Personal Finance Primer for the Future Orthopaedic Surgeon: A Starting Point

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Abstract
The level of financial literacy varies among orthopaedic trainees. Personal finance ideally should be taught before accepting student loans; however, when this has not happened, it is imperative that trainees start taking their personal finances seriously. Many trainees are faced with large amounts of student debt and struggle with how to manage a large salary increase in their first job. This can lead to poor financial decisions including insufficient savings. The authors provide a comprehensive viewpoint on personal finance for the orthopaedic trainee. In this article, we provide future orthopaedic surgeons with a framework for personal financial management as a starting point to understanding the financial concepts of budgeting, investment, debt management, mortgage, disability insurance, and life insurance.

Financial literacy varies among future orthopaedic surgeons. Although some hold advanced business degrees, others have minimal training and experience. The psychological well-being of trainees has been correlated with their personal financial situation and financial literacy\textsuperscript{1–7}. Residents have fewer assets, more debt, and lower retirement savings than their peers\textsuperscript{8}. Many trainees justify high levels of debt and spending with their future earning potential\textsuperscript{8}. Few, if any, residents receive formal teaching in personal financial management during their orthopaedic surgery residency because it is not a mandated part of the certification curriculum nor the primary focus of surgical training\textsuperscript{9–11}. Many trainees are faced with student debt and struggle with how to manage a large salary increase in their first job, which can lead to poor personal financial decisions including lack of savings\textsuperscript{1,2}.

Although many have identified financial education as a medical training deficit, few have provided information that is specifically catered to medical students and residents. To provide a comprehensive personal finance perspective for future orthopaedic surgeons, the authors of this article combine the experience of a medical student, resident/fellow, attending physician, and financial experts with Certified Financial Planning designation and a combined 50 years of experience working with physicians.

Self-education on personal finance is extremely important; however, there is not a sole financial strategy that applies to every situation. In this article, we provide future orthopaedic...
surgeons with a framework for personal financial management as a starting point to understanding the financial concepts of budgeting, investment, debt management, mortgage, disability insurance, and life insurance. After reading this primer, future orthopaedic surgeons should consider meeting with an experienced financial advisor with physician specialization and fiduciary role to discuss their personal goals and a personalized reading list.

**Budgeting**

Developing a budget is vital to maintaining healthy finances and essential to long-term financial planning. Teichman et al. found that only 60% of residents budgeted expenses. We recommend that every orthopaedic trainee develop a budget as a guide to daily life and to allow for tracking income and expenses. Figure 1 offers a sample budget framework for orthopaedic trainees that is meant to help trainees understand their loan repayment structure and spending patterns. For example, Figure 1 categories related to cable, new clothing, vacation, and dining could be eliminated if money was required elsewhere. Many budgeting apps are available including Mint (https://www.mint.com/), YNAB (https://www.youneedabudget.com/), and PocketGuard (https://pocketguard.com/). A financial planner can provide budgeting recommendations that may work best.

As part of budgeting, trainees should ensure that they have an emergency fund to sustain their living expenses for 6 months in the situation of unexpected job turnover. Starting a separate bank account with monthly automatic deposits is 1 way to save for retirement, vacation, and large purchase items (e.g., automobiles). Developing a budget early is vital as a trainee's salary increases. It's easier to allocate money at the time of a salary increase than to cut back from an established lifestyle. Expenditures nearly always grow to match available funds; automatic withdrawals to distribute funds according to a budget can be essential to developing fiscal discipline.

**Debt Management**

**Debt Avoidance in Training**

During training, it is important that a trainee's lifestyle matches their current financial status. Medical education student loans are necessary for nearly all medical students. These typically are a combination of subsidized, unsubsidized, or private loans. Based on the training location, a dollar amount for which the trainee is eligible will be presented; however, this is not necessarily the dollar amount that should be accepted. Before accepting any loan amount, the trainee should prepare a yearly budget regarding how much money they require. Accepting more than the needed dollar amount will come with the cost of added interest on the loan. For example, an extra $2,000 borrowed for spring break has a real cost of more than $4,000 at a 6.9% interest rate paid with student debt over the next 20 years. During residency and fellowship, trainees should continue to live according to their current salary and not their future earning potential. They should avoid unnecessary and high-end purchases that deviate from their financial plan. Following a budget during this time is essential, especially if a training program location has a high cost of living.

**Credit Cards**

Credit cards have many advantages including building a good credit score, ease of transaction, and member perks. They can...
create an automatic digital record of transactions that can be used to track expenses for budgeting. Up to 20% of residents have credit card debt with 12% having a balance that exceeds $10,000. We recommend paying the full credit card balance each month to avoid compounding interest associated with carrying a balance to the next month. Credit card debt involves compounding interest that can exponentially increase in a short period. Interest rates for credit cards are reported as annual percentage rate and may exceed 20%, but the actual interest rate may be more than this value as the rate is dependent on the compounding frequency (i.e., daily or monthly). If a trainee has credit card debt, we recommend that they develop a budget that makes credit card debt elimination a priority.

**Student Loans**

US resident physicians have accrued substantial debt during their medical training with 25% having more than $210,000, 28% having from $150,000 to $209,999, 22% having from $60,000 to $149,999, and 25% having less than $60,000 at their PGY-2 year. Johnson et al. demonstrated that orthopaedic residents base their practice type and location with regards to their student debt. Cull et al. demonstrated that physician trainees with more than $150,000 in debt had only paid half of their debt after 10 years. Student loan repayment should be taken seriously because it can affect eligibility for future mortgage and loans.

Most student loans do not require payment while in medical school with the first payment occurring during the first year of residency. While in residency, it can be difficult to make student loan payments. However, the income driven repayment (IDR) plan offered by many loan organizations calculates monthly payments based on the trainee’s income and family size. While deviating from a payment plan, also known as forbearance, is an option during residency, it is highly recommended that trainees participate in an IDR plan. While in forbearance, unpaid interest is added to the loan balance and can dramatically increase the loan balance; however, while on an IDR, unpaid interest on the student loan is subject only to simple accrual. We recommend that trainees consult with a financial advisor to discuss repayment options based on their personal situation.

Student loans should be evaluated based on their interest rate and if they are forgiven in the case of an unexpected death. Federal student loans are forgiven in the case of death, but loans from private loan organizations may not be. If a trainee’s government loans are refinanced by a private organization, then they should inquire as to whether they are forgiven in the case of death. Overall, loans with high interest rates and those that are not forgiven in the case of death should be the repayment focus. We recommend that any loan exceeding a 7% interest rate should be paid off more aggressively and this could be a part of a monthly budget. If interest rates are lower than returns on stable investments, consideration can be given to investing as opposed to paying down the loans earlier. For example, if an individual had the option to pay off a loan with an annual interest rate of 5% or investing the money with a guaranteed 6.5% annual return, then investing the money may be a better option.

If a trainee is considering the Federal Public Service Student Loan Forgiveness Program, they must follow their specifications or risk being disqualified from eligibility. The program requires that the student’s loans qualify for the program (direct student loans), at least 120 qualifying payments, and the employer qualifies (full-time employment in a eligible federal, state, or local public service job or 503(c) (3) non-profit). As of March 2020, only 1.8% of applications were approved. If a trainee is planning on using this program, it is imperative that they ensure eligibility and maintain loan payment records. Individual states may have other options for loan repayment programs for certain specialties or those working in critical access regions.

**Investment During Training**

**Short- and Medium-Term Investment**

Short- and medium-term investments can be useful during training but should be reserved for money that is budgeted for this purpose. A safe starting point is to investigate options at a local bank, which may offer a certificate of deposit or rewards checking program with higher interest rates than standard savings accounts. They also have the benefit of Federal Deposit Insurance Corporation (FDIC) coverage. The FDIC was created by the US Congress to insure deposits, monitor the financial system, and protect consumers. These accounts may offer benefits that waive ATM fees and reward the account holder for direct deposits.

Another option for trainees is to consider a money market fund. These accounts are typically safer than stock mutual funds and allow the investor easy access to their money. However, it is still possible to lose money by investing in a money market fund because they are not insured or guaranteed by any government agency. Money market funds may impose a fee on sale of shares or may temporarily suspend the ability to sell shares if the fund’s liquidity falls below required minimums because of market conditions or other factors. Consultation with a financial advisor can be helpful in selecting a fund that fits a trainee’s needs. Other options include the use of a stockbroker or fee-for-service advisory service.

**Long-Term Investment**

Because of the training length, orthopaedic trainees are generally behind their peers in starting retirement savings. The power of time in compounding interest is exceedingly important for long-term investments, and it is critical to start retirement savings as early as reasonably possible. As an example (Fig. 2) of compounding interest, consider 2 individuals (A and B) who start investments with an assumed 6.5% gross rate of return. Individual A invests $2,000 per year into an Individual Retirement Account (IRA) starting at age 26 (beginning of residency) for 15 years. This represents a total investment of $30,000 and a valuation at age 65 of approximately $233,500. Individual B delays investing until after residency at age 36 and starts investing $2,000 per year until age 65. This represents
a total investment of $60,000 and a valuation at age 65 of approximately $186,000. Overall, Individual B invests twice as much money, but has $47,500 less at age 65. Starting retirement savings as early as possible can reap heavy rewards. This hypothetical example is for illustrative purposes and is not based on any particular investment. Investments fluctuate and when redeemed may be worth more or less than originally invested.

Not having saved enough for retirement is 1 reason why some physicians work past age 65. Orthopaedic trainees should budget for retirement savings as early in their career as possible. The US government offers several retirement savings accounts including the traditional IRA, Roth IRA, and 401(k); some employers may offer retirement savings by 401(k) contribution matching. If this is available at the trainee’s residency program (e.g. University of Pittsburgh Medical Center, Vanderbilt), they will likely want to take advantage of this opportunity. The maximum employee contribution to the 401(k) is $19,500 in 2020. The maximum employer contribution to an employee’s 401(k) is $57,000 per year. The 401(k) contribution is directly deducted from the trainee’s paycheck pre-tax with tax being due at time of withdrawal from the account.

A Roth IRA is another retirement savings option. It has a maximum contribution of $6,000 per year in 2020 if the adjusted gross income is less than $124,000 if taxes are filed independently or less than $196,000 if taxes are filed jointly. The benefit of the Roth IRA is that withdrawals from this account are tax-free and growth to the account is also tax-free if the funds are not withdrawn until age 59½. Withdrawals that occur before this age are subject to a 10% tax penalty and income tax on any gains. For example, consider a 27-year-old orthopaedic resident who invests $6,000 in 2 separate accounts with an assumed 6.5% rate of return: a Roth IRA and a traditional IRA (Fig. 3). At age 65, they withdraw both investments, which have the same market value of $65,680; however, the traditional IRA requires $15,763 in federal tax (assuming a 24% tax rate) and $3,284 state tax (assuming a 5% rate) due at the time of withdrawal. The difference of $19,047 demonstrates the tax benefit of retirement savings using a Roth IRA. This hypothetical example is for illustrative purposes only and is not based on any particular investment. We recommend that the orthopaedic trainee consider maximizing contributions to a Roth IRA to start retirement saving as early as possible. After training completion, we recommend that trainees consult with a financial planner regarding a retirement savings investment strategy.

Mortgage

Depending on the training location and future employment plans, purchasing a condominium or home during training can sometimes be a sound financial decision. Mortgage payments during residency instead of rent may be a viable option if the local housing market will allow for a timely sale with positive return on the initial investment. Rent and mortgage costs are not directly comparable as home ownership also includes property taxes, association fees, maintenance, utilities, and other costs associated with owning a home. As with any investment, the decision to purchase a home is not without risk. With a maximum of 4 to 5 years of occupancy during training before reselling, the possibility of losing money due to fluctuating markets is very real. In addition, home
ownership requires maintenance during a time that is already very busy with professional responsibilities.

After training completion, the decision to buy a permanent home is likely the largest purchase a person will make during their lifetime. The home purchase price should be based on the trainee’s budget and not what the bank has offered to fund. Traditionally, it has been recommended that the house not be more than twice the household’s total yearly income. To offset closing costs and other expenses, the trainee should plan to live in the home for at least 3 to 5 years to minimize the risk of loss on sale. Depending on the future job’s pay structure (salary changes after 2-3 years of practice), the trainee may be unable to obtain a fixed rate mortgage without having to pay private mortgage insurance (PMI). PMI is coverage that protects the lender against loss should the borrower stop making payments on the loan\textsuperscript{24}. A physician’s future earning potential is high, several banks offer physician mortgages that do not require the applicant to provide a large down payment and do not require PMI. We recommend obtaining the lowest fixed rate mortgage that the trainee’s budget allows and avoiding loans that require mortgage insurance. If interest rates drop, the opportunity to refinance should be considered. As a rule of thumb, a mortgage payment should be kept under 20% of the household pre-tax income. If a mortgage does not have a prepayment penalty, then paying off a mortgage early is an option and should be considered with the whole financial situation.

**Insurance**

**Disability**

Orthopaedic surgeons will earn a significant cumulative amount of money during their career (Fig. 4); personal disability insurance protects future potential income in the case that the trainee becomes ill or injured. If the trainee becomes disabled, this insurance ensures that they will receive a monthly stipend. In 2020, most private insurance carriers will allow residents to acquire as much as $5,000 per month in tax-free disability coverage, which can provide a significant amount of money if they become disabled during their career (Fig. 5). Personal disability insurance premiums are usually paid with post-tax dollars, which means that the benefit is not taxable. The cost for this insurance is based on the trainee’s health, age, sex, and chosen coverage level. Obtaining coverage while the trainee is young and healthy can lock in a lower premium, which can save money over time. Morbidity rates are higher for women because of factors including pregnancy and generally result in higher disability premiums than for men. However, mortality rates are lower for women, and women will generally pay less for life insurance.

Personal health history may determine whether a trainee is insurable or not; recent surgery or chronic disease may make obtaining personal disability insurance more expensive or may add exclusions to the contract. As a person acquires additional medical comorbidities, the cost of this insurance increases, and they risk becoming uninsurable. For this reason, it is recommended that trainees obtain this insurance when they are younger and healthier because many companies will lock in the rates of the original policy. We recommend that the orthopaedic trainee find a plan that will allow for increased coverage (i.e., future purchase options) as their income increases without having to repeat the health screening process\textsuperscript{25}. Be sure to read the policy as some will only provide payment if the trainee is completely unable to work. More desirable policies will provide payment if the trainee is unable to perform responsibilities as an orthopaedic surgeon, which is known as True Own Occupation/Specialty
Specific Protection. The best plans never require one to be totally disabled to receive payment.

Personal disability insurance should not be confused with the group disability policies that are offered by many employers; group policies are typically only applicable for catastrophic disability. In addition, most group disability policies only cover up to 60% of total income to a predefined dollar amount. These policies are usually paid for by the employer.

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Fig. 4
This chart demonstrates the cumulative salary earned for annual salaries of $150k-$700k during the course of a career (ages 33-65). These examples assume a 3% inflationary increase to salary over one’s career.

Fig. 5
This chart demonstrates the cumulative payment that can be expected if a person is disabled during their early career and are covered by a disability insurance policy. This example assumes a $5,000 per month ($60,000 per year) benefit payment increasingly yearly at a 3% inflation rate.
with pre-tax dollars, which means that any benefit received is subject to tax. The final benefit received after taxes may fall short of what is required to cover monthly expenses. We recommend that orthopaedic trainees obtain personal disability insurance at the youngest age when they can afford the monthly payment for the policy.

Life
Life insurance protects the trainee’s family in the case of an untimely death. Like disability insurance, life insurance eligibility is based on the trainee’s age, sex, health, occupation, and hobbies. Activities with higher risk correlate with a higher monthly payment. Like disability insurance, life insurance is available through employers on a group basis, which is different from an individual plan. Group policies only provide coverage while employed with the specific organization. These policies also only provide amounts between 1 and 2x the employee’s salary, which may be insufficient. A strong financial plan involves protecting the trainee’s family should death occur with an individual life insurance plan. However, in the case of a healthy, orthopaedic resident without dependents, delaying obtaining life insurance is reasonable but not risk-free if funds are unavailable.

There are 2 main categories for life insurance coverage: term and permanent. Term life insurance provides coverage at a level premium for a set number of years (e.g., 5-30 years). Permanent insurance provides coverage for the entire lifetime. It can build a cash value over time, but it also comes with a higher initial premium compared with term insurance. The best insurance type is dependent on the specific personal situation. Most orthopaedic trainees obtain term life insurance when they have dependents, and the amount is based on their financial obligations. We recommend that trainees discuss life insurance options with a financial advisor to ensure that it matches their financial goals.

### Top Financial Recommendations
- Find a trusted financial advisor who specializes in creating healthy financial habits for physicians.
- Create a household budget and follow it.
- Create an emergency fund that will allow you to live comfortably for at least 6 months in the case of unforeseen financial hardship.
- Establish automated savings and loan payments from your paycheck.
- Live according to your current salary, not your future earning potential.
- Do not take more money than is required with student loans and mortgage.
- Eliminate credit card debt as soon as reasonably possible.
- Develop a plan to repay student loans in such a way that the loans with the highest interest rates are eliminated first.
- Develop an investment strategy and revisit it annually with a financial planner.
- Save for retirement as soon as reasonably possible.
- Evaluate the risks and benefits of renting versus owning during your training.
- Protect your income and family with disability and life insurance.

### Conclusion
Orthopaedic trainees appropriately focus on the treatment and management of orthopaedic disorders during their training, but personal financial security is often neglected during this time. In this article, we have provided a framework for trainees to establish healthy financial habits. Given the different financial situation of every trainee, we have provided widely applicable guidelines. Early focus on personal finances allows for ease of mind, asset protection, and a financially healthy start to a career in orthopaedic surgery.

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