



## Increasing the Social Security Retirement Age: Older Workers in Physically Demanding Occupations or Ill Health\*

When Congress passed the Social Security Amendments of 1983, it mandated a study of the implications for workers in physically demanding jobs and/or ill health of the increase in the age at which full social security benefits are payable. The report to Congress is reprinted here verbatim. The analysis shows that fewer older workers than today—7.9 percent by 2020, compared with 11.4 percent in 1982—are expected to be in jobs with

heavy strength requirements. It is unclear whether fewer than the 16.3 percent who now say they are unable to work will be unable to work in the future. Thus, it appears that there will be some decline—but not a dramatic decline—relative to today in the proportion of retirement-age workers who could find it difficult to extend their work lives a year or two in response to the increase in the age at which full social security retired-worker benefits are payable. If workers do not delay retirement and if there are no offsetting increases in other income sources, it appears that the average reduction in total income at retirement for workers in physically demanding jobs and/or ill health will be on the order of 6-7 percent when the new retirement age is fully phased in in 2027.

\*Report of the Department of Health and Human Services, Social Security Administration, pursuant to Section 201(d) of Public Law 98-21, the Social Security Amendments of 1983, August 4, 1986. Technical appendices describing the data bases and techniques used to derive the estimates in the report as well as background papers commissioned as part of the study are available from the Publications Staff, Office of Research, Statistics, and International Policy, Social Security Administration, Room 921, 1875 Connecticut Avenue, N.W., Washington, D.C. 20009 or by calling (202) 673-5579.

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# Executive Summary of Report

## I. Introduction

When Congress passed the Social Security Amendments of 1983 providing for a phased-in increase in the age at which full benefits are payable (called here the retirement age) from 65 to 67, it asked for an analysis of the implications of the change for those in physically demanding jobs or ill health.

This report responds to that mandate by:

- Estimating the percent of recent newly retired workers who had arduous jobs or were in ill health.
- Looking at what the economic consequences would have been for them had the change in the law been fully effective in 1981–82 when they claimed benefits, assuming they would not have postponed claiming benefits in response to the change.
- Projecting the percent of older workers in the future who are likely to be in physically demanding jobs and describing the trends that may affect the percent in ill health.
- Estimating the factors that may alter the economic status of those in physically demanding jobs or ill health in the future.

Conceptually, “physically demanding job” or “ill health” can be defined several ways. Congress had no one definition in mind nor does a consensus exist in the research community. The choices that were made and the results obtained are described below.

## II. If the Change in the Law Were Effective Now

The analysis was based on information collected in the 1982 New Beneficiary Survey. Physically demanding jobs were defined using strength demands of the respondent’s last job before claiming benefits. Ill health was defined as self-reported work incapacity at the time of the interview. In all:

- 18.5 percent of new retired workers were unable to work or had partial work limits and had had jobs with heavy strength requirements.
- A total of 29.9 percent were unable to work or had had jobs with heavy strength requirements or had partial limitations and had had jobs with medium strength requirements.

The strength requirements and degrees of work capacity can be combined to produce a number of estimates. Regardless of the definition used, those in physically demanding jobs and/or ill health:

- Tended to have median income equal to about three-fourths that of other new retirees.
- Relied on social security benefits for just more than half their total income on average and thus would ex-

perience a reduction in total income of about 7 percent if the change in the law were fully effective now, if benefits were claimed at the same ages as under present law, and if there were no offsetting increases in other income sources.

## III. When the Change in the Law Becomes Fully Effective

This analysis shows that:

- Projected changes in the occupational mix are likely to reduce the proportion of workers approaching retirement in the future who will be in jobs with heavy strength requirements from 11.4 percent now to 8–10 percent by 2000 and 7–9 percent by 2020.
- Recent trends in the illness and limitation patterns of persons 62–67 are ambiguous.
- Whether future improvements in the environment, lifestyle, or medical technology will lead to a substantial decrease in the percentage of workers approaching retirement in the future who are in ill health is extremely difficult to predict.
- The difference in retirement income between new retirees in arduous jobs or ill health and other new retirees is not likely to be much different in the future than it was in 1982.
- Growth in other sources of income is not likely to alter substantially the degree to which retirees rely on social security.
- It is not clear whether future retirees in physically demanding jobs and/or ill health will have been able to save more to offset a potential benefit reduction; it seems unlikely that they will substantially extend their work lives.

This report does not include recommendations for legislative changes. It will be many years before the new retirement age provision phases in and in the intervening period we will gain experience with the determinants of work ability among older persons. Also as time passes, more will become known about the proportion of older workers likely to be in physically demanding jobs or ill health in the future.

## I. Introduction

The Social Security Amendments of 1983 (Public Law 98–21) provide for a gradual increase in the age at which unreduced retired-worker benefits are first payable (called here for purposes of brevity the retirement age) from 65 to 67 between the years 2000 and 2027. Benefits for retired workers still will be available at age 62, but the amount payable will gradually be reduced from the currently payable 80 percent of the unreduced benefit to 70 percent. The 1983 amendments also raise the delayed retirement credit

from 3 percent per year to 8 percent of the full benefit amount.<sup>1</sup> The effect of these changes will depend in part on the choices new retirees make with regard to the timing of their retirement (table I-1).

The original Social Security Act of 1935 set the minimum age for receiving retirement benefits at 65. According to Edwin E. Witte, Executive Director and Secretary of the Committee on Economic Security, which prepared the report that formed the basis of the 1935 legislation, age 65 was chosen as the retirement age without much consideration being given to other alternatives.<sup>2</sup> Although the historical record does not explicitly state why age 65 was chosen, it probably was selected because it was already in use in most State old-age assistance plans and in many American industrial pension plans and foreign social insurance programs.<sup>3</sup>

The Social Security Amendments of 1956 lowered the minimum age for retirement benefits to 62 for women and further provided that benefits for those who start receiving them before age 65 would be permanently reduced to account for the longer period over which benefits would be paid. The reduction equals 6⅔ percent of the full benefit for each year of entitlement prior to age 65—a 20-percent reduction at age 62. This early retirement provision was extended to men by the Social Security Amendments of 1961.

In recent years, prior to the enactment of the Social Security Amendments of 1983, the issue of raising the retirement age had been studied by several major advisory panels. Attention had been brought to this issue because a substantial portion of a growing long-range deficit in social security financing was being attributed to projections of a decreasing ratio of workers to beneficiaries in the future, especially when the "baby boom" generation began to retire. It was argued by many that raising the retirement age would offset, at least to some extent, the need for future increases in the payroll tax rate and would properly recognize the past and projected improvements in longevity that had occurred since 1935. In general, these advisory groups recommended either a phased-in increase in

<sup>1</sup>The retirement age for workers reaching age 62 in the years 2000 through 2005 will be increased 2 months per year from age 65 to age 66. The retirement age will then stay at age 66 for individuals reaching age 62 from 2006 through 2016. For those workers who reach 62 after 2016, the retirement age will again be increased 2 months per year until it reaches age 67 for all workers who reach age 62 after 2021. Though the age for receiving a full retirement benefit will increase, it will still be possible to receive a reduced retired-worker benefit as early as age 62. However, the amount of the age 62 benefit will gradually decline from its current 80 percent of the full age 65 benefit (i.e., 80 percent of the primary insurance amount (PIA)) to first 75 percent of the PIA, when the retirement age is age 66, and ultimately to 70 percent of the PIA when the retirement age reaches age 67. The 1983 amendments also provide for a gradual increase in the delayed retirement credit from its current 3 percent of the PIA per year to 8 percent per year (for individuals reaching age 62 between 1987 and 2005). The age at which delayed retirement credits can be earned (currently age 65) will increase as the retirement age increases.

<sup>2</sup>Remarks delivered at observance of 20th anniversary of Social Security Act by Department of Health, Education and Welfare, Washington, D.C., on August 15, 1955.

<sup>3</sup>Brown (1972).

**Table I-1.—Future benefit levels for retired workers attaining age 62 in 2022 and thereafter as a result of 1983 amendments<sup>1</sup>**

Age at which benefits are first received (in years)	Benefits as a percentage of PIA		Percentage change in benefits due to 1983 amendments
	Prior to 1983 amendments	After 1983 amendments	
62.....	80	70	-12½
63.....	86	75	-13½
64.....	93	80	-14½
65.....	100	86	-13½
66.....	103	93	-9
67.....	106	100	-5
68.....	109	108	-1
69.....	112	116	+3
70.....	115	124	+7

<sup>1</sup>The effects shown here reflect the increase in the age at which full benefits are first payable, the resultant changes in reduction factors for benefits claimed before age 67, and the increase in the delayed retirement credit from 3 percent of the primary insurance amount per year to 8 percent per year.

the retirement age beginning in the next century or that such a provision deserved serious consideration.<sup>4</sup>

Raising the retirement age had received some attention in Congress before 1983, also. In 1977, Representative Barber Conable (R., N.Y.) introduced H.R. 9595, which included a provision to phase in a 3-year increase in the age for receiving both full and early retirement benefits beginning in the year 2000. H.R. 3207, introduced by Representative J.J. Pickle (D., TX) in 1981, also would have raised the age for full retirement benefits to 68, but the early retirement age would have remained at 62 and the phase-in would have started in 1990.

H.R. 3207 was a comprehensive bill designed to improve and strengthen the financing of the social security program. While Congress was deliberating H.R. 3207, the Administration announced its own comprehensive package of social security reforms. Both of these packages were developed in response to the worsening financial status of the social security trust funds brought about primarily by the high inflation and stagnating economic growth that had occurred since 1977 when major social security financing legislation had been passed. When it became clear that no consensus was developing around any single set of long-range reform proposals, President Reagan decided to create a nonpartisan blue-ribbon panel to study the issues and come up with a plan to assure the fiscal integrity of the program.

The National Commission on Social Security Reform transmitted its report to the President in January 1983. Congress based the Social Security Amendments of 1983 (P.L. 98-21) on the "consensus package" recommended by the Commission. Although the "consensus package" did not include a recommendation to raise the retirement age, a supplementary statement supported by a majority of the Commission did propose a phased-in increase of the

<sup>4</sup>Recommendations and discussions on changing the retirement age are contained in reports of the 1975 Advisory Council on Social Security (1975), 1979 Advisory Council on Social Security (1980), the President's Commission on Pension Policy (1981) and the National Commission on Social Security (1981).

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retirement age to 66, starting in the year 2000, with further increases thereafter to keep the ratio of years of work to years of retirement similar to what it would have been in 1990.

The Commission's package provided adequate financing for the program into the first part of the next century. However, it did not fully address the deficits that would occur after the turn of the century as the baby boom retired. The difficulty in dealing with this deficit—by further tax rate increases, benefit reductions, or increases in the retirement age—became a major issue as the legislation moved through Congress.

In the House Ways and Means Committee there were strong differences of opinion. The Committee ultimately agreed to report a bill that would have provided both increasing taxes (by 0.24 percent for employees and employers each) and reducing benefits (by 5 percent) after the turn of the century. But this agreement was reached only after Committee members were assured that there would be an opportunity when the bill reached the House floor to vote on two alternative approaches: (1) to eliminate the long-range deficit solely by increasing the retirement age and (2) to eliminate the deficit solely by increasing taxes in the 21st century.

When these two alternatives were brought to a floor vote, the proposal to eliminate the deficit by raising payroll taxes in 2010 (by 0.53 percent for employees and employers each) was defeated. The House then adopted a provision to eliminate the long-run deficit solely by increasing the retirement age.

The Senate Finance Committee and later the full Senate took a combined approach. The Senate bill combined a 1-year increase in the retirement age by 2015 and a 5-percent reduction in initial benefit levels starting in 2000. Both the House and Senate bills contained provisions calling for a study of the effects of an increase in the retirement age. These provisions were consistent with concerns expressed by the National Commission on Social Security Reform, whose report indicated that if the retirement age were increased it would be necessary to address "the special problems of those between age 62 and the normal retirement age who are unable to extend their working careers for health reasons." The Senate-passed version of the bill would have provided for a study by the next Social Security Advisory Council of the effects of the increase. The House-passed version, which was subsequently agreed to in conference, included as section 201(d) the mandate for this study:

The Secretary shall conduct a comprehensive study and analysis of the implications of the changes made by this section in retirement age in the case of those individuals (affected by such changes) who, because they are engaged in physically demanding employment or because they are unable to extend their working careers for health reasons, may not benefit from improvements in longevity. The Secretary shall submit to the Congress no later than January 1, 1986, a full report on the study

and analysis. Such report shall include any recommendations for legislative changes, including recommendations with respect to the provision of protection against the risks associated with early retirement due to health considerations, which the Secretary finds necessary or desirable as a result of the findings contained in this study.

This report, which is being transmitted in response to that mandate, begins by estimating the percentage of workers retiring today who are in ill health or physically demanding jobs and by assessing what the effect of the 1983 amendments would be on their income if the amendments were fully effective now (Part II). The purpose in beginning with an analysis of what the effect of the amendments would be today is to provide a benchmark against which the implications of future trends may be assessed. The report then estimates the percentage of workers in 2000 and 2020 who are likely to be in physically demanding jobs (Part III). Part III also discusses the relationship between mortality and health status, examines past trends in the work ability of older persons, and assesses trends in health status that may affect the size of the group in ill health in the future. Part III also projects the effect of the change in the retirement age on total income of retired workers, and suggests the extent to which workers, particularly those in physically demanding jobs and/or ill health, may extend their work lives and/or increase their saving in response to the changes in the law. Part IV provides a summary of the study's findings.

It should be noted that this study is limited to estimating the size of the group in physically demanding jobs and/or ill health and the effects of the change in the law on them. It does not address other implications of raising the retirement age, such as the demand for older workers 20–40 years hence. It also is limited to workers approaching retirement age. It does not address the effect on aged survivors (for whom the age at which full benefits are payable also will increase from 65 to 67). And it does not address the potential effects of the law on other programs, such as the disability insurance or supplemental security income programs.

The analysis that supports the conclusions outlined here is contained in a set of four appendices and three research papers. The two parts that follow in this report are based on appendices that include more detail about the techniques used to derive the estimates here, as well as some of the study's theoretical and empirical underpinnings. A third appendix describes the data base used for Part II and some of the limitations of that data base. A fourth appendix provides more detailed findings related to those outlined in Part II. The three additional papers, which were commissioned for this study, review the literature on the relationship between longevity and health (Chapman, LaPlante, and Wilensky, 1985), review the literature on potential labor force responses to the change in the retirement age (Sammartino, 1985), and provide some analysis of recent trends in health status (Ycas, 1985).

## II. Today's New Retirees in Physically Demanding Jobs and/or Ill Health

As indicated in the mandate for this study, the Congress was concerned about those approaching retirement age in the future who will be in physically demanding jobs and/or ill health. This study begins by estimating the number of recently retired workers who meet those criteria. This part also examines the effect on total income assuming that the retirement age increase were effective today, that no one delayed benefit receipt in response to the change, and that other income sources did not change.

These assumptions were made for two reasons. With these assumptions, the data presented here represent a baseline for purposes of comparison. That is, the effects indicated here represent the upper bound that the change in the law could create. Further, it is difficult to know what alternative assumptions to use. For example, it is likely that private pension systems will change in response to the increase in the retirement age, but it is not clear what direction that change will take. As discussed in Part III, persons may save more or work longer, but it is not known by how much. More workers aged 62–64 will become eligible for disability insurance and some persons aged 65–67 will become newly eligible, but it is impossible to estimate which workers these new disabled beneficiaries will be from available data sources.

More details on the techniques used in the analysis summarized here are available in Appendix A and more detailed findings are available in Appendix D.

The data base for this analysis is the Social Security Administration's New Beneficiary Survey. (See Appendix C.) The New Beneficiary Survey, a personal interview survey conducted in October–December of 1982, collected information about the occupations, health status, and incomes of a sample of persons aged 62 or older who received their first social security benefits from mid-1980 to mid-1981. This analysis is based on those who first received retired-worker benefits at ages 62–67—the age group that could receive lower benefits when the retirement age change is fully effective. It excludes those who converted from disability insurance to retired-worker benefits and those who shifted to disability insurance benefits after first claiming retirement benefits, because they would be unaffected (or only marginally affected) by a change in reduction factors.<sup>5</sup> For simplicity, the group included in this analysis is referred to as “new retirees” or “new retired workers.”

### A. Estimating the Percent in Physically Demanding Occupations

The New Beneficiary Survey includes data on the respondent's current, last and longest jobs. These jobs could

<sup>5</sup>About 3 percent of newly retired workers in the New Beneficiary Survey sample converted to disabled-worker benefits. In recent years, about 11 percent of new currently payable retired-worker benefit awards are made to persons who convert from the disability rolls.

all be the same, but most often were not. The analysis in this report is based on the last job the new retiree held before claiming benefits. The last job, the one held just before benefit receipt—rather than the longest job—was used because the longest job might not adequately reflect current capabilities and job opportunities as the worker approached the age for making a retirement decision. The current job also was not used if it differed from the last job because it could represent a postretirement job with reduced responsibilities and/or hours worked, a job which, absent social security benefits, might not provide adequate income. None of the choices among jobs is perfect, but the last job seems most indicative of the worker's job situation at the time he or she was approaching retirement age.<sup>6</sup>

There is even more room for debate over what constitutes a physically demanding job and how to measure it. Several measures indicate the physical demands of various occupations, but there is no consensus among experts about which measure is best or what score or sum of job characteristics makes a job “physically demanding” and what does not. Further, none of the measures takes account of characteristics of different types of workers—older or younger, male or female—that may make a job more demanding for some than for others. And none takes account of the physical hazards or environmental risks that are inherent in some occupations.

After exploring alternatives, described below, a system based on the Department of Labor's **Dictionary of Occupational Titles** was used for this study to determine whether or not jobs were physically demanding. The **Dictionary of Occupational Titles** classifies occupational demands by evaluating 44 job characteristics. It is the only available source of systematic data for classifying occupations by the degree of physical demand.<sup>7</sup>

For this study jobs were classified as being physically demanding based on their strength requirements, i.e., the amount of time spent walking or standing rather than sitting; the amount of time spent lifting, carrying, pulling, or pushing objects; the weight of these objects; and the circumstances of intensity, duration, and body position in relation to movement of objects that may affect the degree of difficulty in moving them. Weight of objects moved was the primary criterion. Basically, jobs were classified as having medium strength requirements if they entailed lifting up to 25 pound objects regularly, heavy strength requirements if they entailed lifting up to 50 pounds regularly, and very heavy if they involved lifting 50 pounds or more regularly. The heavy and very heavy categories are combined here and termed “heavy.”

<sup>6</sup>About 2½ percent of those whose last job had heavy physical demands switched to a less demanding job after claiming benefits but an equal percentage switched to a current job that had heavy physical demands from a less demanding job.

<sup>7</sup>However, occupational classifications in the **Dictionary of Occupational Titles** do not perfectly match those used in the New Beneficiary Survey. The system used to match the classifications in these two data bases is described in Appendix A.

Some 11.4 percent of new retirees' last jobs had heavy strength requirements and 39.2 percent had at least medium strength requirements.<sup>8</sup> Some insight into the appropriateness of these definitions is provided from lists of the kinds of jobs classified as physically demanding under both sets of criteria examined. Three-fourths of those in jobs with heavy strength requirements were in 8 occupations (janitors and cleaners, farmers, and construction workers, for example). Two-fifths of those in medium or heavy strength jobs were in 12 occupations (expanding the definition to include nursing aides and orderlies, laborers, carpenters, and miscellaneous machine operators, for example).

Gender distinctions in the difficulty of performing given jobs were not taken account of here, in large part because gender-based criteria do not exist. It may be that jobs with a given strength requirement are more physically demanding on average for women than for men. Such an assumption is consistent with the finding that fewer women than men (4 v. 17 percent) were found to be in jobs with heavy strength requirements or in jobs with at least medium strength requirements (29 v. 47 percent). However, some of those women whose ability to work is not captured by the strength requirement measure may be captured in the health measure, discussed below, because it takes account of the respondent's own assessment of his or her capacity to perform a given job.

Two other measures of physically demanding jobs were explored and rejected. The first was a composite measure that added stooping or crawling and balancing or climbing to the strength measures listed above. The jobs determined to be physically demanding by this measure include all the jobs that had a heavy strength requirement, some of those that had a medium strength requirement, and a few that seemed inappropriate that met the light strength requirement and had both a stooping and a climbing requirement. This composite measure was rejected because it was more complex and harder to interpret and because the cutoffs between what constituted physically demanding and what did not were even more arbitrary than under the strength measure.

Another option might have been to classify all blue-collar jobs (as defined by the **Dictionary of Occupational Titles**) as physically demanding. About as many workers were in blue-collar jobs as were in jobs requiring at least medium strength. However, more than a third of the new retirees whose jobs entailed medium or heavy strength requirements (primarily service workers) were not in blue-collar jobs and a third of those in blue-collar jobs had jobs that did not require even medium strength demands.

Neither of these alternative indices was significantly more gender neutral than the strength criterion.

## **B. Estimating the Percent in Ill Health**

The New Beneficiary Survey collected the respondents'

<sup>8</sup>In 1980, some 9.1 percent of workers of all ages had jobs with heavy strength requirements.

own assessments of their health status at the time of the interview. Some observers have questioned the reliability of such self-reported health data. From a practical perspective, survey data based on the respondents' self-assessed health status are the only data available on a nationwide basis for the relevant population. Further, studies that compare physicians' assessments with self-assessments find that the self-assessments are the most reliable data available for research purposes.

Data on three measures of health status are available from the New Beneficiary Survey: (1) if the respondents suffer from specific categories of health conditions or diseases; (2) the extent of any difficulty in performing functional activities, such as ability to walk, lift, or stand, and (3) if they have limits on their ability to work that have lasted or are expected to last at least a year. Three responses were available under this measure: no limitation, partial limitation, and inability to work at all.

This analysis focused on the third measure, the respondents' own assessment of their ability to work. The first measure is inadequate because no data are available on the severity of the conditions or diseases. The second measure does not relate functional limitations to work capacity. Further, the second measure requires the creation of an index that involves unavoidably arbitrary determinations of both the relative importance of each functional activity and the cutoff point for identifying those likely to be limited in work capacity. The third measure has the advantage of being directly related to work capacity. However, it should be noted that this measure is in no way equivalent to a determination of disability under the Social Security Act.

According to the third measure, 16.3 percent of the new retirees reported they were not able to work at all at the time of the interview, 2 years after they first claimed benefits. An additional 16.6 percent said they were limited in the amount or kind of work they could do. (Of course more of those who are unable to work would apply for disability benefits when the new law phases in than do now. The Office of the Actuary in the Social Security Administration projects that the percent of male workers insured for disability benefits and not already entitled who will become eligible for them will increase from 1.9 percent to 2.8 percent among 63-year-olds and from 1.8 percent to 2.9 percent among 64-year-olds when the new law phases in. The actuaries also estimate that 2.3 percent of 65-year-old and 2.2 percent of 66-year-old insured men who now would receive retired-worker benefits will become newly eligible for disability benefits when the new retirement age is fully effective. Women would be more likely to become disability insurance beneficiaries at similarly increased, but lower rates. (Kelley and Lopez, 1984)).

## **C. Estimating the Percent in Physically Demanding Jobs and/or Ill Health**

The New Beneficiary Survey respondents are categorized according to the three degrees of strength require-

ments of jobs (sedentary or light, medium, and heavy) and three categories of ability to work (no limits, partial limits, and unable to work) in table II-1. Neither the legislative history of the new retirement age provision nor the mandate for this study state how Congress intended the concepts of "physically demanding" jobs or "unable to work" to be defined or measured. However, it seems that one reasonable definition would include those retirees who had worked in jobs with heavy strength requirements (11.4 percent) or those who were unable to work due to health limitations (16.3 percent). Subtracting those who were in both groups to avoid double counting leaves the total size of the group of concern at 25.5 percent (table II-2).

Among women, 3.2 percent of married women and 5.6 percent of unmarried women had had jobs with heavy strength requirements, 16.3 percent of the married women and 16.2 percent of the nonmarried women reported themselves unable to work 2 years after beginning to receive benefits. Among men, the unmarried were more likely to have had jobs with heavy strength requirements and to report current inability to work: 16.3 percent of the married men had had jobs with heavy strength requirements compared with 22.2 percent of the nonmarried men. Some 15.4 percent of the married men and 20.9 percent of the unmarried men reported themselves unable to work at the time of the interview.

It could be argued that those retirees who had been in jobs with heavy strength requirements, but who did not have any work limitations caused by health limitations, are not the subject of the concern expressed in the Congressional mandate because they could reasonably be assumed to be able to work another year or two. Subtracting the 7.0 percent in this group would produce a "narrow" definition of the group of concern equal to 18.5 percent of new retirees. On the other end of the spectrum, an argument could be made that the 4.4 percent of retirees who were partially limited in ability to work and who had worked in jobs with a medium strength requirement may find it just as difficult to continue their working careers as (a) individ-

**Table II-1.—Percent of newly retired workers aged 62–67, by physical demands of job and ability to work**

Ability to work <sup>1</sup>	Total <sup>2</sup>	Physical demands of job <sup>3</sup>		
		Sedentary/light	Medium	Heavy/very heavy
Total .....	100.0	60.8	27.8	11.4
No limitation .....	67.1	41.8	18.3	7.0
Limited .....	16.6	9.9	4.4	2.3
Unable to work .....	16.3	9.1	5.1	2.1

<sup>1</sup>Based on responses to questions about limitation 2 years after claiming benefits in ability to work for pay or to do housework and whether the limitation keeps the person from working altogether, for those for whom the limitation has lasted or is expected to last at least a year.

<sup>2</sup>Details may not add due to rounding.

<sup>3</sup>Based on proportion in each Census occupation with strength requirements at the specified level. Data relate to the last job the worker had before claiming benefits. Source: 1982 New Beneficiary Survey.

**Table II-2.—Percent of new retirees aged 62–67 meeting different definitions of physically demanding jobs and/or ill health**

Definition	Percent
All those unable to work, plus those with partial work limitations who had had jobs with heavy strength requirements .....	18.5
All those unable to work, plus all others who had had jobs with heavy strength requirements .....	25.5
All those unable to work, plus all others who had had jobs with heavy strength requirements plus those with partial limitations who had had jobs with medium strength requirements .....	29.9

Source: Derived from table II-1.

uals in jobs with heavy strength requirements but no health limitations, or (b) individuals who reported themselves as unable to work, but were in occupations with sedentary or light physical requirements. Under this "broad" definition the group of concern would include 29.9 percent of new retirees.

#### D. Economic Status of Those in Physically Demanding Jobs/Ill Health

This section examines the economic status of those whose last job was physically demanding and/or who were in ill health, as defined above. As explained earlier, the analysis in this section assumes that the change in the law was fully effective for new retirees in this sample, that benefits were claimed at the same ages as under present law, and that other sources of income were not affected by the changes. It looks both at the 18.5 percent of new retirees who were either unable to work or who had partial limitations and jobs with heavy strength requirements and at the 29.9 percent who were either unable to work, who had jobs with heavy strength requirements, or who had partial limitations and jobs with medium strength requirements.

The analysis is presented primarily in terms of unit income, where the income of a married new retiree includes the income of his or her spouse. (About three-fourths of the new retirees were married.) As would be expected, married couples tended to have higher incomes than nonmarried persons.

**Median income.** The median unit income in 1982 of all new retirees was \$1,375 per month. As shown in table II-3, the median unit income of the 18.5 percent who were unable to work or who had partial limitations and had been in jobs with heavy strength requirements was about three-fourths (\$1,064) of that of other new retirees (\$1,452). This same relationship holds when the broad definition is used: The median unit income of the 29.9 percent who were unable to work, had heavy jobs, or had partial work limits and medium jobs was 75 percent as high as that of other new retirees. The difference was greater among the nonmarried than among the married. Using the narrow definition, the median unit income of nonmarried

**Table II-3.—Median unit income and percentage distribution of newly retired workers aged 62–67 under alternative definitions of group**

Item	Definition of group	
	Narrowly defined group <sup>1</sup>	Broadly defined group <sup>2</sup>
Percent of new retirees:		
Not in group .....	81.5	70.1
In group .....	18.5	29.9
Median unit income of new retirees:		
All .....	\$1,375	\$1,375
Not in group .....	1,452	1,493
In group .....	1,064	1,125
Income of new retirees in group as percent of income of new retirees not in group .....	73.3	75.3

<sup>1</sup>Those unable to work plus those with partial work limitations who had had jobs with heavy strength requirements.

<sup>2</sup>Those who were unable to work or who had had jobs with heavy strength requirements or who had had partial limitations and jobs with medium strength requirements.

Source: 1982 New Beneficiary Survey.

persons in ill health and/or physically demanding jobs was 68 percent of that of other nonmarried persons; for married persons, the ratio was 76 percent.

**Income distribution.** As suggested by the differences in median unit income, those in physically demanding jobs and/or ill health are more likely to be in the low end of the income distribution than other new retirees. As shown in table II-4, using either the narrow or broad definitions, those in the groups of interest were twice as likely to be in the bottom fifth of the income distribution than those not in the groups.<sup>9</sup> (If the income distribution were the same for all, then each group would have about one-fifth of its members in each fifth of the income distribution.) Conversely, those in the groups of interest are half as likely as other new retirees to be in the top fifth of the income

<sup>9</sup>It should be noted, however, that new retirees who are not in physically demanding jobs and/or ill health outnumber those in the bottom fifth who are in physically demanding jobs and/or ill health.

**Table II-4.—Percent of newly retired workers in each income quintile under alternative definitions of group**

Income quintile	Definition of group			
	Narrowly defined group <sup>1</sup>		Broadly defined group <sup>2</sup>	
	Group of concern	Not in group	Group of concern	Not in group
Total .....	100	100	100	100
Lowest .....	33	17	31	15
Second .....	24	19	23	19
Third .....	17	21	19	20
Fourth .....	15	21	16	22
Highest .....	11	22	11	24

<sup>1</sup>Those unable to work plus those with partial work limitations who had had jobs with heavy strength requirements.

<sup>2</sup>Those who were unable to work or who had had jobs with heavy strength requirements or who had partial limitations and jobs with medium strength requirements.

Source: 1982 New Beneficiary Survey.

distribution.

Not surprisingly, dependence on social security benefits also varied widely by income quintiles, as shown in table II-5 for all new retirees. The full group of new retirees can be used because both the level of social security dependence and the potential income reduction due to raising the retirement age are characteristics of income quintile and not whether an individual is in ill health and/or a physically demanding job. For those in the bottom fifth of the income distribution, social security benefits represent on average about 80 percent of total income and the average reduction in income would be about 10 percent assuming the change in the law were fully effective now, if benefits were claimed when they are now, and there were no adjustments in other income sources.<sup>10</sup> For those in the highest fifth of the income distribution, the reduction in social security benefits would represent about a 3-percent reduction in average total income at retirement.

**Shares of income.** Because they are more likely to be in the bottom of the income distribution where reliance on social security benefits is greater than at the higher end of the income distribution, social security provided a somewhat larger share of income for those in physically demanding jobs and/or ill health than for other new retirees.

<sup>10</sup>The shares from a specific source here are based on the concept of average unit shares. This differs from the more commonly used aggregate shares concept. (See footnote to table II-5.)

**Table II-5.—Social security benefits and earnings as a percent of income and the percent reduction as a result of increasing retirement age for all newly retired workers aged 62–67, by income quintile<sup>1</sup>**

Income quintile	All newly retired workers	
	Social security benefits as a percent of income	Percentage reduction <sup>2</sup> in income at retirement
Total .....	52	6.4
Lowest .....	78	9.6
Second .....	62	7.7
Third .....	52	6.5
Fourth .....	41	5.2
Highest .....	24	3.1

<sup>1</sup>As noted in detail in Appendix C, the concept of average unit shares used here differs from the more frequently encountered concept of aggregate shares. Using social security as an example, average social security unit share is constructed by taking social security income as a percentage of each unit's total income and averaging the percentages over all units. The aggregate share is found by taking aggregate social security benefits as a percentage of aggregate total income. A simple example will clarify the difference. Assume that there are two units, one with \$50,000 total income and \$10,000 social security income, and the other with \$10,000 total income and \$8,000 social security income. The unit shares are 20 percent (\$10,000/\$50,000) and 80 percent (\$8,000/\$10,000), respectively. The average social security unit share is 50 percent (the average of 20 percent and 80 percent). However, the aggregate social security share is only 30 percent (\$18,000/\$60,000). The average unit share is more representative of the typical role of social security in the retired worker's income because it is not distorted by high amounts of income, as the aggregate share is.

<sup>2</sup>The percentage reductions shown in column 2 were calculated by determining the benefit amounts retired workers in the New Beneficiary Survey would have received had the change in the law been fully effective when they claimed benefits in 1982 and assuming that benefits would be claimed under the new law at exactly the same ages as they actually were claimed, and then by taking the difference between the "new law" and the "old law" benefit amounts as a percentage of old law (or initial) income.

Source: 1982 New Beneficiary Survey.



As shown in table II-6, social security benefits provided 57-58 percent of income on average, whether the group is the more narrowly defined 18.5 percent or the more broadly defined 29.9 percent. For other new retirees, social security provided just about half of all income. Among those in physically demanding jobs and/or ill health, reliance on social security was greater for the nonmarried than the married. Among nonmarried persons in the narrowly defined group, for example, social security benefits provided 67 percent of total income, compared to 55 percent for married persons in the group.

With the assumptions that the 1983 amendments were fully in effect for new retirees in 1982, that retirement decisions were unaffected by changes in the law, and that other income sources were unchanged, an average 13-percent reduction in social security benefits would translate into a reduction in total income of 7.1-6.8 percent for the two groups in physically demanding jobs and/or ill health and of about 6.4 percent for all new retirees (table II-7). Again, because they rely more heavily on social security benefits for income, the reduction would

**Table II-6.—Sources of income for newly retired workers aged 62-67 under alternative definitions of the group**

Income type	Definition of group	
	Narrowly defined group <sup>1</sup>	Broadly defined group <sup>2</sup>
	Percent shares <sup>3</sup>	
Social security benefits:		
All new retirees .....	52	52
New retirees not in group ..	50	49
New retirees in group .....	58	57
Earnings:		
All new retirees .....	15	15
New retirees not in group ..	16	16
New retirees in group .....	11	13
Pension income: <sup>4</sup>		
All new retirees .....	16	16
New retirees not in group ..	16	17
New retirees in group .....	16	15
Asset income: <sup>5</sup>		
All new retirees .....	13	13
New retirees not in group ..	14	14
New retirees in group .....	10	10
All other income: <sup>6</sup>		
All new retirees .....	4	4
New retirees not in group ..	4	3
New retirees in group .....	6	5

<sup>1</sup>Those unable to work plus those with partial work limitations who had had heavy jobs with heavy work requirements.

<sup>2</sup>Those who were unable to work or who had had jobs with heavy strength requirements or who had partial work limitations and/or medium strength requirements on their last job.

<sup>3</sup>Percent shares are the average fraction of income received from a given source for all units in the study universe. See footnote 1, table II-5.

<sup>4</sup>Pension income includes income from private employer and union pensions, State, local and Federal civilian employee pensions, U.S. military retirement pay, railroad retirement and income from IRA accounts and KEOGH plans.

<sup>5</sup>Interest income from savings and credit union accounts, checking accounts, money market accounts, certificates of deposit and all savers certificates, bonds and personal loans, dividends, gross rental income, income from estates, trusts and royalties, and income from roomers and boarders.

<sup>6</sup>All other sources besides earnings, social security, pension and asset income. Included are such sources as supplemental security income and other means-tested cash payments and veterans' pensions and compensation.

Source: 1982 New Beneficiary Survey.

**Table II-7.—Percentage reduction in income of newly retired workers due to increase in retirement age under alternative definitions of group concern**

New retirees	Definition of group	
	Narrowly defined group <sup>1</sup>	Broadly defined group <sup>2</sup>
	Social security benefits as a percent of income <sup>3</sup>	
All new retirees .....	52	52
New retirees not in group .....	50	47
New retirees in group .....	58	55
	Percentage reduction in income	
All new retirees .....	6.4	6.4
New retirees not in group .....	6.3	5.9
New retirees in group .....	7.1	6.8

<sup>1</sup>Those unable to work plus those with partial work limitations who had had heavy jobs with heavy strength requirements.

<sup>2</sup>Those with at least partial work limitations and at least medium strength requirements on their last job.

<sup>3</sup>Average fraction of income from social security. See footnote 1, table II-5. Source: 1982 New Beneficiary Survey.

be greater for the nonmarried than for the married. Among those in the narrowly defined group of persons in physically demanding jobs and/or ill health, the reduction in income would be 8.0 percent for the nonmarried, compared to 6.8 percent for the married.

Among today's total aged population receiving social security, benefits account for a larger share of income, on average, among older retirees than among younger retirees. This is partly because earnings decline in importance. Further, pensions generally are not indexed to keep pace with inflation and thus tend to represent a smaller average share of total income for the very aged. An indication of the change in the importance of social security benefit income is shown in data from a cross-section of today's elderly beneficiary units in table II-8. The average reduction in benefits due to the change in the law would grow somewhat larger as retirees age and rely more on social security as a source of income, but the magnitude of the change is unknown.

## E. Summary

Estimates of the number of new retirees who could find

**Table II-8.—Average unit shares<sup>1</sup> of income for aged couples and nonmarried persons receiving social security, 1982**

Source of income	Total	Age				
		65-69	70-74	75-79	80-84	85+
OASDI and railroad retirement benefits .....	64	56	63	67	70	72
Earnings .....	7	14	8	3	2	1
Pension income .....	10	12	10	8	7	5
Property income .....	16	14	16	18	17	17
Other .....	4	4	4	3	4	5

<sup>1</sup>See footnote 1 to table II-5.

Source: Unpublished tabulation from the March 1983 Current Population Survey.

it difficult to postpone benefit receipt because of the physical demands of their jobs or their health status depend on assumptions about how these concepts should be defined and measured. For purposes of this report, it is assumed that a narrow definition of the group of concern to Congress includes those unable to work and those with partial work limits who had had jobs with heavy strength requirements; they represent 18.5 percent of new retirees. A broader definition of the group of Congressional concern includes those unable to work, those in jobs with heavy strength requirements, plus those with partial work limitations who had had jobs with medium strength requirements; this group represents 29.9 percent of new retirees. Regardless of the definition used, those in physically demanding jobs and/or ill health:

- Had median unit income equal to about three-fourths that of other new retirees.
- Were twice as likely as other new retirees to be in the bottom fifth of the income distribution, where reliance on social security benefit income is greater than at other points of the income distribution.
- Relied on social security benefits for slightly more than half of their total income on average and thus would experience a reduction in total income of about 7 percent if the change in the law were fully effective now and benefits were claimed at the same ages as now.

The overall change in total income for all new retirees would range from an average reduction of 10 percent for those in the lowest fifth of the income distribution to an average reduction of 3 percent for those in the highest fifth. The average income reduction is likely to increase for all new retirees and for those in physically demanding jobs and/or ill health as the retirees grow older and rely less on earnings as a source of income.

### III. The Future Population in Physically Demanding Jobs and/or Ill Health and Future Economic Implications

This part first addresses two issues:

- Whether the percentage of workers in physically demanding jobs will be larger or smaller when the change in the retirement age becomes effective.
- Whether the health of those approaching retirement age will improve or decline.

Next, trends that may alter the economic status of new retirees in the future are examined, and potential behavioral responses to the increase in the retirement age are briefly reviewed. More detail on the issues discussed in this part is in Appendix B.

### A. Physically Demanding Occupations in the Future

It is estimated that 8–10 percent of workers approaching retirement age in 2000 will be in jobs with heavy strength requirements (i.e., “physically demanding jobs”) and that 7–9 percent will be in such jobs by 2020. These estimates represent a slight decrease from the 11.4 percent of workers in such jobs in 1982. The projections are based on the patterns of change in physically demanding occupations between 1950 and 1980 and Bureau of Labor Statistics [BLS] projections to 1995 (U.S. Department of Labor, 1983).

**Past trends.** Persons who have jobs with heavy strength requirements represent a declining share of the U.S. labor force: They accounted for 20.3 percent of the labor force in 1950, compared with 9.1 percent in 1980 (table III-1). The rate of decline was most rapid from 1950 to 1960, substantial from 1960 to 1970, and comparatively small from 1970 to 1980.

Table III-1 also shows what happens to a group of workers as they become older:

- As a group ages, the decline in the incidence of physically demanding jobs is somewhat less sharp than for the labor force as a whole—at least during periods of rapid change in technology and in demand for output. For example, 18.6 percent of those aged 40–44 were in jobs with heavy strength demands in 1950; when they were 20 years older in 1970, the percentage in physically demanding jobs had declined to 12.6 percent. For the labor force as a whole, the decline was from 20.3 percent to 9.9 percent.
- Between given decades the change in the percentage of older workers in physically demanding jobs is about the same as the change in the percentage of all workers in physically demanding jobs. From 1950 to 1970 the decline was about 50 percent for both groups, and from 1960 to 1980 the rate of decline was 34 percent for both.

**Future trends.** The Bureau of Labor Statistics projects that total employment will increase by about 25.6 percent between 1979 and 1995. Based on these projections, it is estimated that the percentage of employment that is in physically demanding occupations will decline from 12.3 percent to 10.9 percent; an 11.9-percent decline over the 15 years (table III-2).<sup>11</sup>

<sup>11</sup>BLS data in table III-2, referring to jobs, are based primarily on survey data of employment collected from business establishments, while the New Beneficiary Survey and Census data presented in tables III-1 and III-3 are from household or worker surveys and refer to workers. Thus the difference between the 12.3 percent in table III-2 and the 9.1 percent in table III-1 is between jobs and workers, respectively. Although establishment and household survey estimates are not comparable with respect to employment levels, they are believed to have the same percentage of changes over time.

**Table III-1.**—Percent of the labor force in physically demanding occupations, by selected age groups, 1950–80

Labor-force group	1950	1960	1970	1980
Total .....	20.3	13.8	9.9	9.1
Aged 40–44 .....	18.6	<sup>1</sup> 12.2	9.3	<sup>1</sup> 7.9
Aged 60–64 .....	25.4	<sup>1</sup> 16.0	12.6	<sup>1</sup> 10.6

<sup>1</sup>This figure is for a 10-year rather than 5-year age interval—that is, ages 35–44 or 55–64.

Source: SSA estimates based on U.S. Census data.

This amounts to an annually compounded rate of decline in physically demanding occupations of 0.79 percent. This rate is very close to the annual rate of 0.86 percent observed for the 1970–80 decade, but well below the annual rate of 3.26 percent for the 1960–70 decade and the 3.79 percent rate for the 1950–60 decade implied in table III-1. As the proportion of employment that is in physically demanding occupations becomes smaller, the rate of decline is expected to taper off. This is true in large part because such a significant decline has already occurred in agriculture. In past decades agriculture has been the largest single source of the decline in the proportion of workers in physically demanding jobs, representing 11.7 percent of all jobs held by workers in 1950 but only 2.2 percent of jobs in 1980. Conversely, occupations such as craft and related workers and service workers—both of which include jobs with heavy strength requirements—are projected by the Bureau of Labor Statistics to continue to grow at or near the rate of all occupations.

Two approaches were used to estimate the percentage of older workers who are likely to be in jobs with heavy strength requirements in 2000 and 2020. The first approach is based on a projection into the future of the percent of workers aged 60–64 in physically demanding jobs. The second approach starts with the percent of workers aged 40–44 in physically demanding jobs and then projects the percent in physically demanding jobs when this group reaches age 60–64. Both approaches assume that the 0.79 percent annual rate of decline in such jobs will continue through 2000 and on to 2020.

The first approach assumes that the rate of decline in the future for the group aged 60–64 is the same as for the total labor force (as was the case between 1950 and 1980).

**Table III-2.**—Employment status by number, percent, physical demands, and percent change, 1979 and 1995 (projected)

[Numbers in millions]

Employment	1979	1995	Percent change
Total employment .....	101.20	127.10	+25.6
Physically demanding employment:			
Number .....	12.47	13.80	+10.7
Percent .....	12.3	10.9	-11.9

Source: SSA estimates based on data from the Bureau of Labor Statistics.

With this assumption and using the 0.79 percent annual decline, an estimated 7.8 percent of all workers will be in physically demanding jobs in 2000, falling to 6.6 percent by 2020. The percentage of workers 60–64 years old in physically demanding jobs will be 9.1 percent in 2000 and 7.7 percent in 2020. Using these figures and assuming that the 1980 ratio of new retirees aged 62–67 in physically demanding jobs to workers aged 60–64 in physically demanding jobs (1.07) remains applicable in the future, the proportion of new retirees in physically demanding jobs is projected to be 9.7 percent in 2000 and 8.3 percent in 2020 (table III-3).

The second method also assumes that the 0.79 percent rate of decline derived from the 1995 Bureau of Labor Statistics projections continues to hold from 2000 to 2020. Again, the percent of all workers estimated to be in physically demanding jobs is 7.8 percent in 2000 and 6.6 percent in 2020. It then proceeds according to the following steps:

- (1) The percent of workers aged 40–44 in physically demanding jobs in 2000 is calculated by multiplying the percent of all workers in such jobs by 0.9. The adjustment factor is 0.9 because in 1950, 1960, and 1980, about 90 percent as many workers aged 40–44 were in physically demanding jobs as were all workers.
- (2) The percent of workers aged 60–64 in physically demanding jobs in 2000 and 2020 is calculated by assuming that the proportion of workers aged 40–44 in physically demanding jobs in 1980 and 2000 declines at the rate of about half the rate of the total labor force. This rate is based upon the experience from 1950–70 and 1960–80.
- (3) The percent of newly retired workers aged 62–67 in physically demanding jobs is calculated by multiplying the percent of such workers aged 60–64 in such jobs by 1.07 percent. The factor 1.07 was the ratio observed in 1980 between newly retired workers aged 62–67 in the New Beneficiary Survey in physically demanding jobs and workers aged 60–64 in the labor force.

As a result of these calculations, it is estimated by the second method that 7.9 percent of newly retired workers in 2000 and 7.0 percent in 2020 will be in physically demanding jobs as they approach retirement.

The two methods together suggest that the range of those in physically demanding jobs could be from 8 percent to 10 percent in 2000 and 7 percent to 9 percent in 2020.

## B. Ability to Work of Older Workers in the Future

Current knowledge about the health status of the population does not permit a precise estimate of the share of the population approaching retirement in the future who may be in ill health or, more precisely, unable to work. This section thus first reviews the relationship between life expectancy and ability to work and recent trends in each,

**Table III-3.**—Percent of the labor force in physically demanding occupations, 1950–2020

Method	Estimated			Projected	
	1950	1960	1980	2000	2020
<b>Method 1:</b>					
Total labor force .....	20.3	13.8	9.1	7.8	6.6
Labor force aged 60–64 .....	25.4	16.0	<sup>1</sup> 10.6	9.1	7.7
New retirees aged 62–67 .....	(2)	(2)	11.4	<sup>3</sup> 9.7	<sup>3</sup> 8.3
<b>Method 2:</b>					
Total labor force .....	20.3	13.8	9.1	7.8	6.6
Labor force aged 40–44 .....	18.6	<sup>1</sup> 12.2	<sup>1</sup> 7.9	<sup>1</sup> 7.0	(2)
Labor force aged 60–64 .....	25.4	<sup>1</sup> 16.0	<sup>1</sup> 10.6	<sup>1</sup> 7.3	6.5
New retirees aged 62–67 .....	(2)	(2)	11.4	<sup>3</sup> 7.9	<sup>3</sup> 7.0

<sup>1</sup>Aged 35–44 or 55–64 because of derivation from 1980 or 1960 Census figures.

<sup>2</sup>Not applicable to estimating or projecting processes.

<sup>3</sup>Derived from 1980 ratio of new retirees aged 62–67 to labor force aged 60–64.

Source: SSA estimates based on data from the U.S. Census, the 1982 New Beneficiary Survey, and the Bureau of Labor Statistics.

then looks at whether or not improvements in the environment, lifestyle, and medical care are likely to lead to future improvements in the proportion of older persons who are able to extend their work lives.

Conventional wisdom has assumed that the improvements in life expectancy experienced in recent decades have been accompanied by comparable extensions in the active work life of persons approaching retirement age (Fuchs, 1984). A survey of relevant research indicates, however, that life expectancy has improved primarily because of an increase in the ability of medical science to postpone death from potentially fatal diseases—in particular, cardiovascular disease. (See Appendix B.) The prevalence of such conditions may actually have increased as the lives of persons suffering from such diseases have been extended. In addition, the prevalence of work-disabling diseases, such as arthritis, seems not to have declined. It is not clear whether changes in the factors that influence ability to work will lead to reductions in the incidence of disabling diseases in the future.

**Life expectancy and patterns of illness and limitation.** Life expectancy declined slightly for males and increased very slowly for females during the 1950's and 1960's, then began a relatively large and steady increase that appears to continue today. For example, between 1954 and 1968, male life expectancy at age 65 declined at an annual rate of .03 years annually, compared with an annual

**Table III-4.**—Average annual change in life expectancy for selected periods, by age and sex

Period	Average annual change in life expectancy			
	At birth		At age 65	
	Males	Females	Males	Females
1954–68 .....	–0.009	0.104	–0.030	0.082
1968–80 .....	.278	.276	.103	.147
1980–83 .....	.333	.267	.133	.167

Source: Data for 1954–80 are from U.S. Department of Health and Human Services, 1983, table 8b, page 29. Data for 1980–83 are from U.S. Department of Health and Human Services, 1984, table 11, page 53.

increase of .133 years between 1980 and 1983 (table III-4).

Several recent studies indicate that the illness and limitation patterns of middle-aged and older persons have apparently not experienced improvements comparable to the improvements in life expectancy. (Several of these are reviewed in Ycas, 1985.) These studies analyze data from the National Health Interview Survey, which is the only source of continuous data over time on the health status of the U.S. population.

Whether one looks at the degree of limitation in “usual activity”<sup>12</sup> or the number of limiting chronic conditions as measures of long-term disability, or the prevalence (percent of persons suffering from disease at a given time) and incidence rates (the percent of persons experiencing onset of a disease) of specific chronic diseases as measures of long-term ability to work, the available indicators seem to indicate an increase in the prevalence of many chronic conditions and a resultant increase in self-reported disability among middle-aged and older persons during the 1970's.<sup>13</sup> For example, among men aged 62–67, 17.7 percent reported that they could not perform their usual activity in 1969. By 1981, this proportion had increased to 23.9 percent. The number of limiting chronic conditions reported by men aged 62–67 averaged 0.45 in 1969 and 0.61 in 1981; women aged 62–67 reported an average of 0.38 limiting chronic conditions in 1969 and 0.52 in 1981. These same basic patterns appear to hold for middle-aged persons as well, except that prevalence and degree of limitation are substantially less.

The available data from the National Health Interview Survey indicate that the reported prevalence rates for most of the major potentially fatal diseases such as heart disease, cancer, and cerebrovascular disease increased substantially during the 1970's among middle-aged and older persons (Feldman, 1983 and Vebrugge, 1984). For some of the most common nonfatal conditions, such as arthritis and gout (musculoskeletal disorders) and chronic sinusitis and hay fever (respiratory problems), large increases in reported prevalence and limitation rates occurred during the 1970's. It was among the less common nonfatal conditions, such as varicose veins and hemorrhoids (circulatory conditions) and ulcers and constipation (digestive disorders) that the prevalence rates declined during the 1970's.

The real issue is how health status affects work limitation and that is unclear. It is possible that the reported increase in disease and limitation appears to be greater than true levels because reported prevalence and limitation rates

<sup>12</sup>There is some ambiguity about what “usual activity” is referred to by respondents in the National Health Interview Survey. According to Ycas (1985) men tend to refer to their work for pay. (Women have the option of reporting their usual work as housework and so their answers may not be comparable to those from men.)

<sup>13</sup>Ycas (1985), in a background paper for this study, found that some other indicators may be indicating improvement in health status, or at least ambiguous trends. The National Health Interview Survey data are difficult to interpret, particularly in making inferences in year-to-year changes.

may increase even though actual rates have not (Wilson, 1983; Verbrugge, 1984; and LaPlante, Chapman, and Wilensky, 1985).

First, earlier diagnosis of disease can lead to more and better reporting in health interview surveys. Second, earlier and greater accommodation to disease by individuals who restrict or limit their usual activities could result in an increase in reported disability. For example, the increased availability (or knowledge of) social security disability benefits during this period could have permitted some persons who otherwise would have had to continue working despite an impairment to stop working. Third, changes in procedures used to elicit information on chronic disease in the National Health Interview Survey since 1968 could have resulted in a substantial increase in reported conditions. While the importance of these factors cannot be quantified, some analysts believe they are important in explaining the apparent increase in illness and limitation rates since the late 1960's. There is no clear consensus on whether the reported increase therefore represents an actual increase for middle-aged and older persons.<sup>14</sup>

The coincidence of a reported increase in illness and limitation rates among older persons and an unequivocal increase in longevity seems puzzling at first glance. It might be assumed that any factor increasing life expectancy would also decrease illness and limitation rates. This is not necessarily the case. Mortality rates will decline if:

- The incidence of potentially life-threatening disease is reduced.
- The severity of such disease is reduced or the rate of complete recovery is increased.
- The survival rate from a particular disease is increased.

In the first two instances, the factors leading to reductions in mortality will obviously also lead to improvements in health status. Fewer people get sick or when they do get sick, get less sick than previously or more frequently recover. However, in the third instance, health status of the total population may actually decline: just as many people get sick but their lives are extended. Indeed, the incidence of a disease may decline while its prevalence may actually increase.

Further, whereas mortality is affected primarily by the incidence and severity of fatal diseases, such as heart disease and cancer, health status, or more to the point, work capacity, is also affected by the incidence and severity of other diseases, such as arthritis. Consequently, increasing longevity in a population does not necessarily imply an improvement in ability to work.

The increase in life expectancy is due in large part to a relatively substantial decline in mortality from such fatal conditions as heart disease, cerebrovascular disease

(strokes), and arteriosclerosis. In fact, it has been estimated that two-thirds of the decline in total mortality rates from 1968 to 1980 is due to declines in cardiovascular mortality (LaPlante, Chapman, and Wilensky, 1984). But there apparently has not been a corollary decline in the prevalence of such diseases. Indeed, the apparent increase in illness and limitation levels is due in part to an increase in the number of persons who suffer such conditions as heart attacks and continue to live while still experiencing their aftereffects (Gruenberg, 1977). At the same time, the reported prevalence of diseases that are disabling, but not life-shortening, seems also to have increased.

In summary, the existing data on the prevalence of chronic illness and limitation appear to indicate an increase in limitation, but a number of factors make this conclusion unclear. In addition, many nonhealth related factors determine the ability or willingness to continue to work (e.g., economic conditions, job structure, sick leave and disability provisions, and family structure). Therefore, it is difficult to predict the ability or unwillingness to continue to work solely on the basis of illness and limitation.

#### **Determinants of ability to work and future trends.**

The living and working environments, individual lifestyle and personal behavior, and the quality and quantity of medical care are all likely to play some role in determining the ability of the population in the future to extend their work lives. Each of these factors is discussed in turn below.

Several factors suggest that future changes in the environment will increase the health of the population. Projected changes in the occupational mix of the economy over the next 40 years indicate that the proportion of the labor force in physically demanding jobs will decline (as discussed above). While the decrease is relatively small, the decrease may result in improved health status. However, it has been argued that although the proportion of workers in physically demanding jobs has decreased and is expected to decrease further, the proportion of workers in psychologically demanding occupations has been increasing and is likely to increase further. To the extent that some of these occupations result in excessive levels of stress and anxiety, disability caused by mental disorders or stress-induced physical disorders could increase.

Health status is determined not only by the physical demands of a job but also by the industrial environment including dust, smoke, chemical contamination, and risk of injury. Recent evidence indicates that older individuals who worked in "less healthy" industries, such as mining, are more likely to report that they are in poor health than individuals who worked in "healthy" industries (Burtless, 1985). If over the next 40 years the industrial mix in the economy should change so that a smaller proportion of the population works in "less healthy" industries, one would expect the health status of older workers in the future to improve as a result of this change.

Income is an important determinant of the environment

<sup>14</sup>For discussions of various viewpoints, see Colvez and Blanchet, 1981; Feldman, 1983; Verbrugge, 1984; Ycas, 1985; Butler, 1983; Fuchs, 1984; and Baily, 1985.

in which persons live. Because most long-run economic projections show a steady and substantial increase in per capita income, one would expect an accompanying improvement in health status. Air pollution, another determinant, has been declining—although the rate of decline has slowed in recent years and is projected to decrease relatively slowly in the future.

Indeed, most of these improvements in the environment are likely to be small when viewed in an historical context. There is a consensus among health specialists that in a modern society such as the United States, where most of the population already live and work in a relatively healthy environment, environment is the factor least likely to influence change in health status.

It has also been hypothesized that education can lead to healthier lifestyles and improved health status. Education may increase the likelihood of a person's recognizing and obtaining treatment for illness, taking preventive measures (e.g., immunizations) and avoiding risky health patterns (e.g., excessive alcohol consumption and tobacco use), while adopting beneficial behavior (e.g., exercise and good diet).

The U.S. experience of the past 20 years is mixed with regard to the validity of this hypothesis. The use of medical services has increased substantially (resulting in earlier diagnosis and treatment of disease).

One effect of this has been the increase in the proportion of persons whose hypertension is now controlled. In 1960–62, 16.0 percent of hypertensives were controlled; by 1976–80, 34.1 percent were controlled (Rowland and Roberts, 1982). No national data are available on control rates since 1980, but State surveys now put control rates at close to 50 percent.

Smoking also has declined. Among men aged 20 or older, 52.1 percent smoked cigarettes in 1965. By 1983, that number had declined to 35.4 percent (U.S. Department of Health and Human Services, 1985). The effect of this decline in smoking and of additional changes in lifestyle and other factors can be seen in the declines in death rates for coronary heart disease and stroke. The former declined by 33 percent between 1972 and 1984 and the latter by 48 percent, according to unpublished data from the National Heart, Lung, and Blood Institute.

Similarly, elevated serum cholesterol levels are declining. In 1960–62, 26.9 percent of persons aged 25–74 had elevated serum cholesterol levels. This number had declined to 23.2 percent in 1971–74 and to 21.9 percent in 1976–80 (U.S. Department of Health and Human Services, 1985). These numbers are significant because a 1-percent reduction in blood cholesterol levels yields a 2-percent reduction in heart disease rates (Lipid Research Clinics Program, 1984).

Other data are not as encouraging. While the proportion of persons smoking at all has declined, heavy smokers—those who smoke 25 or more cigarettes a day—remained virtually unchanged as a percentage of the population 20

or older between 1965 and 1983. And in 1960–62, 27.4 percent of those aged 25–74 were classified as overweight. This number had increased to 28.4 percent by 1976–80 (U.S. Department of Health and Human Services, 1985).

Whether improvements in the quality and quantity of medical care will lead to improved ability to work will be influenced in part by the extent to which medical science will emphasize preventive care and improvements in the treatment of disabling, but not necessarily fatal, disease. For example, the Health Resources Administration (HRA) in 1985 projected that between 1981 and 2000 the total supply of physicians will increase by 49 percent. However, the HRA projects an increase of only 15 percent in general preventive medicine physicians and of about 36 percent in family practice physicians.

It is difficult to project future advances in medical technology. Speculations abound and some of the projected advances are consistent with a substantial improvement in the ability to work of the older population.

In summary, on the basis of the available evidence, it is not possible to determine whether increases in life expectancy over the past 15 years have been accompanied by comparable improvements in work ability. Medical breakthroughs in the future could reduce the disabling effects of disease, so substantial reduction could occur in work-limiting impairments among older workers in the future. The evidence reviewed here is ambiguous about the potential for improvements in the environment or lifestyle to lead to significant improvements in the overall health status of older workers. This ambiguity suggests that any conclusions about future ability to work should be based on analysis of changes in the determinants of health, not just projections of future increases in life expectancy.

### **C. Future Economic Status of Those in Physically Demanding Jobs or Ill Health**

**Retirement income.** In Part II, it was estimated that the median unit income of newly retired workers in physically demanding jobs and/or ill health in 1982 was about 25 percent lower than the median for other newly retired workers. It was also pointed out that this difference reflected the fact that the percentage of new retirees in physically demanding jobs and/or ill health in the lowest fifth of the income distribution was twice that of other new retirees. Retirement income for all workers is expected to grow over time, but no available information projects whether the difference in retirement income between the two groups will change between 1982 and 2020. However, because the level of income will continue to be determined, in part, by health and occupational status, it is reasonable to conjecture that the median income of older workers in ill health or physically demanding jobs will continue to be in the range of 25 percent lower than that of others in the future.

**The decrease in income due to increasing the retire-**

**ment age.** As noted in Part II, social security benefits represented a slightly larger share of income, on average, for new retirees in physically demanding jobs and/or ill health than for other new retirees. Consequently, the average percentage reduction in income attributable to the increased retirement age was estimated to be only slightly higher for those in physically demanding jobs and/or ill health than for other new retirees—again assuming benefit receipt is not delayed and there are no offsetting increases in other income sources. Whether or not the average percentage reduction in income in 2000 and 2020 is likely to be much different than it would have been in 1982 depends on the average unit's share of total income derived from social security in those years. This in turn depends in part on the growth of social security income relative to the growth of other income sources (pensions, asset income, earnings, etc.) for newly retired workers.

If other income grows at the same rate as social security benefit income, then the effect will be the same as it would have been for 1982. Although social security benefits and other income are not likely to grow at exactly the same rate, social security's share of total income is relatively insensitive to differences in the growth rate between it and other income types because social security is such a large percentage of retirees' total income.

The lack of sensitivity of the share of social security benefits can be illustrated using two simple hypothetical examples. In both examples, it is assumed that average real social security benefits rise by 75 percent from 1982 to 2020. In the first example, it is assumed that the real amount of all income other than social security benefits rises by 150 percent, twice the rate of social security. In this example, which is quite extreme, social security's share of total income declines only from 51 percent to 45 percent when these assumptions are applied to the actual incomes of new retired workers in the New Beneficiary Survey. In the second example, the real amount of all income other than social security benefits is assumed to rise by only 25 percent, one-third of the rate for social security benefit income. This example, which is also quite extreme, raises the share derived from social security only from 51 percent to 58 percent.

Existing projections of the income of the aged suggest a far smaller difference between rates of growth of social security and other income than those assumed in the examples above. As one example, estimates derived from a projection using the ICF Macroeconomic-Demographic Model of the U.S. retirement system (Anderson and McNaught, 1982) indicate that average real social security benefits are expected to rise by roughly the same percentage as average real income other than social security between 1980 and 2020 and the average unit share of income from social security is projected to remain substantially unchanged.

Any projection that looks ahead 35 years is subject to significant error. For example, substantial distributional shifts could occur. Nevertheless, barring unforeseen changes, it appears unlikely that the average share of so-

cial security benefits in total income of new retirees in 2020 will change significantly. Consequently, the average decline in total income that is likely to result from the increase in the retirement age is not likely to differ from the 1982 estimate of 6–7 percent unless there are other major legislative or economic changes.

It is important to recognize, however, that the purchasing power of social security benefits, which relates to prevailing price levels, is expected to rise between 1982 and 2027. The benefit formula is specifically designed to produce initial benefits for new retirees at any given age that rise as the standard of living rises, i.e., as average real wages increase. Because average wages are projected by most observers to increase faster than average prices between 1982 and 2027, initial retirement benefits should reflect a higher standard of living than was experienced in 1982. Thus, implications for a beneficiary's economic well-being of a 6–7 percent reduction in total retirement income in 2027 would be less than the effect of a similar benefit reduction in 1982.

#### **D. Behavioral Responses to the Increase in the Retirement Age**

Behavioral responses—e.g., changes in work and saving patterns—to the change in the retirement age are possible because the prospective change will not be fully effective for 40 years. Of course, such behavioral changes are not expected to significantly alter the size of the group in physically demanding jobs or ill health.

**Saving response.** In anticipation of the change in the retirement age, workers may choose to increase their saving during their working life. An increase in saving can be achieved either by an increase in the rate of saving (i.e., reducing consumption during the working career) or by increasing work effort, and consequently earnings, during the planned working career. Workers can build up savings in the form of real estate (such as housing) and/or financial assets (such as stocks, bonds, or Individual Retirement Accounts), etc. This increase in savings could then be used in retirement to offset the decrease in benefits resulting from the increase in the retirement age.

The empirical studies of the relationship between changes in social security benefits and changes in individual saving have been based on data collected in an environment in which social security benefits were generally increasing. The most highly publicized studies have used historical aggregate U.S. national data to examine the effect of social security on national private saving. The issue is examined in detail in Feldstein (1974, 1982) and Leimer and Lesnoy (1980, 1982, 1983) and summarized in Aaron (1982) and Lesnoy and Leimer (1985). Although the results are still being debated, the historical data suggest that national saving has not been affected by the growth of social security. This suggests that, on average, individuals do not change their personal saving in response to changes in social security benefits.

Since this study is concerned with the differential response of individuals to changes in social security benefits, it appears sensible to focus on those studies that examine the saving responses of individuals (or households). These studies, which rely on data from household surveys (such as the SSA's Retirement History Study) are referred to as household cross-section studies.<sup>15</sup> In general, the approach is to estimate whether, other factors (lifetime income, marital status, education, etc.) being equal, individuals with higher social security benefits save less. If such a relationship exists, it is then inferred that an increase in social security benefits will decrease individual saving. Since the relationship is symmetric, it can similarly be inferred that a decrease in social security benefits could increase saving.

The results of studies that have focused on the question of whether increases in social security benefits result in decreases in personal saving are quite mixed. For example, Friedman (1982), Kotlikoff (1979), and Kurz (1981) conclude that increases in social security benefits do not appear to result in decreases in personal saving. On the other hand, Feldstein (1983), Feldstein and Pellechio (1979), and Diamond and Hausman (1984) conclude that increases in social security benefits result in decreases in personal saving. Most studies that find that social security benefit increases reduce saving estimate that a dollar increase in benefits results in substantially less than a dollar decrease in saving.

While some current and future workers may increase their saving rather than delay benefit receipt, the available empirical evidence also suggests that the increased saving will not, to any substantial degree, offset the reduction in benefits that would result for those who do not delay retirement. The pertinent question is whether the workers who do increase their saving are likely to be those in physically demanding jobs and/or ill health. Two hypotheses suggest they may not be. First, it would seem that workers who have been in physically demanding occupations would be among the least likely and least able to increase their saving through increased work effort. If ill health at the time of retirement has been of long duration, that may also have limited increased work effort. Second, such individuals are more likely than others to have relatively low income status—as this study has demonstrated—and therefore may have been less able to reduce their consumption during their normal working lives. The sparse empirical evidence that is available suggests that low-income individuals tend not to save. Indeed, as shown in table II-6, those in physically demanding jobs or ill health tended to receive a smaller share of their income from assets than other retirees. Given their need to allocate a large portion of their income to current consumption for basic needs, low-income persons may not be able to save more to offset

<sup>15</sup>It should be pointed out that some economists, notably Barro (1978), have argued that the effect of changes on social security benefits on saving cannot be inferred from examining cross-sectional variation in individual saving patterns.

an expected reduction in future income. In summary, increased saving can, in theory, offset a benefit reduction, but it is questionable whether workers in physically demanding jobs or ill health are likely to increase their saving.

**Extending the work career.** In response to the change in the retirement age, workers also may extend their working careers. If they do, their monthly benefits in retirement will not be reduced or will be reduced less.

The effect of social security benefits on the decision to retire has been analyzed in numerous studies. Many have focused on the issue of the relative importance of social security benefits and health status on the decision to retire. In a background paper prepared for this study, Sammartino (1985) reviewed the literature in this area and concludes "that retirement research has established a significant effect of health on the probability of retirement. Those in poor health, but whose health problems are not severe enough to keep them bedridden or completely unable to work, are likely to retire from 1 to 3 years earlier than workers in good health who are similarly situated with regard to other economic and demographic characteristics." Furthermore, he states that "... research has also established that the labor supply response to the changes in the 1983 Social Security Amendments likely will be small. We can expect that retirement ages will increase on average by 0 to 3 months. These effects will differ by age, with the largest response by workers who would have retired at ages 65 and 66, and the smallest response by workers who would have retired between ages 62-64."

Studying the effect of changes in income on the retirement behavior of workers in both poor health and good health, Gustman and Steinmeier (1985) find that in terms of delaying retirement, the response to changes in retirement income is likely to be much smaller for those in poor health than those in good health.

Finally, Gustman and Steinmeier present results on the effect of health on the retirement decision disaggregated by occupational status. They find that poor health increases the probability of retirement more for those in physically demanding occupations than for those not in physically demanding occupations.

In summary, empirical analysis of the potential response of current and future workers to the benefit decrease contained in the 1983 amendments indicates that workers in poor health are much less likely to extend their working careers than are workers in good health. As a consequence, workers in poor health will be less likely to offset the decline in social security benefit income associated with an increase in the retirement age.

## E. Summary of Major Findings

The major findings of this chapter are as follows:

- Projected changes in the occupational mix are likely to reduce the proportion of workers approaching re-



retirement in the future who will be in jobs with heavy strength requirements from 11.4 percent to 8–10 percent by 2000 and 7–9 percent by 2020.

- Evidence about recent trends in the illness and limitation patterns of older workers is ambiguous. Whether improvements in the environment, lifestyle, or medical technology will lead to a substantial decrease in the number of workers approaching retirement in the future who are in ill health is extremely difficult to predict.

- With respect to economic status:

- The 25-percent difference in retirement income between new retirees in physically demanding jobs and/or ill health and other new retirees is unlikely to narrow in the future.

- Growth in other sources of income is not likely to alter substantially the degree to which retirees rely on social security benefits. Therefore, if older workers do not delay benefit receipt when the new retirement age is fully phased in, income at retirement might be about 6–7 percent lower, on average, than it otherwise would have been.

- It is unlikely that future retirees in physically demanding jobs and/or ill health will have been able to save more during their working life to offset a potential benefit reduction; it also seems unlikely that they will substantially extend their work lives.

#### IV. Summary of Major Findings

This study began by estimating the percentage of workers approaching retirement now who had had physically demanding jobs and/or who were in ill health. For purposes of this study, physically demanding jobs were identified by using a criterion dependent largely on requirements to lift or carry heavy objects. Ill health was determined by whether the new retirees said they were partially limited or totally unable to work at the time of the survey. Estimates of the number of persons retiring now who were in physically demanding jobs and/or ill health provide a baseline against which future projections of this group's size can be measured. The data base used for these estimates was the New Beneficiary Survey conducted in 1982 by the Social Security Administration. The study also estimated the potential effect on these recent retirees of the increase in the retirement age were it effective today and assuming that retirees did not change the age at which they claimed benefits or have changes in their other sources of income.

This analysis of recent retirees showed that:

- A narrow definition of the group about which Congress was concerned when it wrote the mandate for this study includes those who said they were totally unable to work and those with partial limits who had jobs with heavy strength requirements. Some 18.5 percent of new retirees met those narrow criterion. A broad definition adds to that group those who had partial work limitations and jobs with medium strength requirements and those with no work limitations and jobs with heavy strength requirements. Some 29.9 percent of new retirees were in the latter group.

- New retirees in physically demanding jobs and/or ill health:

- Had median unit income that was about 25 percent lower than the median unit income of other new retirees.

- Were proportionately more likely to be in the lowest fifth of the income distribution, where reliance on social security benefits is greatest.

- On average, relied on social security benefits for slightly more than half their income, and would experience about a 7.0-percent decrease in total income at retirement if their social security benefits were reduced by about 13 percent under the new law.

The study then estimates the percent of workers in physically demanding jobs approaching retirement age in the future and describes factors that could affect the health status of older workers in the future. It also assesses potential economic implications of the change in the retirement age for older workers. The study finds that:

- Projected changes in the occupational mix of the labor force are likely to reduce the percentage of older workers in the future who will be in jobs with heavy strength requirements from the current 11.4 percent. It is estimated that the percentage will be in the range of 8–10 percent by 2000 and 7–9 percent by 2020.

The projected rate of decline in physically demanding jobs is smaller than the historical rate of decline because much of the potential decrease in such jobs has already occurred (primarily in the agriculture sector) and because a certain irreducible minimum number of such jobs are unlikely to be automated out of existence.

- The evidence is ambiguous as to recent trends in the health status of older workers. Improvements in life expectancy that have occurred over the past several decades have not necessarily been accompanied by corresponding improvements in the active work lives of older persons. This appears to be in part because medical science has succeeded in prolonging life after the onset of potentially fatal diseases. Thus, victims of those diseases are living longer after the onset of disease and so the prevalence of the diseases may actually have increased. At the same time, the prevalence of disabling, but not life-shortening, diseases, seems to have increased.

- It is unclear whether improvements in lifestyle and behavior, the environments in which people live and work, and the quality and quantity of medical care will lead to improvement in the ability of older workers to work in the future. Some of the fragmentary evidence available suggests reason for optimism about the effects of the recent trend toward healthier lifestyles, but it is still difficult to predict the future effect of such changes on work ability. Similarly, it is impossible to predict whether medical breakthroughs will occur that will reduce the prevalence of work-related impairments. However, a significant breakthrough could dramatically reduce the percentage of older persons who are unable to work.

- It appears unlikely that incomes will grow more rapidly for those in physically demanding jobs or poor health than for other retirees in the future. Consequently, the current 25-percent difference between the median unit income of new retirees in physically de-

manding jobs or poor health and the median income of other new retirees is unlikely to narrow in the future.

- Future retirees in physically demanding jobs and/or ill health are the least likely to have saved more to offset a potential benefit reduction; available research indicates that they are unlikely to extend their work lives substantially in response to the increase in the retirement age.

This report does not include recommendations for legislative changes. It will be many years before the new retirement age provision phases in and in the intervening period we will gain experience with the determinants of work ability among older persons. Also as time passes, more will become known about the proportion of older workers likely to be in physically demanding jobs or ill health in the future.

In sum, fewer older workers than today—7–9 percent by 2020 versus 11.4 percent in 1982—are expected to be in jobs with heavy strength requirements. It is unclear whether fewer than the 16.3 percent who now say they are unable to work will be unable to work in the future. Thus, it appears that there will be some decline—but not a dramatic decline—relative to today in the proportion of retirement-age workers who could find it difficult to extend their work lives a year or two in response to the increase in the age at which full social security retired-worker benefits are payable. If workers do not delay retirement and if there are not offsetting increases in other income sources, it appears that the average reduction in total income at retirement for workers in physically demanding jobs and/or ill health will be on the order of 6–7 percent when the new retirement age is fully phased in in 2027.

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