, male: 1.10, other: 1.05 },

smoking: { never: 1.00, former: 1.25, current: 2.10 },

alcohol: { none: 1.00, moderate: 1.05, heavy: 1.25 },

job: { low: 1.00, medium: 1.10, high: 1.25, very\_high: 1.60 },

medical: {

hypertension: 1.10,

diabetes2: 1.20,

asthma: 1.05,

high\_cholesterol: 1.10,

depression: 1.05,

heart\_disease: 1.75,

cancer\_history: 1.40

}

};

* **Medical multiplier** = product of all checked conditions (if any).
* **Total\_risk\_multiplier** =  
  gender × smoking × alcohol × job × medical.

**4) Insurer dispersion (top 5)**

Simulate five insurers around market average (editable JSON):

js

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const insurers = [

{ name: "Insurer A", factor: 0.95 },

{ name: "Insurer B", factor: 0.98 },

{ name: "Insurer C", factor: 1.00 },

{ name: "Insurer D", factor: 1.02 },

{ name: "Insurer E", factor: 1.05 }

];

**5) Monthly premium per insurer & average**

ini

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Units = ceil(Recommended\_coverage / 100000)

Base\_rate = baseRates[country][term][ageBand] // per $100k per month

Risked\_rate = Base\_rate × Total\_risk\_multiplier

Insurer\_premium = Units × Risked\_rate × insurer.factor

Average\_premium = mean(Insurer\_premium across 5 insurers)

Range\_low\_high = [min, max] across 5 insurers

**UI Behavior**

* **Instant re-calc** on any input (debounce 150ms).
* If required inputs are missing/invalid, disable results and show inline tips.
* **Currency** switches with country (USD for USA, CAD for Canada), formatting via Intl.NumberFormat.
* **URL state**: serialize all inputs to querystring; **Copy inputs as link** copies current URL.
* **Reset** button restores defaults.

**Technical**

* Plain, semantic HTML; CSS variables for theme; no external libs.
* Keep functions small & commented (age calc, band lookup, risk combine, premium calc).
* Use a single config object for base rates & multipliers so they’re easy to edit later.

**Disclaimer (show near results & in footer)**

**Disclaimer:** This is an **approximate estimate** based on the information you provided. Actual premiums depend on full underwriting by licensed insurers, detailed medical and lifestyle disclosures, and country/province/state regulations. This tool does not provide financial, legal, or medical advice.

Footer of the page will be created based on the previous pages.