Supplementary material

Text sets included in the survey, and how these text sets were developed.

Nine text sets were included in the survey. This appendix describes the text sets and how they were developed. All text sets (translated from Dutch to English) can be found in Table 4.

Every text set differed in one message feature. These message features were derived from literature about health literacy and monitor-blunter coping style, and we hypothesized that preferences for these message features would relate to these information-processing styles. To derive the message features that we hypothesized to be related to health literacy, we assessed the United States Department of Health and Human Services' guide to writing (and designing) easy-to-use health websites (US Department of Health and Human Services, 2010). For message features that we hypothesized to be related to monitor-blunter coping style, we assessed the features described or used in articles of studies that evaluated whether messages that matched participants' coping styles were more effective in changing health behaviour or adopting preventive behaviour (Latimer et al., 2005; Williams-Piehota et al., 2005; Williams-Piehota et al., 2009).

All of the text sets and their corresponding message features are described below. Text sets 1 to 4 were hypothesized to be related to health literacy, and text sets 5 to 9 to monitor-blunter coping style. If possible, the texts contained the same information in the same order for every pair or trio, and only differed in tone and style. For every attribute, message texts were derived from existing information sources about CHD or medication used in the treatment of CHD from the Royal Dutch Pharmacists Association (Koninklijke Nederlandse Maatschappij ter bevordering der Pharmacie, 2012). This information is used in the Netherlands to inform patients about the medication they receive for CHD.

1. *Language style:* Messages varied in whether they were written in layperson's language or medical language. To transform the original message into layperson's language, both medical terminology and words that could be perceived as difficult were simplified into layperson's language, and long sentences were divided into two parts. The original message was used for the message with medical language.
2. *Level of abstractness:* Messages varied in whether the recommendations had a high or a low level of abstractness. The original message was used for the message with a high level of abstractness. The information was about when to take medication and what to do when one forgot to take a dose. To construct the message with a low level of abstractness, concrete information about when to take which medication dose was added (i.e. 'in the morning after breakfast' and 'after your evening meal' versus 'take a low dose and a high dose every day'). Furthermore, concrete information was added about until when one could take a forgotten dose (i.e. 'you can still take this pill until four hours before your evening meal' versus 'only take the pill you forgot if there are still more than four hours left before you would normally take the next pill').
3. *Actionability:* Recommendations varied in whether they were written in actionable or non-actionable language. The original message was used for the non-actionable message. The message informed the respondent about medication to lower cholesterol levels and about healthy behaviour that could decrease high cholesterol levels. The original message was adapted into an actionable text by giving a step-by-step overview of recommendations for a healthy lifestyle. Instead of advising the reader to 'eat fats in moderation', the actionable recommendation read, 'eat foods that are low in fat, such as dairy products made from semi-skimmed or skimmed milk and reduced-fat cheese'.

4. *Source of information:* Message content was written to evoke the suggestion that the source was scientific, from a physician's clinical experience, or from a patient's experience. The original message was used for the scientific source text, and above this text we added, 'Information based on scientific research, from the Dutch College of General Practitioners (NHG)'. For the message based on a patient's experience, we used a shortened version of a story from the Dutch patient association for cardiovascular disease (De Hart&Vaatgroep, 2009). Finally, the original message for the scientific source text was rewritten from the perspective of a cardiologist. For example, we adapted the text with sentences like 'I always treat these people' and 'as a cardiologist I see that people with'.
5. *Temporal perspective (current or future situation):* Messages varied in that the recommendations only contained the short-term effects of a treatment or only contained information on what someone could expect from the treatment in the long term. The short-term and long-term effects of medication for cardiac arrhythmia were cut from the originally selected information, and used for the separate messages. For example, the short-term effects message explained that, because the medication slows down the heart rate, a patient will feel less dizzy or short of breath. The other long-term text explained that, because the heart rate slows down, the risk of developing blood clots decreases over time.
6. *& 7. Level of disease- or treatment-specific information provided:* Messages varied in the degree of detail provided; messages that were more concise did not contain detailed information about how the heart functioned or exactly how the medication worked. Two separate text pairs that varied in the degree of detail were developed and included in the survey. The subject of the first text pair was the heart function, and the other text pair was about medication. In both cases, the original message was used for

the more detailed message. These original messages were adapted into the more concise message by deleting all information that did not describe the functioning of the heart or medication in general. For example, for the concise message, all information that specifically explains what the various sorts of medication for a myocardial infarction do within the heart was deleted.

8. *Explicitly threatening content:* Messages varied in whether they contained information about the threats and risks of medication (side effects). The original message was used for the text that included the threatening information. For the text that contained no information about threats and risks, all information about side effects, consequences of high blood pressure (e.g. that it damages the blood vessels), and explicit references to the risks a person faces if they have a certain disease were deleted.
9. *Cues (positive or negative):* The messages varied in whether they focused on the advantages of physical exercise (positive cues) or on the ability of physical exercise to reduce a particular health risk (negative cues). The original message was used for the text that focused on reducing health risks. A website (Stallinga, 2009) was used as the inspiration for the text that contained the advantages of exercise. All references in the original message about reducing health risks were rewritten to show the advantages of exercise for the body and how it makes a person feel.

After the texts were adapted, both a cardiologist and a member of the Royal Dutch Pharmacists Association checked all of the text sets for the accuracy of the medical information.

Table 4

All text sets used in the survey. Text sets 1-4 were hypothesized to differ in fit for persons with adequate or inadequate health literacy; text sets 5-9 were hypothesized to differ in fit for a monitoring or blunting coping style.

	Text 1	Text 2	Text 3
1. Language style: layperson's language (Text 1) or medical language (Text 2)	Your doctor has given you aspirin. You are getting this because you had a heart attack. During a heart attack, part of the heart doesn't get enough blood. There are blood vessels in the body that supply the heart with blood. A heart attack occurs when there is a blood clot in one of the blood vessels in the heart. Aspirin keeps such blood clots from forming in the blood vessels.	Your doctor has prescribed Acetylsalicylic Acid Cardio for you because you had a myocardial infarction. During a myocardial infarction part of the heart doesn't get sufficient blood because of a blood clot in one of the coronary arteries in the heart. Acetylsalicylic Acid is an anticoagulant, and inhibits the formation of blood clots in the blood vessels.	
2. Level of abstractness:	Because you have familial	Because you have familial	

low (Text 1) or high (Text 2)	hypercholesterolaemia, your doctor has prescribed the cholesterol-lowering drug simvastatin for you. *When?* You should take the 20 mg dose in the morning after breakfast, and the 40 mg dose after your evening meal. *What should I do if I forget a dose?* It's important to take simvastatin every day at the same time. But if you should happen to forget a dose: - Did you forget your morning pill? Then you can still take this pill until four hours before	hypercholesterolaemia, your doctor has prescribed the cholesterol-lowering drug simvastatin for you. *When?* You should take a low dose and a high dose every day. *What should I do if I forget a dose?* It's important to take simvastatin on a regular basis. But if you should happen to forget a dose: Only take the pill you forgot if there are still more than four hours left before you would

	your evening meal. Otherwise skip the pill you forget to take. - Did you forget your evening pill? Then you can still take this pill until four hours before breakfast. Otherwise skip the pill you forgot to take.	normally take the next pill.

3. Actionability: non-actionable recommendations (Text 1) or actionable recommendations (Text 2)	Because your cholesterol or blood lipid levels are too high, your doctor has prescribed the cholesterol-lowering drug simvastatin for you, to be taken once a day. In addition, a healthy lifestyle can lower cholesterol levels and the risk of cardiovascular disease.	Because your cholesterol or blood lipid levels are too high, your doctor has prescribed the cholesterol-lowering drug simvastatin for you. Take this drug every day. In addition, by having a healthy lifestyle you can help lower your cholesterol levels and the risk of cardiovascular disease.
	A healthy lifestyle consists of a healthy diet, not smoking, moderate alcohol use, and physical exercise. The recommendations advise eating fats in moderation, avoid saturated fats, and, as much as possible, using	Recommendations for a healthy lifestyle: • Eat foods that are low in fat, such as dairy products made from semi-skimmed or skimmed milk and reduced-fat cheese. • Avoid cream, butter, regular margarine, full-

unsaturated rather than saturated fats. In addition, quitting smoking generally offers more health benefits than lowering cholesterol levels does. Physical exercise can also result in a healthy weight. Excessive alcohol use should be avoided.	fat dairy products, full-cream cheese, fatty meats, cakes and pastries, biscuits, and snacks. • Eat fish and nuts on a regular basis. • Use low-fat margarine and vegetable oil instead of regular margarine and butter. • Don't drink more than two alcoholic beverages a day. • Don't smoke. • Exercise or play sports at least five days a week for 30 minutes.
Medication Simvastatin is also prescribed to lower cholesterol levels.	*Medication* To lower your cholesterol level and keep it low, take simvastatin every day.

4. Source of information: physician's experience (Text 1), patient's experience (Text 2), or scientific research (Text 3)	Dr. Hareld Kemps from the Máxima Medical Centre: 'As a cardiologist, I see that people with familial hypercholesterolaemia (FH) don't feel sick. I always treat these people with simvastatin first. For most people with FH, simvastatin works well and is tolerated well. However, because they can't tell if it's having an effect, I test their blood regularly. I see that treatment compliance can be problematic with this kind of medication, because people can't tell what simvastatin is doing. And yet it's	Jeanet, a woman of 40 with familial hypercholesterolaemia (FH), tells her story: 'I have what is known as familial hypercholesterolaemia. I'm being treated for a disease even though I don't feel sick. I take a medicine called simvastatin. This works well for me, although I don't notice what it's doing. Because of this, my blood is tested on a regular basis. The fact that I don't notice what it's doing can make it hard to take the medicine. In spite of this, I keep taking it every day, because I know that	Information based on scientific research, from the Dutch College of General Practitioners (NHG): People with familial hypercholesterolaemia (FH) have no immediate symptoms. People with FH are always treated with a cholesterol-lowering drug. Simvastatin is a frequently prescribed cholesterol-lowering drug. You won't notice much of an effect when taking this medicine. Only a blood test can show whether it is working. Research has shown that when the effectiveness of a

	important that people with FH keep taking their medicine every day, because it considerably reduces the risk of cardiovascular disease.'	otherwise I could have a heart attack, just like my father.'	medicine one is taking to prevent something in future cannot be felt, treatment compliance is poor. Still, to be most effective, simvastatin must be taken every day. Research has shown that using cholesterol-lowering drugs considerably reduces the risk of cardiovascular disease.
5. Temporal perspective (current or future situation): current situation (Text 1) or future situation (Text 2)	Your doctor has prescribed a beta blocker called sotalol for you because you have heart rhythm problems. Beta blockers regulate the heart rate and quickly correct various heart rhythm disorders. As a result, the heart beats more slowly. This	Your doctor has prescribed a beta blocker called sotalol for you because you have heart rhythm problems. Beta blockers regulate the heart rate. Because the heart beats more slowly, this will reduce the risk of developing blood clots. This	

	means you will feel less agitated, anxious, dizzy, or short of breath.	reduces the risk of a heart attack or stroke in the future.
6. Level of disease-specific information provided: low (Text 1) or high (Text 2)	During a heart attack, part of the heart doesn't get enough blood. This is usually caused by a blood clot in one of the blood vessels that supply the heart with blood.	During a heart attack, part of the heart doesn't get enough blood. This is usually caused by a blood clot in one of the blood vessels that supply the heart with blood.
	The blood vessel becomes blocked, which keeps part of the heart from getting enough blood. This part of the heart then becomes damaged, and can no longer function properly.	This can also happen when a piece breaks off from a deposit of fatty material (a plaque) that has built up on the inner wall of an artery (also known as atherosclerosis). The blood vessel becomes blocked, which keeps part of the heart from getting enough blood.

	It loses its pumping capacity and gradually dies off. This part of the heart becomes damaged, and can no longer function properly. A scar is formed.

7: Level of treatment-specific information provided: low (Text 1) or high (Text 2)	Medicines prescribed after a heart attack help prevent another heart attack and relieve the symptoms of angina pectoris (chest pain), heart rhythm problems, and heart failure.	Medicines prescribed after a heart attack help prevent another heart attack caused by a new blood clot, and relieve the symptoms of angina pectoris (chest pain), heart rhythm problems, and heart failure.
	These drugs include: anticoagulants, angiotensin-converting enzyme (ACE) inhibitors, beta blockers, and calcium blockers.	These drugs include: anticoagulants, angiotensin-converting enzyme (ACE) inhibitors, beta blockers, and calcium blockers. - Anticoagulants inhibit the formation of blood clots, and by doing so reduce the risk of a blood vessel becoming blocked. - ACE inhibitors lower

	blood pressure and improve the heart's pumping capacity. - Beta blockers lower blood pressure, slow the heart rate, and decrease the amount of oxygen needed by the heart. - Calcium blockers lower blood pressure, decrease the amount of oxygen needed by the heart, and have an effect on the heart rate.

8. Explicitly threatening content: message with explicitly threatening content (Text 1) or message with no threatening content (Text 2)	People with high blood pressure generally don't have any symptoms. Although high blood pressure is not a disease, it can damage your blood vessels. Damaged blood vessels increase the risk of cardiovascular disease, including stroke, chest pain (angina pectoris), and heart failure.	People with high blood pressure generally don't have any symptoms. When blood pressure is elevated, the blood flows through the blood vessels with too much force. It's important for your health that you keep your blood pressure low.
	As part of the treatment for your high blood pressure, your doctor has prescribed lisinopril for you. It is important to take lisinopril every day. Only then can this medicine provide you with the best possible	As part of the treatment for your high blood pressure, your doctor has prescribed lisinopril for you. It is important to take lisinopril every day because it lowers your blood pressure and improves your heart's

	protection against cardiovascular disease. In addition to the desired effect, this medicine can also have side effects. The most important side effects are decreased kidney function, headache, gastrointestinal complaints, dizziness, and cough.	pumping capacity. Ask your doctor if you think you are experiencing side effects.

9. Cues (positive or negative): promotion or prevention: reducing risks by exercise (Text 1) or advantages of exercise (Text 2)	Physical exercise is healthy. It reduces the risk of cardiovascular disease, especially when the heart and blood vessels are already weakened. In spite of this, most people still don't get enough exercise.	Physical exercise is healthy. It results in a stronger heart and blood vessels, even if they have already been weakened. In addition, physical exercise helps put people in a positive frame of mind and to feel strong.
	Exercising every day reduces the risk of such things as heart attack and other cardiovascular diseases.	Physical exercise improves health, and the body becomes stronger because the immune system is strengthened. It's healthy because it
	Exercise improves the flexibility of the blood vessels and the condition of the blood vessel walls. In addition, waste products are eliminated	increases fat metabolism, strengthens muscle tissue, improves body fat distribution, and increases oxygen uptake. As a result,

	more efficiently. All of this serves to decrease the risk of blood vessels becoming blocked.	people feel more fit and have more stamina. And all of this is good for the heart and blood vessels.

References in this Appendix

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