



RetirementWorks®

## Retirement Income — Amount

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The RetirementWorks® Retirement Income Amount calculator analyzes how much someone should withdraw from savings at or during retirement. It uses a needs-based approach, which asks first how big a withdrawal needs to be made in order to maintain the desired lifestyle, and second whether that lifestyle is likely to be sustainable based on the amount of money that is available.

The first (how much?) question is answered by comparing income with expenses. The second question is answered either in a less sophisticated way, by determining what rate of return would need to be earned to sustain withdrawals well into a person's nineties, or in a more sophisticated way, by using actuarial models of life expectancy to determine what the likelihood of success would be at different levels of withdrawal.

The input can be made extremely simple and approximate, or it can be more detailed and accurate:

- input can be for one retiree or two in the same household;
- analysis can be done reflecting data shortly before retirement, or during retirement; if there are two retirees in the analysis, different retirement dates can be assumed for each;
- eight categories of income are provided, to help itemize sources and estimate how they might change after retirement;
- savings and investment data can be entered in total or in detail, as you prefer;
- as mentioned above, two kinds of analysis can be done; the more sophisticated method requires some additional input;
- household expenses can be entered in total or by category; if they are entered by category, different expense levels can be indicated for late retirement years (eighties and nineties), when most people's medical expenses are higher, but other household expenses tend to be distinctly lower;
- most inputs and calculations use constant dollars, which (except arguably in terms of rates of return) are easier to understand; there is no need to guess what future inflation rates will be!



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## When to Use This Calculator

The Retirement Income Amount calculator is intended to be used shortly before retirement, while planning for that event, and periodically thereafter.

We recommend that withdrawal amounts be reviewed on a regular basis once a year during retirement, and in addition on an *ad hoc* basis whenever there is a major change in the household (such as a second person retires, a death occurs, family expenses change significantly due to a move, etc.).

The screenshot shows the 'Retirement Income - Amount' calculator interface. It includes fields for Name and Date of birth, radio buttons for Client and 2nd Retiree, and options for when retirement occurs (Already, Soon, Over 1 year away). The 'MONTHLY INCOME Sources' section lists various income types with input fields for 'Now' and 'Soon' for both Client and 2nd Retiree. The 'MONTHLY EXPENSES' section includes a 'TOTAL only' or 'Detailed analysis' option and a 'Percentage after retirement' field set to 75%. Buttons for 'Calculate' and 'Close' are at the bottom, along with the version and expiration date: 'Version 3.38D expires 04/15/03'.



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## How to Use This Calculator

The Retirement Income Amount calculator can be extremely simple to use. At the simplest, you can simply enter name and date of birth, current sources of income (including investment balance), and total current household expenses. Then run it!

You have the option of adding some complexity and sophistication to the calculation, however, and you should consider doing so based on the circumstances you are dealing with:

1. **Is there more than one worker in the household?** If so, then you would generally want to use the input fields associated with a 2<sup>nd</sup> retiree. If all the breadwinners are already retired, you could skip this step, but it is better not to: money needs to last longer, in general, when it is supporting two people rather than one. Note that the second retiree does not have to be a spouse, however.
2. **Should you collect and input investment detail?** This is really not necessary, although if you are going to follow up with other analyses (such as Retirement Income Sources analysis, or estate planning – the latter of which is not available in RetirementWorks®), it might well make sense to collect the detail and input it up front. In addition, collecting the detail makes it less likely that any assets get overlooked.
3. **Should you collect and input expense detail?** Yes, if you want to have more control over the system's assumptions about expenses. Unless you specify otherwise, the system will assume that overall expenses in real dollars (i.e., after adjusting for inflation) will drop by about 1% a year during retirement until about age 80, at which point they will level off. Your inputs on the Expense Detail screen can modify the amount by which early and late retirement expenses differ. By working through this screen (or the worksheet) category by category with the client, you can help come up with numbers that are more suited to the actual situation.
4. **Should you use the Simplified or the More Sophisticated calculation method?** We recommend the More Sophisticated method because it requires only a little more data input, but it provides an analysis that is probably more useful for most people. This calculation method performs mortality calculations that tell you what is the likelihood that given levels of withdrawal will last for the lifetime of the retiree(s), assuming a fairly conservative rate of return on investment (3% after inflation). This is, presumably, what you and the client really want to know.

The Simplified method uses a fixed mortality assumption (trying to make money last to somewhere in the age 97-100 range, thus providing a 95% or better chance of success), and tests the proposed level of withdrawals against this target using varying rates of return. In reality, however, the client has limited control over the rate of return he or she will actually receive, so it is less useful to test for this factor. Still, the



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Simplified method provides a general picture of whether the desired starting level of withdrawals and the lifestyle it suggests is sustainable, and by trying out the Simplified method at different levels of expense you can derive an even clearer picture. To the extent that clients have trouble with the concept of mortality probability, the Simplified method may be more understandable.

5. **Why use a 3% rate of return?** Remember, this is 3% on top of the current inflation rate, so it is more than it might seem at first glance. Historically, money market funds have returned about 2½% above the consumer price index. This means that achieving a 3% return is generally possible without investing heavily (or at all) in equities or other volatile investment classes.

This is not much of an issue for the Simplified calculation method. Results will be shown at a variety of after-inflation rates of return, from 0% to 7%.

For the More Sophisticated method, it may seem that the 3% figure is arbitrary and limiting. But the More Sophisticated method is testing probabilities of success. The 3% rate is used because it is a pretty "safe" assumption. In order to target a higher return, a client would need to take more investment risk. The higher assumed return would make the achievement of the goal more likely, but the higher risk of loss would make the achievement of the goal less likely. To the extent that the financial markets value risk appropriately at any give time, these two factors should, in general, cancel out. It therefore would violate the structure of the probability model to give the user control over this item.



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## Detailed Input Instructions

### Name

Enter the client's name as it should appear on the printed report.

### Date of Birth

Date of birth must be entered in *m/d/yyyy* format. **The client's date of birth is always required.**

### Client Timing (When does retirement occur?)

In the middle of the upper part of the Retirement Income Amount screen, you can indicate whether the client is Already retired, or is Soon to be retired.

- **Already.** This choice simplifies input, because it assumes that all income and expenses already reflect the post-retirement situation. The second column of client Income inputs will be disabled.
- **Soon.** This choice opens up the second column of client Income inputs. In the first column (labeled "Now"), enter the current monthly income amounts, including pre-retirement salary or wages. In the second column (labeled "Soon"), indicate the expected post-retirement income amounts, including pensions and Social Security, if applicable. The retirement analysis will be done based on the second column only, but seeing the Before and After picture side by side can help facilitate discussion of changes that are likely to occur.

### 2<sup>nd</sup> Retiree

The right portion of the Retirement Income Amount screen is available for information about a spouse or other household member who may be retired already or retiring later. For the second retiree, there are three options about the timing:

- **Already.** If the second person is already retired, the right-most column



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of Income inputs will be disabled.

- **Soon.** This choice opens up the right-hand column of Second Retiree Income inputs. In the first column (labeled "Now") indicate the current monthly income amounts, including pre-retirement salary or wages. In the second column (labeled "Soon"), indicate the expected post-retirement income amounts, including pensions and Social Security, if applicable. The analysis will be done based on the second column only, but seeing the Before and After picture side by side can help facilitate discussion of changes that are likely to occur.
- **Over 1 year away.** If the second person will not be retiring within the next year, select this option. In the first column (labeled "Now") indicate the current monthly income amounts, including pre-retirement salary or wages. In the second column (labeled "Later"), indicate the expected post-retirement income amounts, including pensions and Social Security, if applicable. If you choose both this option and the More Sophisticated calculation method, you can indicate your best estimate of the Second Retiree's retirement year on the Analysis Detail pop-up screen. Otherwise, the Second Retiree will be assumed to retire in about five years. So if the second retiree is not likely to retire until much later than that, you should probably plan to use the More Sophisticated rather than the Simplified calculation method.

### Monthly Income Sources

Household income is entered on the Retirement Income Amount screen. Depending on your choices regarding Client Timing and a Second Retiree, you will have from one to four columns in which to input the income items.

Income is divided into eight categories. Except for investment income, which is described in more detail elsewhere, the income categories don't actually matter a great deal. For calculation purposes, they are currently handled alike. But we itemize them to help make sure that all income sources are captured, and so that if not everyone in the household has retired yet, you may more easily consider which income sources will be different after retirement. (Note that the income categories we use are similar to those that appear on the Federal 1040 tax form, enabling you to use recent tax returns as a data source.)

**All income items are to be entered on a monthly basis. If any items fluctuate over time, enter the average monthly amount. Count cash receipts only (not, for example, unrealized capital gains on investments, real estate, or business ownership, or uncollected accumulation in IRAs, annuities, or pension plans).**



## Investment Income

Investment income is different from other kinds of income, because it is the main focus of the analysis. Income from investments and savings is entered in the second row of the Income fields on the Retirement Income Amount screen. There are several points to keep in mind about Investment Income:

- **Count CASH income only.** This screen is trying to determine what your monthly income is, so we are interested only in income that you actually receive. For the most part, this means interest and dividends only. Do not include unrealized capital gains, or accumulated growth in IRAs, annuities, or pension plans, except to the extent that you receive payments from such plans in cash.
- **Enter MONTHLY amounts.** For consistency with the other inputs, make sure you enter investment income as a monthly (not an annual) amount. If you want help making the translation, you can right-click on the input field you are using, and pop up the built-in calculator.
- **Detailed analysis is available.** If you click the Detailed Analysis check box, then click on the Detail button that subsequently appears, you will be taken to the Invested Assets detail screen. Here, you can enter investment information by type of asset, or even asset by asset. This level of detail is not really required for the Retirement Income Amount calculation, but it is useful for other calculations, and you may find it a convenience to enter the detail here and have it available later for other purposes. Entering the detail also helps assure that no assets get overlooked. The detail screen is shown in the following section.
- **Enter the Investment Balance.** We need to know the total of investments and savings that are available for eventual liquidation. If you use the Detailed Analysis, this field will be filled in automatically. But otherwise, you need to do it manually. **Include all assets that are or will become available to supplement income, even if they do not generate income currently (such as land, gold, or collectibles).** If there is a second retiree, include his or her assets as well.



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Invested Assets Detail (optional)

Invested Assets				
Asset Class or Item	Current Asset Balance	CASH Annual Return %	TOTAL Annual Return %	Owned by 2nd Retiree?
+ IRA, 401(k), 403(b), 457 & other plan balances	\$	%	%	<input type="checkbox"/> % Surr. fee
+ Bank accounts, cert's of deposit, money mkt. funds	\$	%	%	<input type="checkbox"/>
+ Taxable mutual funds	\$	%	%	<input type="checkbox"/> % Cap.gain
+ Individual common and preferred stocks	\$	%	%	<input type="checkbox"/> % Cap.gain
+ Individual taxable bonds	\$	%	%	<input type="checkbox"/> % Cap.gain
+ Non-taxable bonds or bond funds	\$	%	%	<input type="checkbox"/> % State tax
+ Cash value life insurance	\$	%	%	<input type="checkbox"/>
+ Annuity account balances (excl. qualified plans)	\$	%	%	<input type="checkbox"/> % Surr. fee
+ Other income-producing assets, taxable at sale	\$	%	%	<input type="checkbox"/> % Cap.gain
+ Other income-producing assets, non-taxable at sale	\$	%	%	<input type="checkbox"/>
+ Other non-income-producing assets	\$	%	%	<input type="checkbox"/>

Close    Click "+" to add a detail item in any category, "-" to delete one. Shaded inputs are optional.

This screen appears when you click the Detail button after selecting Investment Detail on the Retirement Income Amount screen. This screen enables you to itemize assets, and/or to enter them by category, with details about each item.

This level of detail is not needed to perform the Retirement Income Amount calculations. However, these details can later be used for other kinds of analysis, and you may consider it desirable to collect the information and enter it all at this point. Being this thorough makes it less likely that some assets will be overlooked.

Eleven fixed categories of investment are provided. **Any amounts entered in the last category ("Other non-income-producing assets") will not be considered to be available for use in the Retirement Income Amount analysis and will not be included in the invested assets total on the Retirement Income Amount screen.** You may change the names of the fixed categories, if you want, but not the nature of how each category is treated, so make any such changes with caution.



You can add space to enter specific assets in one or more categories by clicking the "+" sign next to the appropriate category. You will get one new blank row each time you click "+". If you later wish to delete a detail row, click the minus sign next to that row. You cannot delete the fixed category rows, only the detail rows. If you use detail rows, the inputs for the affected categories are disabled; but subtotals and overall rates of return will be calculated automatically and displayed for these categories, based on the detailed information provided underneath them.

For the Retirement Income Analysis, you need to enter the first three columns: the current asset balance (normally, this should be net of any associated liability such as a mortgage or other loan), the average annual cash rate of return, and the average annual total rate of return (including any capital gains, realized or not). **Enter actual rates of return, not inflation-adjusted rates.** If there is a Second Retiree, it is also preferable to indicate which person owns the asset, using the check box at the far right. Other details concerning surrender fees or capital gain percentages are not needed for this analysis (although again, if known, they may be entered now for use in other reports).

When you have entered all the data and clicked the Close button, you will return to the Retirement Income Analysis screen, and the current balance and cash investment income fields on that screen will be filled for you. If the client (or Second Retiree, if any) is not yet retired, you may adjust the post-retirement income amount(s) if you wish to, but changes to the current numbers need to be made by going back to the detail screen (or by first turning off the detail option).

## Calculation Method options

Near the bottom of the Retirement Income Amount screen, you can select whether you want a simplified or a more sophisticated calculation option. Your choice has several implications:

- **Simplified.** This choice minimizes your inputs. It also does not make any assumptions about mortality; instead, it assumes a relatively safe illustration extending into the client's late nineties, plus a few years if there is a second retiree. In terms of analysis and output, it shows how many years the household can be expected to maintain its specified standard of living (i.e., current expenses, with adjustments over time) assuming different rates of return on savings. The 3% (in excess of inflation) rate of return is highlighted on the report, because this rate is generally achievable over long periods of time without assuming much investment risk.
- **More Sophisticated.** This choice requires some additional inputs, mostly related to underwriting factors, so that we can do mortality



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calculations. The extra inputs appear on a pop-up screen, which you get to by clicking the Detailed Analysis button that appears when you select the More Sophisticated option. This option assumes an average 3% rate of return above inflation, a level that is generally achievable over the long run without assuming much investment risk. The analysis indicates, based on mortality calculations and anticipated adjustments in expenses over time, what the likelihood is of the household being able to maintain its standard of living for as long as the client (and the second retiree, if applicable) is alive. This calculation is performed at the current rate of withdrawal suggested by the gap between stated income and expenses. It is also performed at levels of withdrawal from 0% to 150% of that amount.

The additional fields needed to implement the more sophisticated analysis are described in the following section.

### Analysis Detail

The detail pop-up screen appears when you choose the More Sophisticated calculation method on the Retirement Income Amount screen, and click on the Analysis Detail button.

**Factors for detailed analysis**

**Client:**  Male  Female  Non-Smoker  Smoker  Unknown  %

**2nd Retiree:**  Male  Female  Non-Smoker  Smoker  Unknown  %

Date of birth (mm/dd/yyyy):

Years until retirement:

Percentage(s) indicate each person's level of unhealthiness, expressed as a percentage of normal (100%). Someone in relatively poor health might have twice as great a chance of dying in any given year compared to an average person the same age, in which case "200" would be a suitable entry. Press the <F1> key for further help and specific examples.

The fields on this screen are mostly self-explanatory: sex and smoking status for the client (and for a Second Retiree, if applicable). Smoking status should be considered to be the general past practice. If someone has just recently quit after a long period of smoking, you should still enter him or her as a smoker.

If there is a Second Retiree, we also ask for date of birth (in *m/d/yyyy* format) and best guess



about number of years until retirement.

In addition, there is information requested about health impairments. The mortality percentages to the right of the smoking status indicate how much more likely to die a medically impaired person is, compared to normal. A normally healthy person has a 100% mortality rating. Someone twice as likely to die in the next year has 200% mortality, someone three times as likely has 300% mortality, and so on. (For people in the insurance business, these last two would be Table D and Table H respectively.) If you don't do this for a living — and even if you do — it's hard to estimate a mortality percentage. In order to help you, some common conditions and approximate percentages are provided in the on-line Help for this input screen.

## Monthly Household Expenses

Near the bottom of the Retirement Income Amount screen, you can select whether you want to enter only the total monthly household expenses, or whether you want to enter details:

- **Total only.** This choice is the quick and easy method. It requires you to enter only the current total monthly household expenses plus, if there is a currently unretired person in the household, the percentage of current expenses expected to remain in place after retirement. The system will automatically make additional adjustments, as appropriate, reflecting the fact that most people's expenses (in real dollar terms) go down somewhat during their retirement as they age and become more infirm. It will also assume extra expenses at death.
- **Detailed analysis.** This choice makes visible the Expense Detail button which, when clicked, takes you to the Monthly Household Expenses screen, where you can input expenses by category and by time period. The system will then apply this information to its future assumptions about expenses, adding in extra expenses at death (and also reducing expenses, if the More Sophisticated calculation method is used, after the first death). Although the Detail option provides more information than is actually required to do the calculation, it can facilitate discussion and analysis of what expenses currently exist and how they might change over time.



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Monthly Household Expense Detail (optional)

Monthly Household Expenses					
Enter all amounts in CURRENT dollars (that is, without taking future inflation into account)		Earlier Retirement Years		Later Retirement Years	
MONTHLY Expense Items	Now	Pct. of	Amount	Pct. of	Amount
		Current		Current	
Housing: Mortgage / Rent / Insurance	\$	100%	\$	50%	\$
Utilities	\$	100%	\$	75%	\$
Real Estate Taxes	\$	100%	\$	50%	\$
Food: Groceries	\$	90%	\$	90%	\$
Dining out	\$	100%	\$	50%	\$
Clothing:	\$	75%	\$	25%	\$
Medical / Dental / Eye care (all costs) :	\$	150%	\$	300%	\$
Transportation:	\$	100%	\$	50%	\$
Travel / Recreation / Hobbies :	\$	150%	\$	50%	\$
Income Taxes (Federal, State, Local) :	\$	75%	\$	50%	\$
Loan/Credit Payments, and Savings	\$	0%	\$	0%	\$
Life Insurance :	\$	100%	\$	20%	\$
Work-related Expenses:	\$	0%	\$	0%	\$
Charitable Contributions / Gifts :	\$	100%	\$	50%	\$
Alimony or other Family Support :	\$	100%	\$	50%	\$
Miscellaneous Cash Expenses :	\$	100%	\$	75%	\$
<input type="button" value="Close"/> <input type="button" value="Save Percents"/>		Total	\$	0%	\$

This screen appears when you click the Expense Detail button after selecting Expense Detail on the Retirement Income Amount screen. This screen enables you to itemize monthly expenses, both by type of expense and (if applicable) by timeframe.

Sixteen fixed expense categories appear on the screen. These categories cannot be changed or elaborated upon. For more detail on what each category is expected to cover, hover the mouse over the blue label on the left-hand side of the screen, and an explanatory message will appear.

In the end, it does not matter a great deal which categories are used. **What is important is that all expenses be accounted for, and that all expenses be entered on an average monthly basis.**

What about current savings? There is a category for savings (along with loan/debt payments), but include only savings that need to continue to be made into retirement (e.g., money that is being set aside for heirs, for some specific expenditure such as grandchildren's college educations, or to take care of dependents). **Money that is currently being saved for**



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**retirement or for general investment purposes should not be counted as a household expense!**

In most instances (i.e., except where the client is already age 80 or over), you can also indicate the percentage by which expenses are expected to adjust, from pre-retirement to post-retirement, or from early retirement to late retirement, or both, as applicable to the situation. Sample percentages are provided for you, but you can change these if you wish. If you want to make your revised percentages the default for future cases, just click the "Save Percents" button at the bottom of the screen.

When you are done, click the Close button, and you will return to the Retirement Income Amount screen, with the current total expenses already filled in. Whether you use the Simplified or the More Sophisticated calculation method, expenses for late retirement will reflect the data you entered on the detail screen.