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SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 11-K

ANNUAL REPORT
Pursuant to Section 15(d) of the
Securities Exchange Act of 1934



ANNUAL REPORT PURSUANT TO SECTION 15 (d) OF THE SECURITIES EXCHANGE
ACT OF 1934

For the fiscal year ended December 31, 2003

OR

TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number: 1-31312

MEDCO HEALTH SOLUTIONS, INC. 401 (k) SAVINGS PLAN

(Full title of the plan)

MEDCO HEALTH SOLUTIONS, INC.

(Name of issuer of the securities held pursuant to the plan)

100 Parsons Pond Drive
Franklin Lakes, New Jersey 07417-2603

(Address of principal executive office)

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Medco Health Solutions, Inc. 401(k) Savings Plan

INDEX

	<u>Page</u>
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	1
FINANCIAL STATEMENTS	
Statements of Net Assets Available for Benefits as of December 31, 2003 and 2002	2
Statement of Changes in Net Assets Available for Benefits for the Year Ended December 31, 2003	3
NOTES TO FINANCIAL STATEMENTS	4 – 8
*SUPPLEMENTAL SCHEDULE	
H – Line 4i – Schedule of Assets (Held at End of Year)	9
SIGNATURE	10
EXHIBIT INDEX	11
EXHIBIT 23.1 – Consent of Independent Registered Public Accounting Firm	12
EXHIBIT 99.1 – Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	13
EXHIBIT 99.2 – Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	14

*Other schedules required by Section 2520.103-10 of the Department of Labor Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 are omitted because they are not applicable.

Report of Independent Registered Public Accounting Firm

To the Participants and Employee Benefits Committee of the
Medco Health Solutions, Inc. 401(k) Savings Plan:

In our opinion, the accompanying statements of net assets available for benefits and the related statement of changes in net assets available for benefits present fairly, in all material respects, the net assets available for benefits of the Medco Health Solutions, Inc 401(k) Savings Plan (the "Plan") at December 31, 2003 and 2002, and the changes in net assets available for benefits for the year ended December 31, 2003 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) and auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental Schedule of Assets (Held at End of Year) is presented for the purpose of additional analysis and is not a required part of the basic financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. This supplemental schedule is the responsibility of the Plan's management. The supplemental schedule has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.



Florham Park, NJ
June 24, 2004

MEDCO HEALTH SOLUTIONS, INC. 401(k) SAVINGS PLAN
STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

	December 31,	
	2003	2002
Assets:		
Investments in the Master Trust	\$ -	\$ 359,691,013
Investments at fair value	425,278,573	-
Participant loans at contract value	11,337,457	10,647,525
Total investments	436,616,030	370,338,538
Receivables:		
Employer's contribution	801,973	1,065,165
Participants' contributions	1,026,496	1,240,686
Total receivables	1,828,469	2,305,851
Net assets available for benefits	\$ 438,444,499	\$ 372,644,389

The accompanying notes are an integral part of these financial statements.

MEDCO HEALTH SOLUTIONS, INC. 401(k) SAVINGS PLAN
STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

	Year Ended <u>December 31, 2003</u>
Additions to net assets attributed to:	
Investment income	
Net appreciation in fair value of investments	\$ 26,908,346
Interest	718,462
Dividends	6,344,120
	<u>33,970,928</u>
Contributions	
By participants	41,142,433
By employer	19,156,629
Total contributions	<u>60,299,062</u>
Transfers in	365,150
Total additions	<u>94,635,140</u>
Deductions from net assets attributed to:	
Benefits paid to participants	(27,286,303)
Transfers out	(1,548,727)
Total deductions	<u>(28,835,030)</u>
Net increase	<u>65,800,110</u>
Net assets available for benefits:	
Beginning of year	<u>372,644,389</u>
End of year	<u>\$ 438,444,499</u>

The accompanying notes are an integral part of these financial statements.

MEDCO HEALTH SOLUTIONS, INC. 401(k) SAVINGS PLAN
NOTES TO FINANCIAL STATEMENTS

(1) Description of the Plan

The following description of the Medco Health Solutions, Inc. 401(k) Savings Plan (the "Plan") provides only general information. More complete information regarding the Plan's provisions may be found in the Plan document.

General

Effective January 1, 1989, the predecessor company to Medco Health Solutions, Inc. established the Plan under the provisions of Section 401(a) of the Internal Revenue Code ("IRC"), which includes a qualified cash or deferred arrangement as described in Section 401(k) of the IRC, for the benefit of eligible employees. The Plan is a defined contribution plan covering substantially all employees (other than certain employees subject to collective bargaining agreements) who have completed three months of service and attained the age of twenty-one. Participation in the Plan is voluntary. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA").

The Plan was amended as a result of a merger, effective November 18, 1993, by and between the predecessor company to Medco Health Solutions, Inc. and Merck & Co., Inc. ("Merck"). The amendment provided participants with an option to invest all or part of their contributions in the common stock of Merck. Subsequent to the merger, the predecessor company was converted to a limited liability company and changed its name to Merck-Medco Managed Care, L.L.C.

In May 2002, Merck-Medco Managed Care, L.L.C. converted from a limited liability company to a Delaware corporation and subsequently changed its name to Medco Health Solutions, Inc. ("Medco" or the "Company"). On May 15, 2003, the Company's Board of Directors adopted a resolution amending the name of the Plan from the Merck-Medco Managed Care 401 (k) Savings Plan to the Medco Health Solutions, Inc. 401(k) Savings Plan. On August 19, 2003, Medco Health Solutions, Inc. was spun off from Merck as a separate publicly traded enterprise, and the Plan received 0.1206 shares of Medco common stock for every one share of Merck common stock held in the Merck Common Stock Fund. These shares were transferred to a new Medco Health Stock Fund that was established as an investment alternative in the plan.

The Plan is administered by the Employee Benefits Committee ("EBC"), which is appointed by the Board of Directors of the Company. The EBC periodically evaluates the Plan's design to ensure that employee participation is appropriate.

Master Trust

Prior to January 1, 2003, the assets of the Plan were maintained, for investment purposes only, on a commingled basis with the assets of the Merck & Co., Inc. Employee Stock Purchase & Savings Plan and the Merck & Co., Inc. Employee Savings & Security Plan in the Merck & Co., Inc. Employee Savings & Security Plan and the Merck & Co., Inc. Employee Stock Purchase & Savings Plan Trust (the "Master Trust"). These plans did not own specific Master Trust assets but rather maintained individual beneficial interests in such assets. The portion of fund assets allocable to each plan was based upon the participant's account balance within each plan. Investment income for each fund was

MEDCO HEALTH SOLUTIONS, INC. 401(k) SAVINGS PLAN
NOTES TO FINANCIAL STATEMENTS

allocated to each plan based on the relationship of each plan's beneficial interest in the fund to the total beneficial interest of all plans in the fund.

On January 1, 2003 Medco Health Solutions, Inc. established a separate trust with Fidelity Management Trust Company ("Fidelity") and transferred the assets of the Plan from the Master Trust to the newly established trust.

Contributions

Each year, participants may contribute an amount up to 15% of base compensation, as defined by the Plan (up to 10% if a highly compensated employee as defined by the IRC) subject to certain limitations under the IRC. Participants direct the investment of their contributions into various investment options offered by the Plan, with a minimum investment of 1% in any investment option. Fidelity is the trustee of the Plan. The Company matches 100% of employee contributions for the first 3% of base compensation deferred and 50% of employee contributions for the next 3% deferred. Participants direct the investment of all Company matching contributions in any of the available investment options. Also, the Economic Growth and Tax Relief Reconciliation Act of 2001 permits "catch-up" contributions that are designed to provide individuals age 50 and above with an additional pre-tax retirement savings opportunity. As such, effective July 1, 2002, eligible participants in the Plan were able to contribute an additional \$1,000 for 2002 and \$2,000 for 2003. The limit for this "catch-up" contribution increases by \$1,000 each year until it reaches \$5,000 per year in 2006.

The Company periodically reviews the investments offered by the Plan and as a result from time to time may change the investment options.

Participant Accounts

Each participant's account is credited with the participant's contribution and the Company's matching contribution and allocation of Plan earnings and fees. The allocation is based on participants' account balances, as defined in the Plan document.

Vesting

Participants are vested immediately in their contributions plus actual earnings thereon. Participants vest in Company contributions as follows:

<u>Years of Service</u>	<u>% Vested</u>
Less than 2 years	0%
2 years but less than 3	25%
3 years but less than 4	50%
4 years but less than 5	75%
5 years or more	100%

MEDCO HEALTH SOLUTIONS, INC. 401(k) SAVINGS PLAN
NOTES TO FINANCIAL STATEMENTS

At December 31, 2003 and 2002, forfeited non-vested accounts totaled \$2,818,069 and \$2,361,621, respectively. The Company will use forfeited non-vested accounts to reduce future Company contributions.

Participant Loans

Participants may borrow from their account balances with interest charged at the prime rate plus 1%. Loan terms range from one to five years or up to thirty years for the purchase of a primary residence. The minimum loan is \$1,000 and the maximum loan is the lesser of \$50,000 less the highest outstanding loan balance during the one year period prior to the new loan application date, or 50% of the participant's vested account balance less any current outstanding loan balance.

Payment of Benefits

In-service (which include hardship withdrawals) and termination distributions are made throughout the year in accordance with applicable Plan provisions.

(2) Summary of Significant Accounting Policies

Basis of Accounting

The accompanying financial statements are prepared using the accrual basis of accounting.

Use of Estimates

The financial statements are prepared in conformity with accounting principles generally accepted in the United States of America and, accordingly, include amounts that are based on management's best estimates and judgments. Actual results could differ from these estimates.

Investment Valuation and Income Recognition

Investment income (loss) from the Plan includes interest, dividends and net appreciation (depreciation) in market value of investments. Purchases and sales of securities are recorded on a trade-date basis. Dividend income is recorded on the ex-dividend date. The net appreciation (depreciation) in market value of investments is based on the beginning of the year market value or value at the time of purchase during the year and is included in the statement of changes in net assets available for benefits.

Participant loans are valued at cost which approximates fair value.

Contributions

Employee and Company matching contributions are recorded in the period in which the Company makes the payroll deductions from the participant earnings.

MEDCO HEALTH SOLUTIONS, INC. 401(k) SAVINGS PLAN
NOTES TO FINANCIAL STATEMENTS

Payment of Benefits

Benefits are recorded when paid.

Expenses

The costs of administering the Plan are borne by the Company.

Risks and Uncertainties

The Plan provides for various investment options in investment securities. Investment securities, in general, are exposed to various risks, such as interest rate, credit and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statements of net assets available for benefits.

(3) Investments

The following presents investments that represent 5% or more of the Plan's net assets as of year-end:

	<u>December 31,</u>	
	<u>2003</u>	<u>2002</u>
Merck Common Stock Fund	\$111,667,576	\$163,911,194
Fidelity Retirement Money Market Fund	\$ 52,884,739	\$ 45,748,058
T. Rowe Price Blue Chip Growth Fund	\$ 50,094,214	\$ 36,268,534
Janus Growth & Income Fund	\$ 28,880,197	\$ 20,446,259
Fidelity Low-Priced Stock Fund	\$ 26,277,423	\$ 13,631,615
Medco Health Stock Fund	\$ 25,778,778	\$ -

During 2003, the Plan's investments (including gains and losses on investments bought and sold, as well as held during the year) appreciated in value by \$26,908,346 as follows:

Mutual Funds	\$43,174,519
Merck Common Stock Fund	(20,520,594)
Medco Health Stock Fund	<u>4,254,421</u>
	<u>\$26,908,346</u>

(4) Related-Party Transactions

Certain Plan investments are shares of mutual funds managed by Fidelity. Because Fidelity is the trustee, these transactions qualify as party-in-interest transactions.

MEDCO HEALTH SOLUTIONS, INC. 401(k) SAVINGS PLAN
NOTES TO FINANCIAL STATEMENTS

Medco Health Solutions, Inc. is a party-in-interest to the Plan under the definition provided in Section 3(14) of ERISA. Therefore, Medco Health Stock Fund transactions qualify as party-in-interest transactions.

Merck & Co., Inc. was a party-in-interest to the Plan through August 19, 2003 under the definition provided in Section 3(14) of ERISA. Therefore, Merck Common Stock Fund transactions through that date qualify as party-in-interest transactions.

(5) Plan Termination

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA. In the event of Plan termination, participants will become fully vested in their account balances.

(6) Tax Status

The trust established under the Plan is qualified under the IRC as exempt from Federal income taxes and the Plan received a favorable determination letter from the Internal Revenue Service on August 20, 2003 indicating that it had been designed in accordance with applicable sections of the IRC.

(7) Other Matters:

Transfers in during 2003 consist primarily of transfers of \$365,150 between the Plan and the Merck & Co., Inc. Employee Savings and Security Plan.

Transfers out during 2003 consist of transfers of \$1,548,727 for employees who transferred out to the Merck & Co., Inc. Employee Savings and Security Plan.

(8) Master Trust:

As described in Note 1, prior to January 1, 2003, the assets of the Plan were commingled with the assets of other Merck plans in the Master Trust. At December 31, 2002, the Plan had a 12% interest in the Master Trust.

The net assets of the Master Trust were as follows:

	<u>December 31,</u> <u>2002</u>
Mutual Funds	\$1,472,422,521
Common Stock	1,651,008,624
Accrued interest & dividends	<u>10,375,281</u>
	<u>\$3,133,806,426</u>

MEDCO HEALTH SOLUTIONS, INC. 401(k) SAVINGS PLAN
Line 4i - SCHEDULE OF ASSETS (HELD AT END OF YEAR)
December 31, 2003

(a)	(b) Identity of Issue, Borrower, Lessor or Similar Party	(c) Description of Investment Including Maturity Date, Rate of Interest, Collateral, Par or Maturity Value	(d) Cost	(e) Current Value
*		Medco Health Stock Fund 2,229,998 units	\$ 21,140,041	\$ 25,778,778
**		Merck Common Stock Fund 7,005,494 units	110,180,197	111,667,576
	Capital Research Management Co.	American Funds Europacific Growth Fund 306,678 units	8,838,063	9,264,743
	American Century Investments	American Market Century Emerging Markets Fund 656,873 units	2,726,525	3,836,140
	Columbia Wanger Asset Managemet	Columbia Acorn Fund 474,922 units	8,771,312	10,714,248
	Fidelity Investments	Fidelity Dividend Growth Fund 698,664 units	18,435,983	19,073,526
		Fidelity Equity Income Fund 190,608 units	8,784,835	9,482,727
		Fidelity Low-Priced Stock Fund 751,213 units	20,747,811	26,277,423
		Fidelity Mid-Cap Stock Fund 370,464 units	6,950,802	7,990,908
		Fidelity Retirement Money Market Fund 52,884,739 units	52,884,739	52,884,739
		Spartan Government Income Fund 244,591 units	2,703,199	2,695,390
		Spartan US Equity Index Fund 386,353 units	15,042,252	15,226,173
	Franklin Templeton Investments	Franklin Small-Midcap Growth Fund 503,314 units	15,923,624	15,210,160
	Janus Capital Group	Janus Enterprise Fund 69,521 units	1,957,930	2,166,959
		Janus Growth & Income Fund 998,969 units	28,824,881	28,880,197
	Pacific Investment Management Co.	Pimco Foreign Bond Fund 118,889 units	1,256,972	1,235,258
		Pimco Long-Term US Government Fund 639,013 units	7,013,499	6,914,117
		Pimco Total Return Fund 1,640,108 units	17,447,250	17,565,557
	Putnam Investments	Putnam Global Equity A Fund 63,371 units	383,800	472,749
		Putnam International Capital Opportunities Fund 86,230 units	1,392,774	1,629,748
	T. Rowe Price	T. Rowe Price Blue Chip Growth Fund 1,760,781 units	47,883,554	50,094,214
	The Vanguard Group	Vanguard Asset Allocation Fund 275,587 units	5,256,308	6,217,243
*	Participants' Loans	Interest rates ranging from 5.0% to 10.5% and with maturities through 2033	11,337,457	11,337,457
		Total	415,883,808	436,616,030

* Denotes a party-in-interest to the Plan.

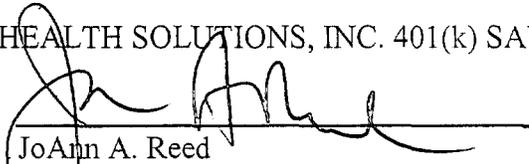
** Denotes a party-in-interest to the Plan through August 19, 2003

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the members of the Employee Benefits Committee have duly caused this annual report to be signed on its behalf by the undersigned thereunto duly authorized.

MEDCO HEALTH SOLUTIONS, INC. 401(k) SAVINGS PLAN

By:

A handwritten signature in black ink, appearing to read "JoAnn A. Reed", written over a horizontal line.

JoAnn A. Reed
Senior Vice President, Finance and
Chief Financial Officer, Medco Health Solutions, Inc.
Member, Employee Benefits Committee

June 21, 2004

Medco Health Solutions, Inc. 401(k) Savings Plan

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Document</u>	<u>Page</u>
23.1	Consent of Independent Registered Public Accounting Firm	12
99.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	13
99.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	14

PricewaterhouseCoopers LLP
400 Campus Drive
P. O. Box 988
Florham Park NJ 07932
Telephone (973) 236 4000
Facsimile (973) 236 5000

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 filed on August 13, 2003 (Commission File No. 333-107936) of Medco Health Solutions, Inc. of our report dated June 24, 2004 relating to the statements of net assets available for benefits and the related statement of changes in net assets available for benefits for the fiscal year ended December 31, 2003, which appear in this Annual Report on Form 11-K.

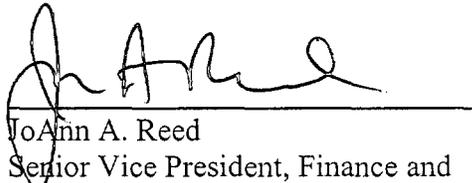


Florham Park, NJ
June 24, 2004

Certification

In connection with the Annual Report of the Medco Health Solutions, Inc. 401(k) Savings Plan (the "Plan") on Form 11-K for the period ended December 31, 2003 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, JoAnn A. Reed, Senior Vice President, Finance, and Chief Financial Officer, Medco Health Solutions, Inc. and Member, Employee Benefits Committee, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the net assets available for benefits and the changes in net assets available for benefits of the Plan.

Dated: June 21, 2004

A handwritten signature in black ink, appearing to read "JoAnn A. Reed", is written over a solid horizontal line.

JoAnn A. Reed
Senior Vice President, Finance and
Chief Financial Officer, Medco Health Solutions, Inc.
Member, Employee Benefits Committee

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.

Certification

In connection with the Annual Report of the Medco Health Solutions, Inc. 401(k) Savings Plan (the "Plan") on Form 11-K for the period ended December 31, 2003 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Karin Princivalle, Senior Vice President, Human Resources, Medco Health Solutions, Inc. and Chair, Employee Benefits Committee, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the net assets available for benefits and the changes in net assets available for benefits of the Plan.

Dated: June 21, 2004



Karin Princivalle
Senior Vice President, Human Resources, Medco Health
Solutions, Inc.
Chair, Employee Benefits Committee

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.