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Living to 120 and Beyond

Americans' Views on Aging, Medical Advances and Radical Life Extension

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About the Pew Research Center's Religion & Public Life Project

This report was produced by the Pew Research Center's Religion & Public Life Project. Launched in 2001 as the Pew Forum on Religion & Public Life, the Religion & Public Life Project seeks to promote a deeper understanding of issues at the intersection of religion and public affairs.

The project conducts surveys, demographic studies and other social science research to examine a wide range of issues concerning religion and society in the United States and around the world – from shifting religious composition to the influence of religion on politics to the extent of government and social restrictions on religion. The project also covers a range of issues that often have a religious component – from abortion and same-sex marriage to stem cell research and church-state controversies.

The Religion & Public Life Project is directed by Luis Lugo and is part of the Pew Research Center, a nonpartisan fact tank that informs the public about the issues, attitudes and trends shaping America and the world. The center conducts public opinion polling, demographic studies, media content analysis and other empirical social science research. Pew Research does not take positions on any of the issues it covers or on policy debates.

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PREFACE

While the Pew Research Center routinely tracks long-established trends in public attitudes, it also tries to identify emerging social, political and religious issues. We began polling on samesex marriage, for example, in 1996, seven years before Massachusetts became the first state to allow it. The goal of these early studies is to set down some initial markers that may help us, years down the road, to look back and measure the amount and direction of change in public opinion on evolving issues.

The idea for the forward-looking survey reported in these pages goes back to summer 2010, when David Masci, a senior researcher at the Pew Research Center's Religion & Public Life Project, interviewed a range of scientists, bioethicists and other experts about technological changes that could set off ethical and religious debates. Among the possibilities they raised was "radical life extension," the prospect that advances in biotechnology and other fields could slow down or turn back the biological clock and allow many humans to live to 120 years or beyond. Some religious leaders, Masci found, already were discussing the possibility of much longer life spans. In 2010, for example, <u>Pope Benedict XVI</u> spoke against the desire to postpone death indefinitely, warning that endless life on Earth "would be no paradise." The issue also has slowly seeped into public consciousness via <u>movies</u>, <u>books</u> and the <u>news media</u>.

It is a great leap, however, to go from discussing a hypothetical scientific breakthrough to polling the U.S. public about it. To begin to explore what Americans think about radical life extension, the Religion & Public Life Project conducted two pilot studies, involving a total of more than 500 telephone interviews, in fall 2011. These tests broached the topic of scientific developments that might, in the future, allow an average person to live decades longer than is usual today. Respondents were asked to say, in their own words, what thoughts came to mind when they considered this possibility. Cary Funk, a senior researcher at the Pew Research Center who has extensive experience in polling about science and related issues, used the open-ended responses to develop a series of more specific questions on topics such as overpopulation and economic inequality. Pew Research also experimented with Google Consumer Surveys, using the internet to test the effect of specifying that medical advances might allow people to live past the age of 120. All these tests helped us to refine the survey questionnaire, which was fielded in spring 2013 on landlines and cell phones among a nationally representative sample of more than 2,000 adults.

Together with the survey results, we are releasing two accompanying reports. "<u>To Count Our</u> <u>Days: The Scientific and Ethical Dimensions of Radical Life Extension</u>" presents an overview of the scientific research and the emerging ethical debate. "<u>Religious Leaders' Views on Radical</u> Life Extension" describes how some clergy, bioethicists, theologians and other scholars think their religious traditions might approach the issue. Funk was the principal researcher on the survey, and Masci was the principal writer of the companion reports. He received valuable help in 2011-12 from Elizabeth A. Lawton, a former research assistant at the Religion & Public Life Project. Leah Christian, formerly a senior researcher at the Pew Research Center, also contributed to the survey. Fieldwork for the survey was ably carried out by Princeton Survey Research Associates International.

Luis Lugo, Director Alan Cooperman, Deputy Director Religion & Public Life Project Pew Research Center

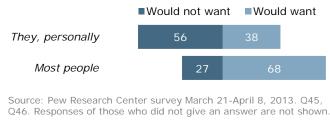
OVERVIEW

With falling birthrates and rising life expectancies, the U.S. population is rapidly aging. By 2050, according to U.S. Census Bureau projections, one-in-five Americans will be 65 or older, and at least 400,000 will be 100 or older.¹ Some futurists think even more radical changes are coming, including medical treatments that could slow, stop or reverse the aging process and allow humans to remain healthy and productive to the age of 120 or more. The possibility that extraordinary life spans could become ordinary life spans no longer seems far-fetched. A recent issue of National Geographic magazine, for example, carried a picture of a baby on its cover with the headline: "This Baby Will Live To Be 120."

Yet many Americans do not look happily on the prospect of living much longer lives. They see peril as well as promise in biomedical advances, and more think it would be a bad thing than a good thing for society if people lived decades longer than is possible today, according to a new survey by the Pew Research Center. Asked whether they, personally, would choose to undergo medical treatments to slow the aging process and live to be 120 or more, a majority of U.S. adults (56%) say "no." But roughly two-thirds (68%) think that most *other* people would. And by similarly large margins, they expect

Who Wants To Live Decades Longer?

% of U.S. adults saying (they personally/most people) would or would not want medical treatments that slow the aging process and allow the average person to live decades longer, to at least 120 years



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that radically longer life spans would strain the country's natural resources and be available only to the wealthy.

There is, at present, no method of slowing the aging process and extending average life expectancies to 120 years or more. But research aimed at unlocking the secrets of aging is under way at universities and corporate labs, and religious leaders, bioethicists and philosophers have begun to think about the morality of radical life extension, according to two accompanying reports released by the Pew Research Center's Religion & Public Life Project in conjunction with the new survey.

¹ See U.S. Census Bureau, Population Division. December 2012. "Table 2. Projections of the Population by Selected Age Groups and Sex for the United States: 2015 to 2060 (NP2012-T2)."

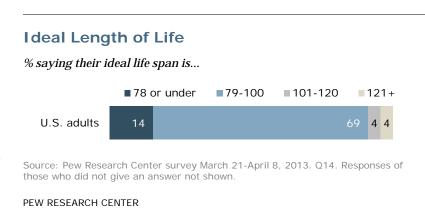
http://www.census.gov/population/projections/data/national/2012/summarytables.html

The survey, conducted from March 21 to April 8, 2013, among a nationally representative sample of 2,012 adults, examines public attitudes about aging, health care, personal life satisfaction, possible medical advances (including radical life extension) and other bioethical issues. The telephone survey was carried out on cell phones and landlines, in all 50 states, with an overall margin of error for the full sample of plus or minus 2.9 percentage points.²

The findings suggest that the U.S. public is not particularly worried about the gradual rise in the number of older Americans. Nearly nine-in-ten adults surveyed say that "having more elderly people in the population" is either a good thing for society (41%) or does not make much difference (47%). Just 10% see this trend as a bad thing.

Americans also appear to be generally optimistic as they look toward their own futures, including old age. Most say they are satisfied with the way things are going in their lives today (81%) and expect that 10 years from now their lives will be even better (56%) or about the same (28%). Younger adults are particularly optimistic, but even among Americans ages 65 and older, fully two-thirds expect their lives to be better (23%) or about the same (43%) in another decade. And while about a fifth of all U.S. adults (18%) say they worry "a lot" and 23% say they worry "a little" about outliving their financial resources in retirement, more than half (57%) say they either do not worry "too much" about this or do not worry about it "at all."

Asked how long they would like to live, more than twothirds (69%) cite an age between 79 and 100. The median ideal life span is 90 years – about 11 years longer than the current average U.S. life expectancy, which is 78.7 years.³



The public also is optimistic

that some scientific breakthroughs will occur in the next few decades. For example, about seven-in-ten Americans think that by the year 2050, there will be a cure for most forms of

² For more details on the survey methodology, see Appendix A.

³ Average life expectancy from Centers for Disease Control and Prevention. 2013. "Table 18" in "Health, United States, 2012: With Special Feature on Emergency Care," National Center for Health Statistics. http://www.cdc.gov/nchs/data/hus/hus12.pdf#018.

cancer (69%) and that artificial arms and legs will perform better than natural ones (71%). And, on balance, the public tends to view medical advances that prolong life as generally good (63%) rather than as interfering with the natural cycle of life (32%).

But there also is some wariness about new medical treatments. Only a quarter (24%) of adults say they have "a lot" of confidence that new medicines and treatments have been carefully tested before becoming available to the public. About half (54%) agree with the statement that "medical treatments these days are worth the costs because they allow people to live longer and better-quality lives," but 41% disagree, saying medical treatments these days "often create as many problems as they solve."

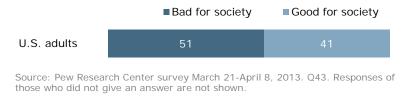
Views of Radical Life Extension

The survey seeks to provide a glimpse into people's initial thoughts and considerations on a subject – radically longer human life spans – that could emerge as a public issue in the future. But measuring opinion about scientific breakthroughs that

may or may not come to pass is difficult. Only 7% of respondents say they have heard or read a lot about the possibility that new medical treatments could in the future allow people to live much longer; 38% say they have heard a little about this possibility, and about half (54%) have heard nothing about radical life extension prior to taking the survey. Since the scientific breakthroughs are uncertain and the public does not know much about this field, the wording of the survey question focuses on the result – much longer life spans – and is deliberately yague about how, exactly

Views of Radical Life Extension

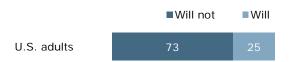
% saying medical treatments that slow the aging process and allow the average person to live decades longer, to at least 120 years old, would be a good thing or a bad thing for society



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Likelihood the Average Person Will Live to at Least 120 Years Old

% saying this will or will not happen by the year 2050



Source: Pew Research Center survey March 21-April 8, 2013. Q21a. Responses for definitely/probably will happen and definitely/probably will not happen are combined. Responses of those who did not give an answer are not shown.

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- and is deliberately vague about how, exactly, this would be achieved.

At this early stage, public reaction to the idea of radical life extension is both ambivalent and skeptical. Asked about the consequences for society if new medical treatments could "slow the aging process and allow the average person to live decades longer, to at least 120 years old," about half of U.S. adults (51%) say the treatments would be a bad thing for society, while 41% say they would be a good thing.

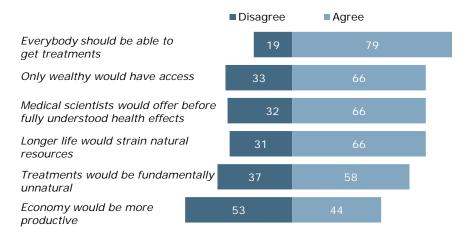
But most doubt that such a breakthrough will occur anytime soon. When asked about the future likelihood of "the average person" in the United States living to at least 120 years, nearly three-quarters (73%) say it either probably or definitely will *not* happen by the year 2050. Just a quarter of adults (25%) consider it likely to happen by 2050.

The public also is skeptical about the fairness of these kinds of potential medical interventions. An overwhelming majority believes that "everyone should be able to get these treatments if they want them" (79%). But two-thirds think that in practice, only wealthy people would have access to the treatments.

Most Americans also foresee other negative implications. About two-thirds agree that "longer life expectancies would strain our natural resources" and that "medical scientists would offer the treatment before they fully understood how it affects people's health." And about six-in-ten (58%) say "these treatments would be fundamentally unnatural."

What Would a Future with Radical Life Extension Look Like?

% of U.S. adults who agree /disagree with each statement



Source: Pew Research Center survey March 21-April 8, 2013. Q47b-h. Responses of those who did not give an answer are not shown.

Opinion is more divided over whether "our economy would be more productive because people could work longer;" 44% agree, while about half (53%) reject this idea.

Views on the likely impact of radical life extension on society vary somewhat by age, race and ethnicity. Blacks and Hispanics are more likely than whites to see radical life extension as a positive development for society. And younger adults are more inclined than those 50 and older to say that radical life extension would be a good thing for society.

But there are few differences in opinions across other social and demographic groups. Men and women are about equally likely to say that radical life extension would be a good thing for society. There are only modest differences across education and income groups, with those who have less formal education and lower incomes somewhat more inclined to say radical life extension would be a positive development for society.

Attitudes Toward Aging and Medical Advances

Older adults account for a growing share of the U.S. population. Roughly 41 million Americans are 65 and older, and they make up about 13% of the total U.S. population, up from 4% in 1900.⁴ The growth in the share of older people in the population over the past century stems from dramatic advances in public health and medical care as well as steep declines in fertility rates. The share of the population that is 65 and older is growing at a faster pace than other age groups, fueled primarily by the aging of the nation's 76 million baby boomers.

The new Pew Research survey finds that the public views this trend in American society as more positive than negative. About four-in-ten (41%) adults consider "having more elderly people in the population" a good thing for society. Just 10% say this is a bad thing, and 47% say it doesn't make much difference.

More Elderly People in the Population

% saying this trend is a good thing/bad thing or doesn't make much difference for American society

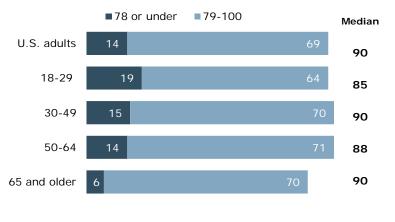


⁴ Figures are from the U.S. Census Bureau population estimates and Pew Research Center population projections. Also see the June 2009 Pew Research Center report "Growing Old in America: Expectations vs. Reality."

The overall average life expectancy in the U.S. at present is 78.7 years, although women tend to live longer (81.0 years) than men (76.2 years).⁵ Given the option, most Americans would choose to live longer than the current average. Fully 69% of American adults would like to live to be 79 to 100 years old. About 14% say they would want a life span of 78 years or less, while just 9% would choose to live more than 100 years. The median ideal life span is 90 years. Younger adults, to

Ideal Life Span by Age Group

% saying they would like to live to the age of ...



Source: Pew Research Center survey March 21-April 8, 2013. Q14. Other responses and responses of those who did not give an answer are not shown.

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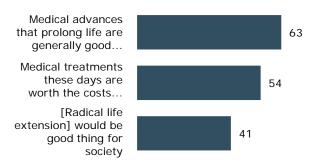
whom old age may seem far away, are more likely than those 65 and older to give an ideal age of 78 years or less (19% vs. 6%). The median ideal life span of adults under 30 - at 85 years - is lower than that for older adults. Relative to whites and Hispanics, blacks are especially likely to say they would choose a longer life span (median of 94 years). But whether respondents are male or female, their median ideal life span is roughly the same. And there are no significant differences in the median ideal length of lifetime by education.

⁵ Average life expectancies from Centers for Disease Control and Prevention. 2013. "Table 18" in "Health, United States, 2012: With Special Feature on Emergency Care," National Center for Health Statistics. http://www.cdc.gov/nchs/data/hus/hus12.pdf#018.

Public views of medical treatments today are largely positive, though not without reservations. About two-thirds of adults (63%) say "medical advances that prolong life are generally good because they allow people to live longer," while about threein-ten (32%) say medical advances are bad because "they interfere with the natural cycle of life." Further, 54% of adults believe that "medical treatments these days are worth the costs because they allow people to live longer and betterquality lives," while 41% say that these treatments "often create as many problems as they solve."

Attitudes About Medical Advances

% of U.S. adults saying ...



Source: Pew Research Center survey March 21-April 8, 2013. Q22d, Q8, Q43. Other responses not shown.

Overall attitudes about medical treatments are, not surprisingly, closely related to views about the likely effect of medical treatments that would radically extend the life span of human beings. Those who see medical advances in generally positive terms are also more inclined to view radical life extension as a good thing for society, and vice versa.

Differences by Religious Group

There are mostly modest differences among religious groups in their views on medical advances in general. Majorities of all large U.S. religious groups consider medical advances that prolong life as generally good.⁶ About half or more of adults in all the major religious groups also say that medical treatments these days are worth the costs because they allow people to enjoy longer, better-quality lives. About six-in-ten white mainline Protestants (62%) and white (non-Hispanic) Catholics (59%) hold this view, compared with about half of white evangelical Protestants (50%) and black Protestants (52%). About half or more of Hispanic Catholics (53%) and the religiously unaffiliated (55%) also say that medical treatments these days are worth the costs.

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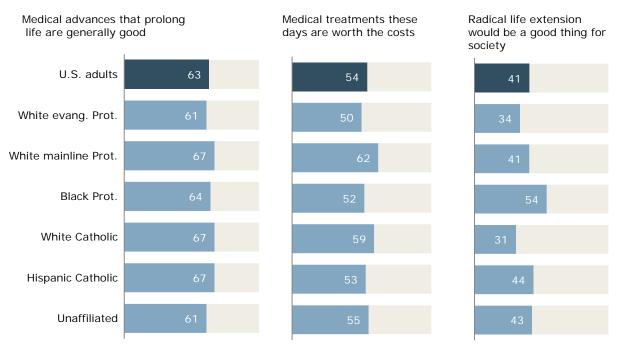
⁶ The religious groups that are large enough to be analyzed separately in this survey are white evangelical Protestants, white mainline Protestants, black Protestants, white (non-Hispanic) Catholics, Hispanic Catholics and the religiously unaffiliated. The survey's respondents also include members of many smaller U.S. religious groups, and their views are reflected in the results for the overall public. But the numbers of Hispanic Protestants, Jews, Muslims, Buddhists, Hindus and other religious minorities in the survey sample are insufficient to allow them to be analyzed and reported separately.

However, there is a different pattern across religious groups when it comes to attitudes about the possibility of slowing the aging process and radically extending life. Black Protestants are among the most likely to say radical life extension would be a good thing for society (54% do so). By contrast, fewer white evangelical Protestants (34%) and white Catholics (31%) say the same.

Hispanic Catholics (44%) are more likely than white Catholics (31%) to think that much longer life spans would be a good thing for society. Among the religiously unaffiliated, 43% say radical life extension would be good for society, and 51% say it would be bad for society. About four-in-ten (41%) white mainline Protestants say radical life extension would be a good thing, while 52% say it would be a bad thing for society.

Views About Medical Treatments and Radical Life Extension, by Religious Group

% saying...



Source: Pew Research Center survey March 21-April 8, 2013. Q22d, Q8, Q43. Other responses not shown.

Predicting Views of Radical Life Extension

While only a minority of U.S. adults have heard about the possibility of radical life extension, those who report having heard at least a little about it are relatively more inclined to see it in a positive light. And those who expect scientific developments to dramatically increase average life spans in the next 40 years also are more inclined to view radical life extension as good for society and to say they personally would want life-extending treatments.

The survey contains a number of null findings that may be surprising. It turns out, for example, that many standard measures of religious beliefs and practices, including belief in God and frequency of attendance at religious services, are related to views on radical life extension only weakly, if at all. Nor is there a strong relationship in the survey between the gender, education or political party identification of respondents and what they say about longer human life spans.

At least one question that deals directly with death, however, is correlated with views on radical life extension. People who oppose the death penalty are more inclined to say that longer life spans would be good for society. Beliefs about medical advances in general also are predictive of where people stand: those who think medical advances are generally good are more likely to view radical life extension in positive terms and to say that they personally would want life-extending treatments.

Perhaps most intriguing, there is an association between race and ethnicity and views about radical life extension, with blacks and Hispanics more inclined than (non-Hispanic) whites to favor radical life extension for themselves as well as for society as a whole. There may be many, overlapping reasons for these differences. Blacks and Hispanics tend to hold distinctive views on a number of questions that are correlated with views about radical life extension, such as having higher expectations that such scientific breakthroughs will come to pass by the year 2050 and being more inclined to see the growth of the elderly population as good for society. The survey cannot provide a definitive explanation for these racial and ethnic differences. For an overview of how some black Protestant leaders and other clergy are approaching the issue, see "<u>Religious Leaders' Views on Radical Life Extension</u>."

Roadmap to the Report

The rest of this report details the survey's findings on radical life extension and related attitudes toward aging, medicine, personal life, religion, and moral and social issues. The first section looks at Americans' initial thoughts about the desirability and impact of radical life extension. The second section covers views on radical life extension by religious affiliation, beliefs and practices. The third section looks at the public's views on aging in general. The fourth section explores attitudes toward medical treatments available today and the relationship of those attitudes to the public's views on radical life extension. The fifth section looks at personal life satisfaction as it relates to attitudes about longevity. The sixth section considers the morality of some social issues – including views on abortion, stem cell research and the death penalty – and how those views are related to the public's early thinking about the possibility of radically longer life spans. The seventh section provides an overview of the similarities and differences across racial and ethnic groups on views about radical life extension and beliefs about aging, medicine and personal life.

What's the Science Behind Radical Life Extension? And What's the Religious Debate?

In the last 200 years, advances in medicine, nutrition and public health have substantially increased human life spans. These increases have been achieved largely by helping infants and children to live to adulthood rather than by pushing the boundaries of human aging past their known limits. Today, however, scientists at major universities, research institutions and corporate labs are investigating a number of potential ways to slow down or turn back the natural clock of human aging, including growth hormone treatments, natural or drug-induced starvation diets and genetic therapies that seek to reduce or reverse the effects of aging. So far, none of these approaches has proven to be clearly effective in humans, but together they give a sense of the possible avenues ahead. For an overview of the scientific research and the emerging moral and religious debate over the possibility of much longer life spans, see the accompanying report, "To Count Our Days: The Scientific and Ethical Dimensions of Radical Life Extension." For brief descriptions of how some major U.S. religious traditions might approach the issue, based on interviews with clergy, bioethicists and other scholars, see "Religious Leaders' Views on Radical Life Extension."

CHAPTER 1: AWARENESS, DESIRABILITY, IMPLICATIONS AND PREDICTIONS

Most Americans have heard little or nothing about biomedical advances that, according to some researchers, hold the potential to allow the average person to live decades longer. Just 7% of U.S. adults report having heard or read a lot about this possibility, which medical researchers and bioethicists call radical life extension. Nearly four-in-ten Americans (38%) say they have heard or read a little about this subject, but the majority of those surveyed (54%) say they have heard nothing about it.

At this early stage, Americans on the whole are both ambivalent and skeptical about dramatic increases in longevity. Asked about the societal impact of "new medical treatments" that would "slow the aging process and allow the average person to

Awareness of Radical Life Extension

% of U.S. adults saying they have heard or read ...

A lot	7
A little	38
Nothing at all	54
Don't know	*
	100

Source: Pew Research Center survey March 21-April 8, 2013. Q42. Figures may not add to 100% due to rounding

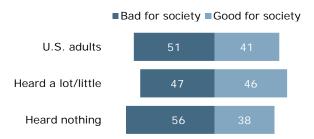
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live decades longer, to at least 120 years old," about half (51%) of the general public says the treatments would be a bad thing for society, while 41% say they would be a good thing.

Those who have heard at least a little about radical life extension are closely divided in their views: 46% say such treatments would be a good thing for society, and 47% say they would be a bad thing. Those who have heard nothing about it prior to the survey interview are more inclined to see radical life extension as a bad thing (56%) than a good thing (38%) for society.

Opinion About Radical Life Extension, by Awareness

% saying treatments to extend life by decades would be ...



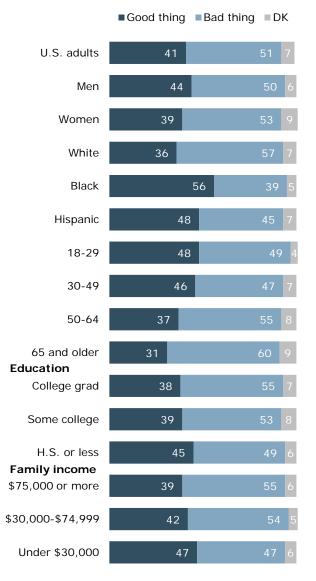
Source: Pew Research Center survey March 21-April 8, 2013. Q43. Responses of those who did not give an answer are not shown

Opinions about the possible impact of radical life extension on society tend to vary by age, race and ethnicity. Blacks and Hispanics are more likely than whites to see dramatically longer life spans as a positive development for society. And younger adults (ages 18 to 49) are more inclined than older generations to say that radical life extension would be a good thing for society.

But there are only modest differences across education and income groups, with those who have less formal education and lower incomes being somewhat more inclined to say that radical life extension would be a good thing for society.

Opinion About Radical Life Extension, by Demographics

% saying treatments to extend life by decades would be a good thing or a bad thing for society



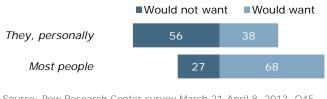
Source: Pew Research Center survey March 21-April 8, 2013. Q43. Figures may not add to 100% due to rounding. Whites and blacks refer to single-race-only groups who are not Hispanic; Hispanics are of any race.

Personal Interest in Having Treatments To Live Much Longer

When asked whether they, personally, would want medical treatments that slow the aging process and allow them to live decades longer, to at least 120 years old, about four-in-ten U.S. adults (38%) say they would, while more than half (56%) say they would not. By contrast, about seven-in-ten (68%) speculate that most people would want such treatments, while roughly a quarter (27%) say most people would not want them.

Who Would Want Treatments To Radically Extend Life?

% of U.S. adults saying ... would or would not want treatments to extend life by decades



Source: Pew Research Center survey March 21-April 8, 2013. Q45, Q46. Responses of those who did not give an answer are not shown. **PEW RESEARCH CENTER**

Not surprisingly, personal desire for life-extending treatments is closely related to views about their overall effect on society. Of those who say such treatments would be a good thing for society, 71% say they personally would want to receive them. Conversely, the overwhelming majority (83%) of those who think such treatments would be a bad thing for society say they personally would *not* want medical treatments to slow the aging process and live decades longer.

There are some, mostly modest, differences in preferences among demographic groups. For example, men are somewhat more inclined than women (43% vs. 34%) to say they would want medical treatments that dramatically lengthen their lives. Also, blacks (46%) and Hispanics (46%) are more likely than whites (34%) to say they would want such treatments.

There are also modest differences by age: Adults ages 50 and older are less likely than younger Americans to say they would want treatments to radically increase their longevity (34% vs. 42%).

Differences by education level are not statistically significant.

Desire for Radical Life-Extending Treatments

% saying they personally would or would not want treatments to extend life by decades

U.S. adults	Would 38	Would not 56	DК 6	=100
Among those who say radical life extension is				
Good for society	71	24	6	=100
Bad for society	13	83	3	=100
Awareness of radical life extension				
Heard a lot/little	45	49	6	=100
Heard nothing	32	62	6	=100
Men Women	43 34	52 59	5 8	=100 =100
White	34	59	7	=100
Black	46	49	5	=100
Hispanic	46	48	6	=100
18-29	40	57	3	=100
30-49	43	51	6	=100
50-64	35	58	7	=100
65 and older	31	59	10	=100
High school grad or less Some college	41 34	54 60	5 6	=100 =100
College grad or more	37	55	7	=100

Source: Pew Research Center survey March 21-April 8, 2013. Q45. Figures may not add to 100% due to rounding. Whites and blacks refer to single-race-only groups who are not Hispanic; Hispanics are of any race.

Expected Effects on Society

Americans hold a range of beliefs about the societal implications of medical treatments to slow the aging process and increase average life expectancy by decades. About eight-in-ten U.S. adults (79%) agree that these kinds of treatments should be available to everyone who wants them. At the same time, two-thirds (66%) expect that only wealthy people actually would have access to these

treatments.

that medical

that longer life

strain natural

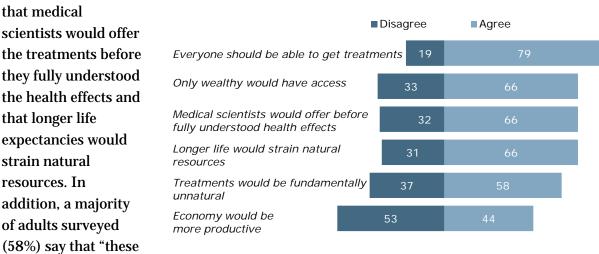
resources. In

treatments would be

fundamentally unnatural." But

Two-thirds also think





Source: Pew Research Center survey March 21-April 8, 2013. Q47b-h. Responses of those who did not give an answer are not shown

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public opinion is more closely divided when it comes to the effect of radical life extension on the economy; 44% say that "our economy would be more productive because people could work longer," while 53% disagree.

% of U.S. adults who agree or disagree with each statement

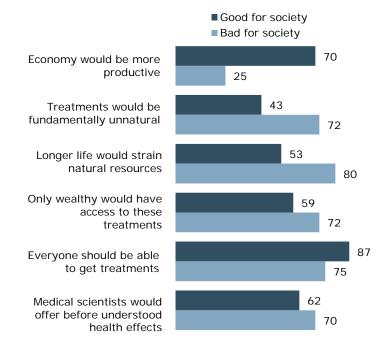
Beliefs about these specific implications go hand-in-hand with assessments of the overall impact of longer life spans on society. For example, people who think that radically life-extending medical treatments would be a good thing for society are more likely to agree that everyone should have access to them – and less likely to view them as fundamentally unnatural.

The strongest correlation is between overall assessments of whether radical life extension would be good or bad for society and the more specific question about the impact of longer life expectancies on the economy. Seven-in-ten Americans who think radical life extension would be good for society agree that the economy would be more productive because people could work longer. By contrast, only a quarter of those who say that radical life extension would be bad for society think the economy would be more productive.

Expectations for the future also are closely tied to overall views about the effect of radical life extension on society. Those who say that radically longer life spans would be a good thing for

Beliefs about Radical Life Extension, by Overall Views

% of U.S. adults who agree with each statement among those who say radical life extension would be a good thing or bad thing for society



Source: Pew Research Center survey March 21-April 8, 2013. Q47b-h. Responses of those who disagree and those who did not give an answer are not shown.

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society are more inclined to think that by the year 2050, the average person in the U.S. will live to at least 120 (38% of this group says it definitely or probably will happen). Among those who see life extension as a bad thing, by contrast, just 16% believe this scenario will come to pass by the year 2050.

What Are the Odds?

The Pew						
Research	Predictions About the Future					
survey asked	% of U.S. adults saying each development will or will not happen by the year 2050					
respondents to						
gauge the			■ Will not		/ill	
likelihood that four	Artificial arms and legs will perform better than natural ones.	n	27		71	
developments	There will be a cure for most forms of cancer. Scientists will bring back an extinct animal species by cloning it.		30	69		
in science and technology			48	5	0	
will come to fruition by the	The average person will live to at least 120 years.	73		25		
year 2050.	Source: Pew Research Center survey Marc definitely/probably will happen and definit give an answer are not shown.					vho did not
Americans largely agree	PEW RESEARCH CENTER					
that by 2050						

artificial arms and legs will perform better than natural ones (71%) and that there will be a cure for most forms of cancer (69%).

The public is almost evenly split in their predictions on whether scientists will bring back an extinct animal species by cloning it, with 50% saying this will happen by 2050 and 48% saying it will not.

Of the four developments considered, the public is most skeptical about radical life extension. Overall, only a quarter of U.S. adults say that by 2050 the average person in the U.S. will definitely or probably live to be at least 120 years old; 73% say this definitely or probably will *not* happen.

Those who have heard at least a little about medical treatments to extend life by decades are more optimistic that such a development is likely (35% say it definitely or probably will happen by 2050, compared with 18% of those who have heard nothing about the treatments). Similarly, those who say radical life extension would be good for society are more likely than those who say it would be a bad thing to think that average life expectancy will be at least 120 years by 2050 (38% vs. 16%). And those who say they personally would want such treatments are more likely than those who would not want them to predict that this scenario actually will occur by 2050 (39% vs. 16%).

How Likely Is It That the Average Person Will Live To Be At Least 120 Years Old?

% saying this will or will not happen by 2050



Among those who have heard about radical life extension





Among those who would or would not want treatments

Would want	60	39
Would not want	83	16

Source: Pew Research Center survey March 21-April 8, 2013. Q21a. Responses for definitely/probably will happen and definitely/probably will not happen are combined. Those who did not give an answer are not shown.

CHAPTER 2: VIEWS ON RADICAL LIFE EXTENSION, BY RELIGIOUS AFFILIATION, BELIEFS AND PRACTICES

Interviews with religious leaders and bioethicists reveal a range of thoughts about how their religious traditions might react to a world that could include radical life extension, but the Pew Research survey finds only modest differences of opinion on the topic among large religious groups in the general public today. (For thoughts from leaders and theologians from different religious traditions on the subject of radical life extension, see "<u>Religious</u> <u>Leaders' Views on Radical Life Extension</u>.")

Black Protestants are among the most likely to say radically longer life spans would be a good thing for society. About half of black Protestants hold this view (54%), compared with about four-in-ten white mainline Protestants (41%) and about a third of white evangelical Protestants (34%). (There are not enough Hispanic Protestants in the survey sample for separate analysis.)

Hispanic Catholics are more likely than white (non-Hispanic) Catholics to think that much longer life spans would be a good thing for society (44%, compared with 31% among white Catholics). The views of religiously unaffiliated

Views on Radical Life Extension, by Religion

% saying treatments to extend life by decades would be ...

	Good thing	Bad thing	DK	
U.S. adults	41	51	7	=100
Protestant	42	49	8	=100
White evangelical	34	57	9	=100
White mainline	41	52	7	=100
Black Protestant	54	40	6	=100
Catholic	37	57	6	=100
White Catholic	31	62	7	=100
Hispanic Catholic	44	50	6	=100
Unaffiliated	43	51	6	=100
Attend worship services	S			
Weekly or more	41	52	7	=100
Monthly/Yearly	43	50	7	=100
Seldom/Never	41	53	6	=100
Belief in life after death	1			
Yes, believe	43	49	7	=100
No, do not	37	58	5	=100
Belief in God				
Yes, believe	42	51	7	=100
No, do not	40	54	6	=100
Source: Pew Research Cen				

2013. Q43. Figures may not add to 100% due to rounding. PEW RESEARCH CENTER

Americans are similar to those of the public as a whole, with 43% of the unaffiliated saying radical life extension would be good for society and 51% saying it would be bad.

The patterns by religious group are in keeping with those by racial and ethnic groups. Regardless of religious affiliation, blacks and Hispanics are more likely than whites to see radical life extension as a good thing for society. In most cases, there is no significant correlation between respondents' religious beliefs and practices and their views about the effects of radical life extension on society. For example, people who say they attend religious services at least once a week do not tend, on the whole, to take a more (or less) positive view of radical life extension's possible impact on society than do people who attend worship services less frequently. The same is true of the importance that people attach to religion in their lives, their self-reported frequency of prayer, whether or not they believe in God or a universal spirit, and their belief in heaven and hell – none of these measures are significantly associated with views about the effect of radical life extension on society.

However, there is a modest association between belief in life after death and opinions about the overall effect of radical life extension. Among U.S. adults who believe in life after death, 43% say radical life extension would be a good thing for society while 49% say it would be a bad thing. Among those who do not believe in life after death, the balance of opinion tilts more negative; 37% say radical life extension would be good for society while 58% say it would be bad.

Personal Desire for Life-Extending Treatments, by Religion

% saying they would/would not want treatments to extend life by decades

	Would want	Would not	DK	
U.S. adults	38	56	6	=100
Protestant	37	56	8	=100
White evangelical	28	62	10	=100
White mainline	37	56	7	=100
Black Protestant	47	47	6	=100
Catholic	39	55	6	=100
White Catholic	35	59	6	=100
Hispanic Catholic	46	47	7	=100
Unaffiliated	39	58	3	=100
Attend worship servic	es			
Weekly or more	33	59	8	=100
Monthly/Yearly	45	50	5	=100
Seldom/Never	36	59	5	=100
Belief in life after dea	th			
Yes, believe in	39	55	6	=100
No, do not	37	59	4	=100
Belief in God				
Yes, believe in	38	56	6	=100
No, do not	44	52	4	=100
Courses Dow Decearch C	anton oursu	ov Morok	01 Apr	

Source: Pew Research Center survey March 21-April 8, 2013. Q45. Figures may not add to 100% due to rounding. **PEW RESEARCH CENTER**

White evangelical Protestants are among the least likely to want treatments to live much longer lives; 62% say they would not want them, while 28% say they would. And about half or more of white Catholics (59%) and white mainline Protestants (56%) say they personally would not want to receive treatments to radically extend their own life expectancy. But black Protestants are divided, with 47% saying they would want the treatments and an equal portion saying they would not. Hispanic Catholics also are closely divided, with 46% saying they would want such treatments and 47% saying they would not.

Those who attend religious services once or twice a month or a few times a year are a bit more likely than either those who attend more often or those who attend seldom or never to say they would want to radically extend their life spans. The relationship between worship service attendance and personal preferences for treatment is more pronounced among white evangelical Protestants and white Catholics. Among adults in these two religious groups, those who attend services less frequently are *more* inclined to want medical treatments that would slow the aging process and extend life expectancy by decades. For example, among white evangelicals who say they attend services at least once a week, 22% say they would want treatments to live decades longer, compared with 40% of those who attend services less often.

There are few differences in personal preference for receiving life-extending treatments based on other religious beliefs and practices, including the importance of religion in people's lives, frequency of prayer, belief in life after death, belief in God or a universal spirit, and belief in heaven or hell. THIS PAGE INTENTIONALLY BLANK

CHAPTER 3: VIEWS ABOUT AGING

The Pew Research survey asked Americans a number of questions designed to explore basic attitudes toward aging in today's world, including their views on the ideal life span and their opinions on the impact of the growing share of the U.S. population that is 65 and older. Survey interviewers asked respondents these questions before the concept of radical life extension was mentioned. The answers subsequently were analyzed to explore links that might help to explain respondents' views on radical life extension.

Average life expectancy in the U.S. today is 78.7 years, according to the Centers for Disease Control and Prevention.⁷ Most Americans say they would like to live longer than that, but relatively few indicate that they would want to live for the prolonged time span associated with radical life extension.

When survey respondents are asked in an open-ended fashion how long they would like to live, nearly seven-inten (69%) give an age between 79 and 100 years. Roughly one-in-ten (9%) say they would like to live to more than 100. A small

To What Age Would You Like To Live?

% saying they want to live to age ...

	78 or Iess	79-100		121 or more	DK	Median age
U.S. adults	14	69	4	4	9 = 100	90
Source: Pew Research (enter su	rvev March (21-Anril 8	3 2013 01	4 Onen e	nd

Figures may not add to 100% due to rounding. Median age based on those who gave a response.

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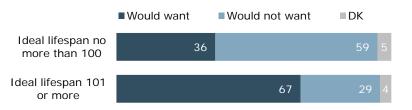
minority of U.S. adults (14%) say they would like to live to no more than 78 years. The median ideal life span is 90 years.

⁷ See Centers for Disease Control and Prevention. 2013. "Table 18" in "Health, United States, 2012: With Special Feature on Emergency Care," National Center for Health Statistics. <u>http://www.cdc.gov/nchs/data/hus/hus12.pdf#018</u>.

Perhaps not surprisingly, people's personal life span preferences are related to their views about radical life extension. People who say they would want to live past 100 are more inclined to personally want treatments to significantly extend their life. Similarly, those who prefer a longer life span are more likely than those who do not to believe radical life extension would be good for society.

Personal Desire for Life Extension, by Preferred Life Span

% saying they personally would or would not want medical treatments to extend life by decades

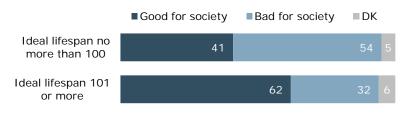


Source: Pew Research Center survey March 21-April 8, 2013. Q45. Figures may not add to 100% due to rounding

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Views on Radical Life Extension, by Preferred Life Span

% saying medical treatments to extend life by decades would be a good thing or a bad thing for society



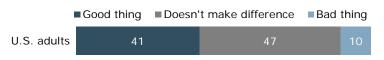
Source: Pew Research Center survey March 21-April 8, 2013. Q43. Figures may not add to 100% due to rounding

How Views Toward the Aging Population Relate to Views on Radical Life Extension

Overall, about four-in-ten U.S. adults (41%) consider the growing number of elderly people in the population to be a good thing for society. Just 10% say the aging population is a bad thing, and 47% say it does not make much difference.

Having More Elderly People in the Population

% saying this trend is a good thing, a bad thing or doesn't make much difference for American society



Source: Pew Research Center survey March 21-April 8, 2013. Q7e. Responses of those who did not give an answer are not shown.

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Views about the growing elderly population are related to views

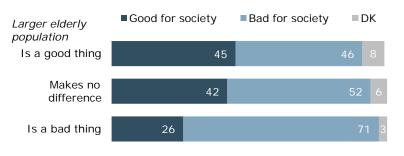
about radical life extension. Those who see the growth of the elderly population as a bad thing for society are also more negative about the possible effect of radical life extension on society;

about a quarter (26%) say life-extending treatments would be good for society, while 71% say these treatments would be bad for society.

However, views about the overall effect of having more elderly people in the population are not significantly related to personal preferences for getting radical life-extension treatments.

Views on Radical Life Extension by Views on Having More Elderly in Population

% saying medical treatments to extend life by decades would be a good thing or a bad thing for society



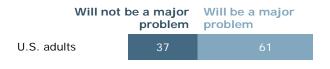
Source: Pew Research Center survey March 21-April 8, 2013. Q43. Figures may not add to 100% due to rounding.

Population Growth and Life Extension

While relatively few U.S. adults think the growing elderly population is a bad thing for society, a majority of Americans have a pessimistic view about the effect of population growth on natural resources. About six-in-ten adults (61%) say the growing world population will be a major problem because there will not be enough food and resources to go around. Nearly four-in-ten (37%) take the view that growth will not be a major problem because the world will find a way to stretch its natural resources.

World Population Growth and Resource Strains

% saying the growing world population will/will not be a major problem



Source: Pew Research Center survey March 21-April 8, 2013. Q22c. Responses of those who volunteered "neither" or "both" and those who did not give an answer are not shown.

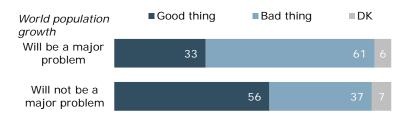
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Perspectives about the impact of world population growth on natural resources are associated

with views about the overall effect of radical life extension and, to a lesser degree, with personal preferences for getting life-extending treatments. For example, those who are pessimistic about the effects of population growth are more inclined to consider radical life extension a bad thing rather than a good thing for society, by a 61% to 33% margin.

Views on Radical Life Extension, by Views on World Population Growth

% saying medical treatments to extend life by decades would be a good thing or a bad thing for society

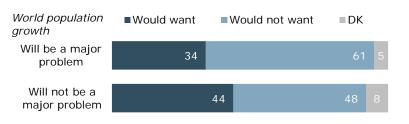


Source: Pew Research Center survey March 21-April 8, 2013. Q43. Figures may not add to 100% due to rounding.

Similarly, those who say population growth will be a major problem for society are also less inclined to say they personally would want life-extending treatments (34% would want treatments, compared with 44% among those who think world population growth will *not* be a major problem for society).

Personal Desire for Life Extension, by Views on World Population Growth

% saying they personally would or would not want medical treatments to extend life by decades

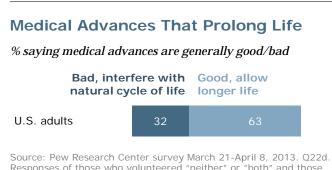


Source: Pew Research Center survey March 21-April 8, 2013. Q45. Figures may not add to 100% due to rounding.

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CHAPTER 4: VIEWS ABOUT TODAY'S MEDICAL TREATMENTS AND ADVANCES

Before raising the topic of radical life extension, the Pew Research survey asked respondents about their opinions on medical advances in general. Overall, 63% of U.S. adults agree that medical advances that prolong life generally are good. About a third of U.S. adults (32%) say such advances are bad because they interfere with the natural cycle of life.



Responses of those who volunteered "neither" or "both" and those who did not give an answer are not shown.

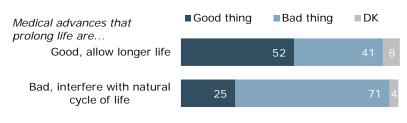
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Opinions about medical advances in

general are strongly associated with views about radical life extension in particular. About half (52%) of those who think medical advances that prolong life are generally good say that radical life extension would be a positive development for society, compared with just a quarter (25%) of those who consider medical advances bad because they interfere with the natural cycle of life.

Views on Radical Life Extension, by Views on Today's Medical Advances

% saying medical treatments to extend life by decades would be a good thing or a bad thing for society

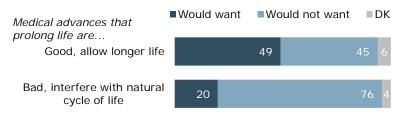


Source: Pew Research Center survey March 21-April 8, 2013. Q43. Figures may not add to 100% due to rounding.

The same pattern applies to personal desire for radical life-extending treatments. About half (49%) of those who think medical advances that prolong life are generally good say they personally would want radically lifeextending treatments. By contrast, just a fifth of those who say medical advances are bad because they interfere with the natural cycle of life would opt for radical life-extending treatments.

Personal Desire for Life Extension, by Views on Today's Medical Advances

% saying they personally would or would not want medical treatments to extend life by decades



Source: Pew Research Center survey March 21-April 8, 2013. Q45. Figures may not add to 100% due to rounding.

The survey also asked a separate question about the costs and benefits of today's medical treatments. A majority of adults (54%) say that medical treatments these days are "worth the costs because they allow people to live longer, betterquality lives," while four-in-ten (41%) say such treatments "often create as many problems as they solve."

Often create as many problems as longer, betterquality lives solve U.S. adults 41

Worth costs, allow

Source: Pew Research Center survey March 21-April 8, 2013. Q8. Responses of those who volunteered "neither" or "both" and those who did not give an answer are not shown.

Views about the costs and benefits of today's medical treatments also are

strongly related to opinions about radical life extension. Those who say medical treatments today are worth the costs are more inclined than those who see today's medical treatments as creating as many problems as they solve to say that radical life-extending treatments would be a positive development for society (48% versus 33%).

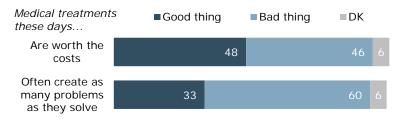
Views on Radical Life Extension by Views on **Medical Treatments Today**

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Medical Treatments Today

% saying medical treatments these days...

% saying medical treatments to extend life by decades would be a good thing or a bad thing for society

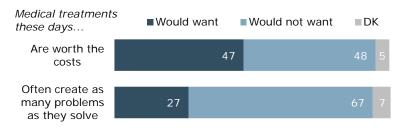


Source: Pew Research Center survey March 21-April 8, 2013. Q43. Figures may not add to 100% due to rounding

The same pattern occurs with regard to preferences for lifeextending treatments. Among those who say today's medical treatments are worth the costs, nearly half (47%) say they would personally want radical lifeextending treatments. This compares with just 27% among those who say that medical treatments today often create as many problems as they solve.

Personal Desire for Life Extension, by Views on Medical Treatments Today

% saying they personally would or would not want medical treatments to extend life by decades



Source: Pew Research Center survey March 21-April 8, 2013. Q45. Figures may not add to 100% due to rounding.

Medical Testing and Confidentiality Concerns

About a quarter of adults in the U.S. (24%) say they have a lot of confidence that new medicines and treatments have been carefully tested before being made available to the public. Roughly half (47%) have some confidence, and 27% have either not too much or no confidence that new medical treatments have been carefully tested.

Confidence in the testing of new treatments is modestly related to personal wishes for radical life extension. Adults who express a lot of confidence that new medicines are carefully tested are evenly divided in their assessments of radical life extension for society, while those who express less confidence in medical testing are more inclined to say that radical life extension would be a bad, rather than a good, thing for society. The same pattern occurs when it comes to personal preferences for radical life-extending treatments.

Confidence and Confidentiality in Medical Treatments

Amount of confidence that new medicines and treatments have been carefully tested	
before available to the public	%
A lot	24
Some	47
Not too much/none	27
Don't know	<u>2</u>
	100

Worry about health-care providers keeping your health records confidential	
A lot of worry	20
Some worry	22
Not too much worry	27
No worry at all	30
Don't know	<u>1</u>
	100

Source: Pew Research Center survey March 21-April 8, 2013. Q9, Q10. Figures may not add to 100% due to rounding.

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Personal concerns about the confidentiality of health records tend to vary, with a fifth of adults (20%) saying they worry a lot about health-care providers keeping their records confidential and another fifth (22%) saying they worry some about it. A majority of adults do not worry too much (27%) or at all (30%) about health-care providers keeping their records confidential.

Concerns about the confidentiality of health records are not significantly related to beliefs about the overall effect of radical life extension on society or personal preferences for receiving such treatments. THIS PAGE INTENTIONALLY BLANK

CHAPTER 5: PERSONAL LIFE SATISFACTION

The Pew Research survey asked several questions about personal life satisfaction, which then were analyzed to explore links with respondents' views on radical life extension.

Fully eight-in-ten Americans (81%) say they are satisfied with the way things are going in their lives today. Just 16% say they are dissatisfied. On the whole, a majority of Americans (56%) are optimistic that their lives will be better in 10 years than they are today, while 28% say the future will be about the same and 11% think it will be worse. A majority (56%) also says their lives are better today than they were 10 years ago. A quarter say their lives are about the same, and 18% say things are worse today.

Personal Life Today, In the Future and In the Past

Overall, are you satisfied or dissatisfied with the way things are going in your life today?	%
Satisfied	81
Dissatisfied	16
Don't know/Refused	<u>3</u>
	100
Looking ahead to the next 10 years, do you think your life, overall, will be better, worse, or about the same as it is now?	
Will be better	56
About the same	28
Will be worse	11
Don't know/Refused	<u>5</u>
	100
Thinking back to 10 years ago, would you say your life, overall, is better today, worse today, or about the same as it was then?	
Better today	56
About the same	25
Worse today	18
Don't know/Refused	<u>1</u>

Source: Pew Research Center survey March 21-April 8, 2013. Q1, Q2, Q3. Figures may not add to 100% due to rounding.

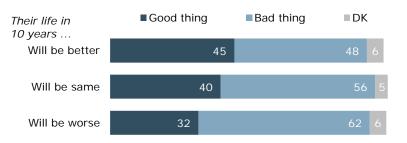
100

Optimism about the future is modestly related to beliefs about radical life extension. Those who expect their personal life to be better in 10 years than it is today are somewhat more inclined to say that radical life extension would be a positive development for society (45%), compared with those who expect their future lives to be worse (32%) than it is now.

The same pattern occurs when it comes to personal preferences for receiving lifeextension treatments. Those who are optimistic about their future life are more inclined to say they personally would want radical life-extending treatments (42%). By contrast, just 28% of those who are pessimistic about their life down the road say they would want radical lifeextending treatments, personally.

Views on Radical Life Extension, by Optimism About the Future

% saying medical treatments to extend life by decades would be a good thing or a bad thing for society

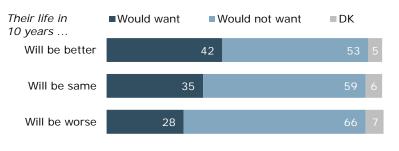


Source: Pew Research Center survey March 21-April 8, 2013. Q43. Figures may not add to 100% due to rounding.

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Personal Desire for Life Extension, by Optimism About the Future

% saying they personally would or would not want medical treatments to extend life by decades



Source: Pew Research Center survey March 21-April 8, 2013. Q45. Figures may not add to 100% due to rounding.

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Views about radical life extension are not significantly related either to current life satisfaction or to ratings of personal life satisfaction today compared with 10 years ago.

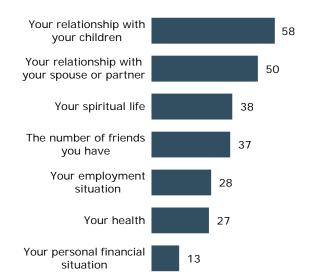
The Pew Research survey also asked respondents to rate a number of specific aspects of their personal lives. Familial relationships are the most highly rated: A majority of Americans rate their relationship with their children as excellent (58%), and half say the same about their relationship with their spouse or partner (50%).⁸ About four-in-ten U.S. adults rate their spiritual life as excellent (38%), and a similar portion say the same about the number of friends they have (37%). About three-in-ten consider their employment situation (28%) and health (27%) to be excellent.

Fewer adults (13%) consider their personalSour
Q4a.financial situation to be excellent. Indeed,
on a separate question about finances,
about four-in-ten Americans (41%) say theyPEWworry about outliving their money after retirement.

However, worries about outliving one's financial resources are not related to views about radical life extension, nor are ratings of other aspects of respondents' personal lives, such as relationships with family and friends.

Evaluations of Personal Life

% of U.S. adults who say each aspect is "excellent"



Source: Pew Research Center survey March 21-April 8, 2013. Q4a-g. Based on those who could rate each aspect. Other responses not shown.

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Money Worries in Retirement

How much do you worry about outliving your money after retirement?	%
NET A lot/A little	41
NET A IOU A IIIIIC	- · ·
A lot	18
A little	23
NET Not too much/at all	57
Not too much	22
Not at all	35
Don't know/Refused	<u>2</u>
	100

Source: Pew Research Center survey March 21-April 8, 2013. Q4h. Figures may not add to 100% due to rounding.

⁸ These figures are based on those who rated each aspect of their lives.

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CHAPTER 6: RADICAL LIFE EXTENSION AND VIEWS ON OTHER LIFE ISSUES

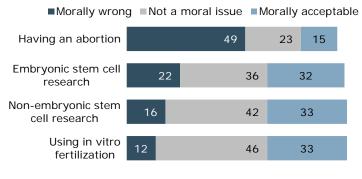
What are Americans' views on other issues related to life and death? And how do these views relate to opinions about radical

life extension?

Moral Assessments

About half of U.S. adults (49%) say that having an abortion is morally wrong, while 15% say it is marally accentable. About a

morally acceptable. About a quarter (23%) say having an abortion is not a moral issue. Attitudes about the morality of abortion have been fairly stable since this question was first asked on Pew Research surveys in 2006.



Source: Pew Research Center survey March 21-April 8, 2013. Q58a-d. Responses of those who volunteered "depends on situation" and those who did not give an answer are not shown.

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Compared with abortion, fewer U.S. adults (22%) consider

embryonic stem cell research to be morally wrong. A majority says that conducting embryonic stem cell research is either morally acceptable (32%) or that such research is not a moral issue (36%). Opinion about medical research using stem cells from non-embryonic sources is a bit more accepting; 16% of adults say non-embryonic stem cell research is morally wrong, while a third say it is morally acceptable, and 42% say it is not a moral issue.

About one-in-ten U.S. adults (12%) say using in vitro fertilization is morally wrong, while a third say it is morally acceptable, and 46% say it is not a moral issue.

Perhaps surprisingly, people's moral assessments about these other bioethical issues are not strong predictors of where they stand on radical life extension. For example, Americans who consider having an abortion to be morally wrong are about equally likely to say they, personally, would want treatments to radically extend their life as others in the general public. But opinions about another moral issue – the death penalty – tend to be more strongly related to views about radical life extension. Overall, a majority of adults (55%) favor the death penalty for persons convicted of murder, while 37% oppose it.

Those who oppose the death penalty are more inclined to consider radically life-extending

treatments to be good for society (47%), compared with those who favor the death penalty (38%).

Similarly, those who oppose the death penalty are more inclined to say they personally would want treatments for radical life extension (43% versus 36% among those who favor the death penalty).

Opinion About the Death Penalty

% saying they favor or oppose the death penalty for persons convicted of murder

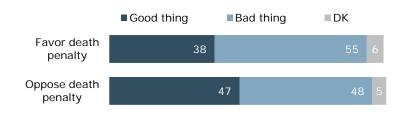
	Fav	or Oppo	ose DK	ζ.
U.S. adults	55	5 37	8	=100

Source: Pew Research Center survey March 21-April 8, 2013. RQ10. Figures may not add to 100% due to rounding.

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Views on Radical Life Extension, by Opinion About the Death Penalty

% saying medical treatments to extend life by decades would be a good thing or a bad thing for society

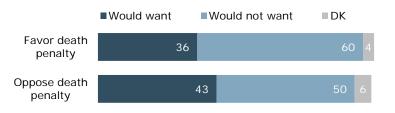


Source: Pew Research Center survey March 21-April 8, 2013. Q43. Figures may not add to 100% due to rounding.

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Personal Desire for Life Extension, by Opinion About the Death Penalty

% saying they personally would or would not want medical treatments to extend life by decades



Source: Pew Research Center survey March 21-April 8, 2013. Q45. Figures may not add to 100% due to rounding.

When it comes to moral assessments and opinion about the death penalty, there are sizable differences among political groups. Views about radical life extension, however, are only modestly related to partisanship. Democrats and independents who lean toward the Democratic Party are more inclined than their Republican counterparts to consider radical life extension a positive development for society (46% vs. 35%). But the two groups are about equally likely to say they personally would want to get radical life-extending treatments (40% among Democrats and Democratic leaners, 36% among Republicans and Republican leaners).

The relationship between political party and views of radical life extension appears to be largely explained by the greater tendency among blacks and Hispanics to identify with the Democratic Party and also to hold more accepting views about radical life extension. Among whites, there is no relationship between party identification and radical life extension. Whites who are Republican or lean toward the Republican Party hold views about the overall effect of radical life extension on society that are not significantly different from the views of whites who are Democrats or lean toward the Democratic Party. The two groups are also about equally likely to say they personally would want radical life-extending treatments.

By contrast, there are strong differences in views about the death penalty, abortion and embryonic stem cell research between whites

Views About Radical Life Extension, by Partisanship

% saying ...

	All U.S. adults		Among whites	
	Rep/ lean Rep	Dem/ lean Dem	Rep/ lean Rep	Dem/ Iean Dem
Radical life extension is				
Good for society	35	46	33	39
Bad for society	56	49	58	56
Don't know	<u>9</u>	<u>5</u>	<u>9</u>	<u>5</u>
	100	100	100	100
Personal preferences for life-extending treatments	;			
Would want	36	40	34	35
Would not want	57	55	58	58
Don't know	<u>7</u>	<u>5</u>	<u>8</u>	<u>6</u>
	100	100	100	100
Opinion on death penalty				
Favor	71	45	74	51
Oppose	23	48	21	43
Don't know	<u>6</u>	<u>7</u>	<u>6</u>	<u>6</u>
	100	100	100	100
Personal views about having an abortion				
Morally wrong	64	38	63	31
Not a moral issue	16	28	16	30
Morally acceptable	8	22	8	26
Depends (vol.)/		10	10	
Don't know	<u>11</u>	<u>12</u>	<u>12</u>	<u>14</u>
Personal views about embryonic stem cell research	100	100	100	100
Morally wrong	30	15	30	10
Not a moral issue	31	39	30	38
Morally acceptable	28	37	30	43
Depends(vol.)/				
Don't know	<u>11</u>	<u>9</u>	<u>10</u>	<u>8</u>
	100	100	100	100

Source: Pew Research Center survey March 21-April 8, 2013. Q43, Q45, RQ10, Q58a-b Figures may not add to 100% due to rounding. Whites refer to single-race-only groups who are not Hispanic.

who are Republicans or independents who lean toward the Republicans and whites who are Democrats or lean toward the Democrats.

CHAPTER 7: RACE, ETHNICITY AND VIEWS ABOUT MEDICAL TREATMENTS AND RADICAL LIFE EXTENSION

As noted earlier, views about radical life extension tend to vary by race and ethnicity. Blacks and Hispanics are more likely than (non-Hispanic) whites to say that radical life extension would be a good thing for society, and they are also somewhat more inclined to say that they personally would want lifeextending treatments.

The reasons for these differences likely are complex. There are significant racial and ethnic group differences on a number of beliefs that are correlated with views about radical life extension, including expectations that radical life extension will come to fruition by the year 2050 and beliefs about the impact of the growing elderly population on society. While overall views about medical treatments today tend to be about the same among racial and ethnic groups, blacks are especially likely to express a desire to live 100 years or more. And both blacks and Hispanics tend to be more optimistic than are whites about the future outlook for their personal lives.

Relative to other racial and ethnic groups, whites are particularly pessimistic that radical life extension will come to pass. Only about a quarter of whites (23%) say the average person will live to at least 120 years old by 2050. This compares with 29% among Hispanics and 35% among blacks.

Views About Radical Life Extension and Population Growth, by Race and Ethnicity

Hic_

% saying ...

	White	Black	His- panic
Radical life extension is			
Good for society	36	56	48
Bad for society	57	39	45
Don't know	<u>7</u>	<u>5</u>	7
	100	100	100
Personal preferences for life-extending treatments			
Would want	34	46	46
Would not want	59	49	48
Don't know	7	<u>5</u>	<u>6</u>
	100	100	100
The average person will live to at least 120, by the year 2050			
Will happen	23	35	29
Will not happen	77	63	68
Don't know	*	<u>2</u>	<u>4</u>
	100	100	100
Larger elderly population			
Good thing for society	38	50	44
Doesn't make a difference	49	44	44
Bad thing for society	11	4	8
Don't know	<u>3</u>	<u>2</u>	4
	100	100	100
World population growth			
Will <i>not</i> be a major			
problem	37	46	33
Will be a major problem	61	52	63
Neither (vol.)/Don't know	<u>2</u>	<u>2</u>	<u>4</u>
	100	100	100

Source: Pew Research Center survey March 21-April 8, 2013. Q43, Q45, Q21a, Q7e, Q22c. Figures may not add to 100% due to rounding. Whites and blacks refer to single-race-only groups who are not Hispanic. Hispanics are of any race.

Further, blacks and Hispanics are more inclined than whites to consider the growing elderly population a good thing for society (50% among blacks, 44% among Hispanics and 38% among whites). And blacks are more inclined to believe that the growing world population will *not* be a major problem (46%) because people will find a way to stretch the world's natural resources than are either whites (37%) or Hispanics (33%). Thus, several of the beliefs that tend to be associated with views about radical life extension also tend to differ by race and ethnicity.

By contrast, whites, blacks and Hispanics tend to hold similar views about another strong correlate of views about radical life extension – overall views about medical treatments today. Similar shares of whites (64%), blacks (62%) and Hispanics (63%) say that medical advances that prolong life are generally good because they allow people to live longer, better-quality lives. About a third of each group says such advances are bad because they interfere with the natural cycle of life.

And roughly half of whites (55%), blacks (51%) and Hispanics (50%) say that medical treatments used today are generally worth the costs because they allow people to live longer, better-quality lives.

There is an exception to this pattern, however. Blacks tend to express somewhat less confidence than whites and Hispanics that new medical treatments are carefully tested before being made available to the public. Only about

Views about Medical Treatments and Personal Life, by Race and Ethnicity

% saying ...

	White	Black	His- panic
Medical advances that prolong life are			
Generally good	64	62	63
Bad, interfere with natural cycle of life	31	35	32
Neither (vol.)/Don't know	<u>5</u> 100	<u>3</u> 100	<u>5</u> 100
Medical treatments these days			
Are worth the costs, allow people to live longer, better lives	55	51	50
Often create as many problems as they solve	40	44	41
Neither (vol.)/Don't know	<u>5</u> 100	<u>5</u> 100	<u>9</u> 100
Amount of confidence that new medical treatments carefully tested	100	100	100
A lot	25	19	31
Some	49	44	40
Not much/none	25	35	25
Don't know	<u>1</u>	<u>1</u>	4
	100	100	100
Ideal life span			
100 years or under	85	74	82
101 or more	7	15	6
Don't know	<u>7</u>	<u>11</u>	<u>12</u>
	100	100	100
Optimism for personal life in 10 years			
Will be better	48	78	67
Will be about the same	34	15	17
Will be worse	13	3	8
Don't know	<u>5</u>	<u>4</u>	9
	100	100	100

Source: Pew Research Center survey March 21-April 8, 2013. Q22d, Q8, Q9, Q14, Q2. Figures may not add to 100% due to rounding. Whites and blacks refer to single-race-only groups who are not Hispanic. Hispanics are of any race.

a fifth of blacks (19%) have a lot of confidence that new medicines are carefully tested, compared with a quarter of whites and 31% of Hispanics.

And while the overall average life expectancy in the U.S. is lower for non-Hispanic blacks (74.7 years) than it is for non-Hispanic whites (78.8 years) or Hispanics (81.2), blacks are especially likely to say they would like to live substantially longer than the current average.⁹ About one-in-six blacks (15%) say they would choose to live to more than 100 years, while roughly half as many whites (7%) and Hispanics (6%) say the same.

Both blacks and Hispanics are particularly optimistic about their personal lives in the years ahead. Fully 78% of blacks and about two-thirds (67%) of Hispanics expect their lives to be better 10 years from now than they are today. By contrast, about half (48%) of whites say the same. Optimism for the future is modestly related to beliefs about radical life extension and may contribute to the racial and ethnic group differences in views and preferences for getting life-extending treatments.

⁹ Average life expectancies from Centers for Disease Control and Prevention. 2013. "Table 18" in "Health, United States, 2012: With Special Feature on Emergency Care," National Center for Health Statistics. <u>http://www.cdc.gov/nchs/data/hus/hus12.pdf#018</u>.

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APPENDIX A: SURVEY METHODOLOGY

The survey was conducted by telephone with a national sample of adults (18 years of age or older) living in all 50 U.S. states and the District of Columbia. The results reported here are based on 2,012 interviews (1,032 respondents were interviewed on a landline telephone and 980 were interviewed on a cell phone). Interviews were completed in English and Spanish by live, professionally trained interviewing staff under the direction of Princeton Survey Research Associates International from March 21 to April 8, 2013.

Survey Design

A combination of landline and cell random digit dial (RDD) samples was used to reach a representative sample of all adults in the United States who have access to either a landline or cellular telephone. Both samples were disproportionately stratified to increase the incidence of African-American and Hispanic respondents. Within each stratum, phone numbers were drawn with equal probabilities. The landline samples were list-assisted and drawn from active blocks containing three or more residential listings, while the cell samples were not list-assisted but were drawn through a systematic sampling from dedicated wireless 100-blocks and shared service 100-blocks with no directory-listed landline numbers. Both the landline and cell RDD samples were disproportionately stratified by county based on estimated incidences of African-American and Hispanic respondents.

The survey questionnaire included a split-form design whereby an additional 1,994 adults were asked a different set of questions. Results from those interviews are being held for future release. The total number of interviews conducted was 4,006. Thus, the data collection involved two simultaneous surveys, each of which is weighted separately to represent U.S. adults; where the same question was asked on each form, the results of the two forms can be combined to yield a representative survey of U.S. adults with the full 4,006 respondents.

Margin of Sampling Error

Statistical results are weighted to correct known demographic discrepancies, including disproportionate stratification of the sample. The table shows the unweighted sample sizes and the error attributable to sampling that would be expected at the 95% level of confidence for different groups in the survey.

The survey's *margin of error* is the largest 95% confidence interval for any estimated proportion based on the total sample – the one around 50%. For example, the margin of error for the entire sample is ± 2.9 percentage points. This means that in 95 out of every 100 samples drawn using the same methodology, estimated proportions based on the entire sample will be no more than 2.9 percentage points away from their true values in the population. Sampling errors and statistical tests of significance used in this report take into account the effect of weighting. In addition to sampling error, one should bear in mind that question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

Margins of Error

	Sample size	Plus or minus percentage points
All adults	2,012	2.9
White, not Hispanic	1,236	3.7
Black, not Hispanic	319	7.3
Hispanic	299	7.1
Protestant	985	4.2
White evangelical	353	6.9
White mainline	265	8.3
Black Protestant	255	8.2
Catholic	467	5.8
White Catholic	265	7.7
Hispanic Catholic	165	9.4
Unaffiliated	360	7.0

Note: The margins of error are reported at the 95% level of confidence and are calculated by taking into account the average design effect for each subgroup.

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Interviewing Procedures

All interviews were conducted using a Computer Assisted Telephone Interviewing (CATI) system, which ensures that questions were asked in the proper sequence with appropriate skip patterns. CATI also allows certain questions and certain answer choices to be rotated, eliminating potential biases from the sequencing of questions or answers.

For the landline sample, half of the time interviewers asked to speak with the youngest adult male currently at home and the other half of the time asked to speak with the youngest adult female currently at home, based on a random rotation. If no respondent of the initially requested gender was available, interviewers asked to speak with the youngest adult of the opposite gender who was currently at home. For the cell phone sample, interviews were conducted with the person who answered the phone; interviewers verified that the person was an adult and could complete the call safely.

Both the landline and cell samples were released for interviewing in replicates, which are small random samples of each larger sample. Using replicates to control the release of the telephone numbers ensures that the complete call procedures are followed for all numbers dialed. As many as seven attempts were made to contact every sampled telephone number. The calls were staggered at varied times of day and days of the week (including at least one daytime call) to maximize the chances of making contact with a potential respondent.

Questionnaire Development and Testing

The Pew Research Center developed the questionnaire. The design of the questionnaire was informed by the results of additional pilot and pretesting on questions related to radical life extension.

Initial Pilot Tests. Two initial pilot studies were conducted Oct. 27-30, 2011, as part of an omnibus survey with a national sample of adults living in the continental U.S. The data collection involved a split-form design, which, in essence, collected data on two sets of questions, or pilot studies, simultaneously. Each form of the questionnaire, or pilot study, was based on both landline and cell phone telephone interviews; 262 adults completed Form A, and 265 adults completed Form B. The interviews were conducted in English under the direction of Princeton Survey Research Associates International. The purpose of the pilot tests was to gauge the feasibility of asking about radical life extension, a topic that involves reactions to a still-hypothetical development in medical science, and to compare two different variants in question wording. The questionnaire was brief. Form A included five closed-ended questions and two open-ended questions. Form B included two closed-ended questions and one open-ended questions; these responses helped inform development of closed-ended questions to the idea of radical life extension; these responses helped inform development of closed-ended questions on beliefs about the likely effects of radical life extension on society.

Full Pilot Test. An additional pilot study was conducted Feb. 27, 2013, with a sample of 103 adults living in the continental U.S. The sample was drawn from fresh RDD landline phone numbers and a sample of cell phone numbers from recontact cases in recent RDD omnibus studies. The interviews were conducted in English under the direction of Princeton Survey Research Associates International. The interviews tested the questions planned for the study questionnaire in the full survey context; pilot study interviews lasted about 24 to 26 minutes, on average.

Question Wording Tests. A question wording experiment was completed Feb. 21-26, 2013, through Google Consumer Surveys with a convenience sample of internet users. Those completing the online, two-question survey were randomly assigned to one of two forms of the questionnaire. A total of 301 respondents completed Form A; 318 respondents completed Form B. The purpose of the question wording experiment was to test the effect of including the specification that medical treatments would allow the average person to live decades longer "*to at least 120 years old*" compared with living decades longer when no specific age is mentioned. Both forms also included an open-ended question that measured respondents' thoughts and associations related to radical life extension.

Pretest. As a final step, a traditional pretest was conducted March 12, 2013, with 22 adults living in the continental U.S. The sample was drawn from fresh RDD landline phone numbers and a sample of cell phone numbers from recontact cases in recent RDD omnibus studies. The interviews were conducted in English under the direction of Princeton Survey Research Associates International. The interviews tested the questions planned for the study questionnaire in the full survey context; pretest interviews lasted about 20 minutes, on average.

Weighting and Analysis

Several stages of statistical adjustment or weighting are used to account for the complex nature of the sample design. The weights account for numerous factors including (1) the different, disproportionate probabilities of selection in each strata, (2) the overlap of the landline and cell RDD sample frames and (3) differential nonresponse associated with sample demographics.

The first stage of weighting accounts for different probabilities of selection associated with the number of adults in each household and each respondent's telephone status.¹⁰ This weighting also adjusts for the overlapping landline and cell RDD sample frames and the relative sizes of each frame and each sample. Due to the disproportionately stratified sample design, the first-stage weight was computed separately for each stratum in each sample frame.

After the first-stage weight adjustment, two rounds of poststratification were performed using an iterative technique known as raking. The raking matches the selected demographics to parameters from the U.S. Census Bureau's 2011 American Community Survey data.¹¹ The

¹⁰ Telephone status refers to whether respondents have only a landline telephone, only a cell phone or both kinds of telephone.

¹¹ ACS analysis was based on all adults excluding those living in institutional group quarters.

population density parameter was derived from 2010 census data. The telephone usage parameter came from an analysis of the January-June 2012 National Health Interview Survey.¹² Raking was performed separately for those asked each form of the questionnaire using Sample Balancing, a special iterative sample weighting program that simultaneously balances the distributions of all variables using a statistical technique called the Deming Algorithm. The raking corrects for differential nonresponse that is related to particular demographic characteristics of the sample. This weight ensures that the demographic characteristics of the sample closely approximate the demographic characteristics of the population.

The first round of raking was done individually for the major race/ethnicity groups. The variables matched to population parameters for Hispanic respondents were gender by age, gender by education, age by education, census region and nativity (U.S. born versus foreign born). The variables for non-Hispanic blacks were gender by age, gender by education, age by education and census region. The variables for other non-Hispanic respondents (white, other or mixed race) were gender by age, gender by education, age by education and census region.

A final round of poststratification raking was performed on the total sample. The total sample was raked to the following demographic variables: gender by age, gender by education, age by education, census region, race/ethnicity, population density and household telephone status.

¹² See Blumberg, S.J. and J.V. Luke. December 2012.Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January-June, 2012. National Center for Health Statistics.

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61 LIVING TO 120 AND BEYOND

APPENDIX B: QUESTION WORDING AND SURVEY TOPLINE

PEW RESEARCH CENTER'S RELIGION & PUBLIC LIFE PROJECT TOPLINE March 21-April 8, 2013

Note: All numbers are percentages. The percentages greater than zero but less than 0.5 % are replaced by an asterisk (*). Columns/rows may not total 100% due to rounding. Questions asked of all based on N=4,006.

ASK ALL:

Q1 Overall, are you satisfied or dissatisfied with the way things are going in your life today?

Mar 21-Apr 8 <u>2013</u>		Jul <u>2011</u>	Aug ¹³ 2008	Jan <u>2008</u>
81	Satisfied	75	81	83
16	Dissatisfied	23	16	14
3	Don't know/Refused (VOL.)	2	3	3

ASK ALL:

Q2 Looking ahead to the next ten years, do you think your life, overall, will be better, worse, or about the same as it is now?

Mar 21-Apr 8

<u>2013</u>

- 56 Will be better
- 28 About the same
- 11 Will be worse
- 5 Don't know/Refused (VOL.)

ASK ALL:

Q3 Thinking back to ten years ago, would you say your life, overall, is better today, worse today, or about the same as it was then?

Mar 21-Apr 8

- <u>2013</u>
 - 56 Better today
 - 25 About the same
 - 18 Worse today
 - 1 Don't know/Refused (VOL.)

ASK ALL:

- Q4 As you think about each of the following areas of your life, please tell me whether, on the whole, you would rate this aspect of your life as excellent, good, only fair, or poor: (First/Next) (INSERT ITEM; RANDOMIZE) (READ FOR FIRST ITEM, THEN AS NECESSARY: Would you rate this aspect of your life as excellent, good, only fair, or poor?)
- a. Your personal financial situation

Mar 21-Apr 8		%
2013		<u>rating</u>
12	Excellent	13
42	Good	43
29	Only fair	29
15	Poor	16
*	Doesn't apply (VOL.)	
1	Don't know/Refused (VOL.)	

13

Trends from August and January 2008 are from Pew Internet & American Life Project.

Q4 CONTINUED...

b. Your employment situation

Mar 21-Apr 8		%
<u>2013</u>		<u>rating</u>
22	Excellent	28
30	Good	38
16	Only fair	19
12	Poor	15
19	Doesn't apply (VOL.)	
*	Don't know/Refused (VOL.)	

The number of friends you have C.

Mar 21-A or 8

ar 21-Apr 8		%
<u>2013</u>		<u>rating</u>
36	Excellent	37
42	Good	43
15	Only fair	15
5	Poor	5
1	Doesn't apply (VOL.)	
1	Don't know/Refused (VOL.)	

Your spiritual life d.

Mar 21-Apr 8		%
2013		<u>rating</u>
36	Excellent	38
44	Good	46
13	Only fair	13
3	Poor	4
3	Doesn't apply (VOL.)	
1	Don't know/Refused (VOL.)	

e. Your health

Mar 21-Apr 8		%
<u>2013</u>		<u>rating</u>
27	Excellent	27
47	Good	47
19	Only fair	19
7	Poor	7
*	Doesn't apply (VOL.)	
*	Don't know/Refused (VOL.)	

f. Your relationship with your children

Mar 21-Apr 8 <u>2013</u>

21-Apr 8		%
<u>2013</u>		<u>rating</u>
43	Excellent	58
25	Good	34
5	Only fair	6
2	Poor	2
26	Doesn't apply (VOL.)	
*	Don't know/Refused (VOL.)	

Q4 CONTINUED...

Mar

g. Your relationship with your spouse or partner

21-Apr 8		%
2013		<u>rating</u>
39	Excellent	50
28	Good	35
7	Only fair	9
5	Poor	6
22	Doesn't apply (VOL.)	
*	Don't know/Refused (VOL.)	

ASK FORM 3&4:

Q4h How much do you worry about outliving your money after retirement—do you worry a lot, a little, not too much, or not at all?

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

2013	
18	A lot

- 18 A lot 23 A lit
- 23 A little22 Not too much
- 22 Not too much
- 35 Not at all
- 2 Don't know/Refused (VOL.)

ASK ALL:

Thinking about the country as a whole...

Q5 All in all, are you satisfied or dissatisfied with the way things are going in this country today?

	Satis-	Dis-	(VOL.)		Satis-	Dis-	(VOL.)
	fied	satisfied	DK/Ref		fied	satisfied	DK/Ref
Mar 21-Apr 8, 2013	30	66	4	Feb 3-9, 2010	23	71	6
Jan 9-13, 2013	30	66	4	Jan 6-10, 2010	27	69	4
Dec 17-19, 2012	25	68	7	Oct 28-Nov 8, 2009	25	67	7
Dec 5-9, 2012	33	62	5	Sep 30-Oct 4, 2009	25	67	7
Oct 18-21, 2012	32	61	8	Sep 10-15, 2009 ¹⁴	30	64	7
Jun 28-Jul 9, 2012	31	64	5	Aug 20-27, 2009	28	65	7
Jun 7-17, 2012	28	68	5	Aug 11-17, 2009	28	65	7
May 9-Jun 3, 2012	29	64	7	Jul 22-26, 2009	28	66	6
Apr 4-15, 2012	24	69	6	Jun 10-14, 2009	30	64	5
Feb 8-12, 2012	28	66	6	Apr 28-May 12, 2009	34	58	8
Jan 11-16, 2012	21	75	4	Apr 14-21, 2009	23	70	7
Sep 22-Oct 4, 2011	17	78	5	Jan 7-11, 2009	20	73	7
Aug 17-21, 2011	17	79	4	December, 2008	13	83	4
Jul 20-24, 2011	17	79	4	Early October, 2008	11	86	3
Jun 15-19, 2011	23	73	4	Mid-September, 2008	25	69	6
May 5-8, 2011	30	62	8	August, 2008	21	74	5
May 2, 2011	32	60	8	July, 2008	19	74	7
Mar 8-14, 2011	22	73	5	June, 2008	19	76	5
Feb 2-7, 2011	26	68	5	Late May, 2008	18	76	6
Jan 5-9, 2011	23	71	6	March, 2008	22	72	6
Dec 1-5, 2010	21	72	7	Early February, 2008	24	70	6
Nov 4-7, 2010	23	69	8	Late December, 2007	27	66	7
Sep 23-26, 2010	30	63	7	October, 2007	28	66	6
Aug 25-Sep 6, 2010	25	71	5	February, 2007	30	61	9
Jun 24-27, 2010	27	64	9	Mid-January, 2007	32	61	7
May 13-16, 2010	28	64	7	Early January, 2007	30	63	7
Apr 21-26, 2010	29	66	5				
Apr 1-5, 2010	31	63	6				
Mar 11-21, 2010	25	69	5				
Mar 10-14, 2010	23	71	7				

¹⁴ In September 10-15, 2009, and other surveys noted with an asterisk, the question was worded "Overall, are you satisfied or dissatisfied with the way things are going in our country today?"

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Q5 CONTINUED...

Q5 CONTINUED			
	Satis-	Dis-	(VOL.)
	fied	<u>satisfied</u>	DK/Ref
December, 2006	28	65	7
Mid-November, 2006	28	64	8
Early October, 2006	30	63	7
July, 2006	30	65	5
May, 2006*	29	65	6
March, 2006	32	63	5
January, 2006	34	61	5
Late November, 2005	34	59	7
Early October, 2005	29	65	6
July, 2005	35	58	7
Late May, 2005*	39	57	4
February, 2005	38	56	6
January, 2005	40	54	6
December, 2004	39	54	7
Mid-October, 2004	36	58	6
July, 2004	38	55	7
May, 2004	33	61	6
Late February, 2004*	39	55	6
Early January, 2004	45	48	7
December, 2003	44	47	9
October, 2003	38	56	6
August, 2003	40	53	7
April 8, 2003	50	41	9
January, 2003	44	50	6
November, 2002	41	48	11
September, 2002	41	55	4
Late August, 2002	47	44	9
May, 2002	44	44	12
March, 2002	50	40	10
Late September, 2001	57	34	9
Early September, 2001	41	53	6
June, 2001	43	52	5
March, 2001	47	45	8

	Satis-	Dis-	(VOL.)
	fied	satisfied	DK/Ref
February, 2001	46	43	11
January, 2001	55	41	4
October, 2000 (RVs)	54	39	7
September, 2000	51	41	8
June, 2000	47	45	8
April, 2000	48	43	9
August, 1999	56	39	5
January, 1999	53	41	6
November, 1998	46	44	10
Early September, 1998	54	42	4
Late August, 1998	55	41	4
Early August, 1998	50	44	6
February, 1998	59	37	4
January, 1998	46	50	4
September, 1997	45	49	6
August, 1997	49	46	5
January, 1997	38	58	4
July, 1996	29	67	4
March, 1996	28	70	2
October, 1995	23	73	4
June, 1995	25	73	2
April, 1995	23	74	3
July, 1994	24	73	3
March, 1994	24	71	5
October, 1993	22	73	5
September, 1993	20	75	5
May, 1993	22	71	7
January, 1993	39	50	11
January, 1992	28	68	4
November, 1991	34	61	5
Gallup: Late Feb, 1991	66	31	3
August, 1990	47	48	5
May, 1990	41	54	5
January, 1989	45	50	5
September, 1988 (RVs)	50	45	5

QUESTION 6 previously released.

ASK ALL:

Q7 Please tell me if you think each of the following trends is generally a good thing for American society, a bad thing for American society, or doesn't make much difference? (First/Next) **[INSERT ITEM; RANDOMIZE ITEMS] [READ IF NECESSARY**: Is this generally a good thing for American society, a bad thing for American society, or doesn't it make much difference?]

		Good thing <u>for society</u>	Bad thing for society	Doesn't make much difference	• •
e.	More elderly people in the population Mar 21-Apr 8, 2013	41	10	47	3

Questions 7a, 7b and 7c previously released. No item 7d.

ASK ALL:

Thinking about medical science.

- Q8 Which of these statements comes closest to your point of view, even if neither is exactly right? [READ IN ORDER]
 - Mar 21-Apr 8
 - 2013
 - 54 (one) Medical treatments these days are worth the costs because they allow people to live longer and better quality lives [OR]
 - 41 (two) Medical treatments these days often create as many problems as they solve.
 - 3 Neither/Both equally (VOL.)
 - 3 Don't know/Refused (VOL.)

ASK ALL:

Q9 How much confidence, if any, do you have that new medicines and medical treatments have been carefully tested before being made available to the public? **[READ]**

Mar 21-Apr 8

- <u>2013</u>
 - 24 A lot
 - 47 Some
 - 21 Not too much
 - 6 None at all
 - 2 Don't know/Refused (VOL.)

ASK ALL:

Q10 How much, if at all, do you worry about health care providers keeping your medical records confidential? Do you worry... **[READ]**

Mar 21-Apr 8

- <u>2013</u>
 - 20 A lot
 - 22 Some
 - 27 Not too much
 - 30 Not at all
 - 1 Don't know/Refused (VOL.)

NO QUESTIONS 11 THROUGH 13

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ASK ALL:

Now I'd like to ask you some questions about getting older...

Q14 If you had your choice, how long would you like to live? That is, until what age? (**READ IF NECESSARY**: Just your best guess is fine.)

Mar 21-Apr 8 <u>2013</u> 30 32 20 4 4 9	80 and under 81-90 91-100 101-120 121 or more Don't know/Refused (VOL.)	Feb 2009 ¹⁵ 26 28 21 8 n/a 17
9 103 90	Don't know/Refused (VOL.) Mean age Median age	17 n/a 90
70	median aye	70

NO QUESTION 15 THROUGH 17

QUESTION 18 HELD FOR FUTURE RELEASE

NO QUESTIONS 19 THROUGH 20

ASK ALL:

Q21 Now I'm going to read you a list of things that may or may not happen in about the next 40 years, that is before the year 2050 [PRONOUNCED: "twenty-fifty"]. Please tell me how likely you think it is that each will happen. First/Next... [INSERT ITEM; RANDOMIZE]

[READ FOR FIRST ITEM AND THEN AS NECESSARY: Do you think this will definitely happen, will probably happen, will probably NOT happen, or will definitely not happen, in about the next 40 years?]

a. The average person in the U.S. will live to be at least 120 years old.

Mar 21-Apr 8

<u>2013</u>

- 3 Will definitely happen
- 22 Will probably happen
- 52 Will probably NOT happen
- 21 Will definitely not happen
- 1 Don't know/Refused (VOL.)
- b. Scientists will bring back an extinct animal species by cloning it.

Mar 21-Apr 8		Apr
<u>2013</u>		<u>2010</u>
10	Will definitely happen	9
39	Will probably happen	42
35	Will probably NOT happen	36
13	Will definitely not happen	11
3	Don't know/Refused (VOL.)	2

¹⁵

In February 2009, "120 or more" was the highest possible response option. Therefore, responses of "120" and responses higher than 120 cannot be distinguished for February 2009.

LIVING TO 120 AND BEYOND

Q21 CONTINUED...

c. There will be artificial arms and legs that perform better than natural ones.

Mar 21-Apr 8 2013		Apr 2010
21	Will definitely happen	20
50	Will probably happen	46
20	Will probably NOT happen	22
7	Will definitely not happen	9
2	Don't know/Refused (VOL.)	3

No item d.

e. There will be a cure for most forms of cancer.

Mar 21-Apr 8

<u>2013</u>

- 14 Will definitely happen
- 55 Will probably happen
- 25 Will probably NOT happen
- 4 Will definitely not happen
- 2 Don't know/Refused (VOL.)

TREND FOR COMPARISON

There will be a cure for cancer.

Will definitely happen Will probably happen Will probably NOT happen Will definitely not happen	Apr <u>2010</u> 18 53 23 4	May <u>1999</u> 23 58 16 2
Don't know/Refused (VOL.)	2	1

ASK ALL:

Q22 As I read a pair of statements please tell me which one comes closest to your point of view, even if neither is exactly right. **[INSERT PAIR; RANDOMIZE PAIRS BUT NOT RESPONSE OPTIONS WITHIN PAIRS]** {*PP 4-99; item b new ITEM C pairs were rotated in 1999—review order of statements*}

No item a or b.

С.

Mar 21-Apr 8 2013		May 1999
37	(one) The growing world population will NOT be	42
	a major problem because we will find a way to stretch our natural resources [OR]	
61	(two) The growing population WILL be a major	56
	problem because there won't be enough food and resources to go around	
1	Neither/Both equally (VOL.)	1
2	Don't know/Refused (VOL.)	1

Q22 CONTINUED...

d.

Mar 21-Apr 8 <u>2013</u>		May <u>1999</u>
63	(one) Medical advances that prolong life are generally GOOD because they allow people to live longer [OR]	66
32	(two) These advances are BAD because they interfere with the natural cycle of life.	29
2	Neither/Both equally (VOL.)	3
3	Don't know/Refused (VOL.)	2

NO QUESTIONS 23 THROUGH 24

QUESTIONS 25 THROUGH 39 HELD FOR FUTURE RELEASE

NO QUESTION 40 THROUGH 41

ASK FORM 3 & 4:

Q42 Currently, the average life expectancy in the U.S. is about 80 years old. Some people think new medical treatments will slow the aging process and will, for the first time, allow the average person to live decades longer, to at least 120 years old. How much, if anything, have you read or heard about this? **[READ]**

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

- <u>2013</u>
 - 7 A lot
 - 38 A little
 - 54 Nothing at all
 - * Don't know/Refused (VOL.)

ASK FORM 3 & 4:

Q43 If new medical treatments slow the aging process and allow the average person to live decades longer, to at least 120 years old, do you think that would be a good thing or a bad thing for society?

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

- 2013
 - 41 A good thing
 - 51 A bad thing
 - 7 Don't know/Refused (VOL.)

NO QUESTION 44

LIVING TO 120 AND BEYOND

ASK FORM 3 & 4:

Q45 Do you think that you, personally, would want these medical treatments, or wouldn't you want them? (**READ IF NECESSARY:** these medical treatments that slow the aging process and allow the average person to live decades longer, to at least 120 years old)

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

<u>2013</u>

- 38 Yes, would want
- 56 No, wouldn't want
- 6 Don't know/Refused (VOL.)

ASK FORM 3 & 4:

Q46 Do you think MOST people would want these medical treatments, or not? (**READ IF NECESSARY**: these medical treatments that slow the aging process and allow the average person to live decades longer, to at least 120 years old)

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

<u>2013</u>

- 68 Yes, MOST would want
- 27 No, MOST wouldn't want
- 5 Don't know/Refused (VOL.)

ASK FORM 3 & 4:

Q47 Still thinking about new medical treatments that slow the aging process and allow the average person to live decades longer, to at least 120 years old, do you agree or disagree that... First/Next, ... [INSERT ITEM; RANDOMIZE]? READ IF NECESSARY: Do you agree or disagree that... [INSERT ITEM]?

No item a.

b. These treatments would be fundamentally unnatural.

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

- 2013
- 58 Agree
- 37 Disagree
- 5 Don't know/Refused (VOL.)
- c. Our economy would be more productive because people could work longer.

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

<u>2013</u>

- 44 Agree
- 53 Disagree
- 2 Don't know/Refused (VOL.)

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Q47 CONTINUED...

d. Only wealthy people would have access to these treatments.

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

- <u>2013</u>
- 66 Agree
- 33 Disagree
- 2 Don't know/Refused (VOL.)
- e. Longer life expectancies would strain our natural resources.

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

<u>2013</u>

- 66 Agree
- 31 Disagree
- 3 Don't know/Refused (VOL.)
- f. Medical scientists would offer the treatment before they fully understood how it affects people's health.

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

- 2013 66 Agree 32 Disagree
 - 2 Don't know/Refused (VOL.)

No item g.

h. Everyone should be able to get these treatments if they want them.

BASED ON ALL ASKED [N=2,012]:

Mar 21-Apr 8

<u>2013</u>

- 79 Agree
- 19 Disagree
- 2 Don't know/Refused (VOL.)

NO QUESTION 48 THROUGH 53 QUESTIONS 54 THROUGH 57 HELD FOR FUTURE RELEASE

ASK ALL:

Now, a different kind of question ...

0.58 Do you personally believe that **[INSERT ITEM AND RANDOMIZE ORDER OF A/D AND B/C IN PAIRS, AND RANDOMIZE ITEMS WITHIN PAIRS]** is morally acceptable, morally wrong, or is it not a moral issue? **[IF NECESSARY:]** And is **[INSERT ITEM]** morally acceptable, morally wrong, or is it not a moral issue?

		Morally cceptable	Morally <u>wrong</u>	Not a moral <u>issue</u>	(VOL.) Depends on <u>the situation</u>	(VOL.) <u>DK/Ref</u>
а.	Having an abortion Mar 21-Apr 8, 2013 Jan 9-13, 2013 Feb 8-12, 2012 Aug 11-17, 2009 February, 2006	15 13 13 10 12	49 47 48 52 52	23 27 25 25 23	9 9 9 8 11	4 4 5 4 2
b.	Medical research that uses embryonic stem cell Mar 21-Apr 8, 2013	s 32	22	36	2	9
C.	Medical research that use stem cells from sources that do NOT involve hum embryos Mar 21-Apr 8, 2013	-	16	42	1	7
d.	Using in vitro fertilization Mar 21-Apr 8, 2013	33	12	46	1	9

SELECTED RELIGION AND DEMOGRAPHIC VARIABLES SHOWN. SEE QUESTIONNAIRE FOR FULL DETAIL OF QUESTIONS ASKED.

ASK ALL:

ATTEND

Aside from weddings and funerals, how often do you attend religious services... more than once a week, once a week, once or twice a month, a few times a year, seldom, or never?

	More than	Once	Once or twice	A few times			(VOL.)
	<u>once a week</u>	<u>a week</u>	<u>a month</u>	<u>a year</u>	<u>Seldom</u>	Never	DK/Ref
Mar 21- Apr 8, 20	13 14	23	15	18	16	13	1
Mar 13-17, 2013	12	24	14	21	16	13	1
Feb 13-18, 2013	17	22	11	19	16	12	3
Jan 9-13, 2013	13	25	13	18	15	15	2
Dec 5-9, 2012	12	24	16	19	15	12	1
Oct 24-28, 2012	13	21	15	19	16	14	2
Oct 4-7, 2012	13	25	14	17	16	12	1
Sept 12-16, 2012	12	24	14	20	15	13	2
July 16-26, 2012	13	24	14	18	16	15	1
Jun 28-Jul 9, 2012	2 14	25	16	17	15	12	1
Jul 21-Aug 5, 2010	D 14	25	14	20	15	11	2
August, 2009	14	23	16	18	16	11	1
August, 2008	13	26	16	19	15	10	1
Aug, 2007	14	26	16	18	16	9	1
July, 2006	15	25	15	18	14	12	1
July, 2005	14	27	14	19	14	11	1
Aug, 2004	13	25	15	20	15	11	1
July, 2003	16	27	15	18	14	10	*
March, 2003	15	24	15	21	15	9	1
March, 2002	15	25	17	18	15	9	1
Mid-Nov, 2001	16	26	14	17	16	10	1
March, 2001	17	26	17	17	15	7	1
Sept, 2000 (RVs)	17	28	16	17	13	8	1
June, 1997	12	26	17	20	15	10	*
June, 1996	14	25	17	21	13	9	1

ASK ALL:

RQ5 How important is religion in your life - very important, somewhat important, not too important, or not at all important?

	Very important	Somewhat important	Not too important	Not at all important	(VOL.) DK/Ref
Mar 21-Apr 8, 2013	56	23	10	10	1
Jun 28-Jul 9, 2012	58	22	10	9	1
Jul 21-Aug 5, 2010	58	24	9	8	1
August, 2009	57	25	8	8	1
August, 2008	58	27	7	7	1
August, 2007	61	24	8	6	1

LIVING TO 120 AND BEYOND

ASK ALL:

RQ6 People practice their religion in different ways. Outside of attending religious services, do you pray [READ LIST]

Mar 21-Apr 8 <u>2012</u>		Jul <u>2012</u>	Aug <u>2009</u>	Aug <u>2007</u>
35	Several times a day	38	36	35
19	Once a day	20	19	21
13	A few times a week	13	14	15
3	Once a week	3	4	4
7	A few times a month	5	6	6
11	Seldom	10	11	11
9	Never	9	8	6
1	Don't know/Refused (VOL.)	2	2	2

ASK ALL:

RQ7 Do you believe in God or a universal spirit, or not?

			(VOL.) Other/
	Yes	<u>No</u>	DK/Ref
Mar 21-Apr 8, 2013	90	8	2
July, 2012	91	7	2
August, 2007	94	4	2
December, 1994 ¹⁶	96	3	1
December, 1988	95	5	1
November, 1978	94	4	2
June, 1976 ¹⁷	94	3	2

NO QUESTION RQ8

ASK ALL

RQ9 Which, if any, of the following do you believe in? Do you believe **[INSERT ITEM; RANDOMIZE]**, or not? Do you believe **[INSERT NEXT ITEM]**, or not?

a. in life after death

Mar 21-Apr 8		May-Aug
2013		2007
70	Yes, believe in	74
24	No, don't believe	18
	Other (VOL.)	2
6	Don't know/Refused (VOL.)	7

¹⁶ Trends from December 1994 and before are from Gallup.

¹⁷ Based on responses from a national sample aged 15 and over.

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RQ9 CONTINUED...

ASK FORM 1 & 3:

bF13. in heaven, where people who have led good lives are eternally rewarded

BASED ON ALL ASKED [N=1,983]:

Mar 21-Apr 8

- <u>2013</u>
- 74 Yes, believe in
- 22 No, don't believe
- 5 Don't know/Refused (VOL.)

ASK FORM 2&4:

cF24. in heaven

BASED ON ALL ASKED [N=2,023]:

Mar 21-Apr 8

- 2013
- 80 Yes, believe in
- 17 No, don't believe
- 3 Don't know/Refused (VOL.)

TREND FOR COMPARISON

Do you think there is a heaven, where people who have led good lives are eternally rewarded?

	May-Aug
	2007
Yes	74
No	17
Other (VOL.)	3
Don't know/Refused (VOL.)	6

COMBINED RQ9bF13/RQ9cF24

bF13/cF23. in heaven, where people who have led good lives are eternally rewarded/in heaven

Mar 21-Apr 8

<u>2013</u>		
77	Yes, believe in	
19	No, don't believe	

4 Don't know/Refused (VOL.)

LIVING TO 120 AND BEYOND

RQ9 CONTINUED...

ASK FORM 1 & 3:

dF13. in hell, where people who have led bad lives and die without being sorry are eternally punished?

BASED ON ALL ASKED [N=1,983]:

Mar 21-Apr 8

<u>2013</u>

- 56 Yes, believe in
- 38 No, don't believe
- 6 Don't know/Refused (VOL.)

ASK FORM 2&4:

eF24. in hell

BASED ON ALL ASKED [N=2,023]:

Mar 21-Apr 8

- <u>2013</u>
- 67 Yes, believe in
- 30 No, don't believe
- 3 Don't know/Refused (VOL.)

TREND FOR COMPARISON

Do you think there is a hell, where people who have led bad lives and die without being sorry are eternally punished?

neu?	
	May-Aug
	2007
Yes	59
No	30
Other (VOL.)	3
Don't know/Refused (VOL.)	8

COMBINED RQ9dF13/RQ9eF24

dF13/eF23. in hell, where people who have bad lives and die without being sorry are eternally punished /in hell

Mar 21-Apr 8

<u>2013</u>

62 Yes, believe in
34 No, don't believe
5 Don't know/Refused (VOL.)

PEW RESEARCH CENTER

ASK ALL:

RQ10 Do you strongly favor, favor, oppose or strongly oppose the death penalty for persons convicted of murder?

	FAVOR			OPPOSE			
	Strongly			Strongly			(VOL.)
	<u>Total</u>	<u>favor</u>	<u>Favor</u>	<u>Total</u>	<u>oppose</u>	<u>Oppose</u>	<u>DK/Ref</u>
Mar 21-Apr 8, 2013	55	18	37	37	10	26	8
Nov 9-14, 2011	62	28	34	31	11	20	7
Sep 22-Oct 4, 2011 ¹⁸	58			36			6
Jul 21-Aug 5, 2010	62	30	32	30	10	20	8
August, 2007	62	29	33	32	11	21	6
Early January, 2007	64	30	34	29	11	18	7
March, 2006	65	27	38	27	8	19	8
December, 2005	62			30			8
Late November, 2005	61			27			12
July, 2005	68	32	36	24	8	16	8
Mid-July, 2003	64	28	36	30	10	20	6
March, 2002	67	33	34	26	9	17	7
March, 2001	66	30	36	27	10	17	7
September, 1999	74	41	33	22	7	15	4
June, 1996	78	43	35	18	7	11	4

18

In October 2011 and before, question was asked as part of a list, except in November-December 2005.