domised controlled trials, our systematic review lends support to the hypothesis that NSAIDs may protect against the development of Alzheimer's disease. The appropriate dose, duration, and ratios of risk to benefit are still unclear.

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Prevalence of five common clinical abnormalities in very elderly people: population based cross sectional study

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As the prevalence of disease rises with age, the number of people with unidentified abnormalities is also likely to increase. We assessed the number of previously known and newly identified patients with anaemia, diabetes mellitus, thyroid dysfunction, atrial fibrillation, and hypertension in a population based sample of 85 year old people.

Participants, methods, and results

The study design and baseline characteristics of the 599 participants in the Leiden 85 plus study have been published elsewhere.[1] All participants gave informed consent. We used standard laboratory techniques to identify anaemia, diabetes mellitus, and thyroid dysfunction. Atrial fibrillation, including flutter, was identified on an electrocardiogram. Hypertension was identified by averaging two standardised blood pressure readings measured with a sphygmomanometer at two separate visits. For 40 people a blood sample, electrocardiogram, or blood pressure measurement was not available. Furthermore, we excluded all 31 residents of nursing homes because they do not voluntarily consult a general practitioner but are continuously monitored by a nursing home physician.

We obtained the medical history of the 528 remaining people from their general practitioner. By including a local general practitioner (JG) in our research team, we managed to get all 60 general practitioners in Leiden to cooperate with us. Moreover, all pharmacies in Leiden provided detailed information on prescribed drugs for all patients. All drugs were encoded according to the WHO Anatomical Therapeutic Chemical (ATC) classification.[2]

Abnormalities were considered known when a positive medical history was present or when patients were currently using one of the following ATC coded drugs: B03 for anaemia, A10 for diabetes mellitus, H03 for thyroid dysfunction, B01AA04/B01AA07 combined with C01AA05 for atrial fibrillation, or C02, C03, C07, C08, or C09 for hypertension.

The definitions for newly identified clinical abnormalities were: haemoglobin <130 g/l (<8.1 mmol/l) in men or <120 g/l (<7.5 mmol/l) in women for anaemia[3]; non-fasting serum glucose concentrations >11.0 mmol/l for diabetes mellitus; serum thyroid stimulating hormone <0.3 mU/l and serum free thyroxin >24 pmol/l (hyperthyroidism) or thyroid stimulating hormone >4.8 mU/l and free thyroxin <10 pmol/l (hypothyroidism) for thyroid dysfunction; Min-

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Number (percentage) of people previously known and newly identified with clinical abnormalities in population of 528 people aged 85 years and their contact with general practitioner in year before study

	Abnormality		No GP contact	
Clinical abnormality	Known	Newly identified	Known	Newly identified
Anaemia	38 (24)	118* (76)	0/38 (0)	8/118 (7)
Diabetes mellitus	77 (90)	9 (10)	4/77 (5)	0/9 (0)
Thyroid dysfunction	32 (84)	6 (16)	3/32 (9)	0/6 (0)
Atrial fibrillation	32 (58)	23 (42)	0/32 (0)	5/23 (22)
Hypertension	304 (81)	73 (19)	15/304 (5)	7/73 (10)

*Mean corpuscular volume <80 fl in six participants and >100 fl in six participants.

nesota codes 8-3-1 or 8-3-2[4] for atrial fibrillation or flutter; and systolic pressure >160 mm Hg or diastolic pressure >95 mm Hg for hypertension.[5]

Among the 528 participants 38 were known to have anaemia, 77 had diabetes mellitus, 32 had thyroid dysfunction, 32 had atrial fibrillation, and 304 had hypertension (table). We newly identified 118 with anaemia, 9 with diabetes mellitus, 6 with thyroid dysfunction, 23 with atrial fibrillation, and 73 with hypertension (table). Over 90% of all participants, except for those with newly identified atrial fibrillation, had consulted their general practitioner at least once in the year before the study.

Comment

Using information from general practitioners and pharmacy records combined with five simple and readily available procedures we have obtained reliable estimates of the prevalence of five common clinical abnormalities in very elderly people. We found a considerable number with previously undetected anaemia and hypertension but fewer with previously undetected thyroid dysfunction, atrial fibrillation, and diabetes mellitus. We have shown that our criteria for anaemia, diabetes mellitus, thyroid dysfunction, and hypertension are adequate for elderly people and can serve as guidelines for clinicians treating older patients. Experienced staff reviewed all automated interpretations and codings of electrocardiograms for atrial fibrillation so we consider that our interpretation of this abnormality is completely reliable. In conclusion, we have shown that it is feasible to use these investigative procedures in an elderly population to provide important quantitative information for future discussions on screening elderly people.

Contributors: AJMdC, JG, and RGJW designed the study. AJMdC and YKOT performed the statistical analysis. PWM analysed ECG recordings. All authors interpreted the results and contributed to writing the paper. AJMdC is guarantor for the study.

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Longevity and carrying the C282Y mutation for haemochromatosis on the HFE gene: case control study of 492 French centenarians

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Hereditary haemochromatosis is a common autosomal recessive disorder of iron metabolism. Most patients are homozygous for a C282Y mutation in the HFE gene. This mutation is frequent in northern Europe, where one in five to ten people are carriers. People who are heterozygous for the C282Y mutation have slightly but significantly higher values for serum iron and transferrin saturation and are less likely to have anaemia because of iron deficiency.[1 2]

Iron promotes the generation of free radicals, which leads to mutagenesis, atherosclerosis, inflammation, and bacterial growth. Therefore, genotypes that increase the concentrations of iron for transport and storage may be associated with an increased risk for common diseases, such as cancers and cardiovascular diseases, and for inflammatory and infectious conditions. Other studies, which investigated the associations of C282Y heterozygosity with morbidity, found conflicting results, and consensus has not been reached about whether C282Y is associated with the development of extrahepatic cancers, coronary heart disease, or diabetes.[1 2]

We hypothesised that people who are heterozygous for the C282Y mutation are under-represented in a centenarian population because many would have died younger from life threatening diseases which are more prevalent in C282Y heterozygotes.

Participants, methods, and results

We recruited 492 French centenarians, who consented personally, through the Chronos Project at the Foundation Jean Dausset (Centre d'Etude du Polymor-