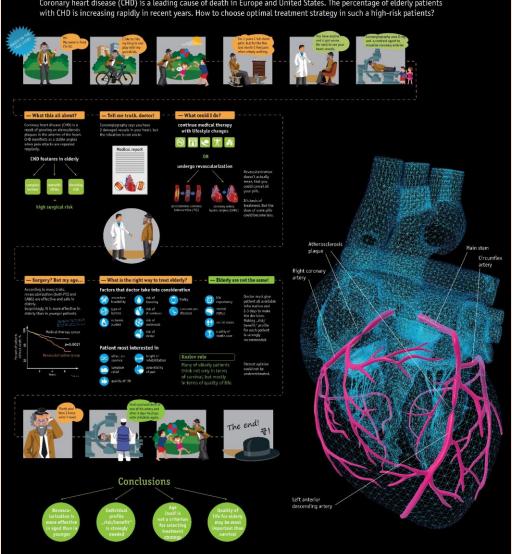# Почему ваш постер не работает

Александр Богачев
визуализация данных
и дата-сторителлинг на
«Дата-журналистике» ВШЭ

Treating elderly patients with stable angina: are pills enough?

K. L. Kozlov[1, 2], A. A. Bogachev[1], I. G. Oleksyuk[2]

[1]St. Petersburg Institute of Bioregulation and Gerontology, Northwestern Branch, Russian Academy of Medical Sciences, Russia
[2]Kirov Military Medical Academy, St. Petersburg, Russia

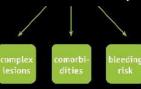Coronary heart disease (CHD) is a leading cause of death in Europe and United States. The percentage of elderly patients with CHD is increasing rapidly in recent years. How to choose optimal treatment strategy in such a high-risk patients?

— What this all about?

Coronary heart disease (CHD) is a result of growing an aterosclerosis plaques in the arteries of the heart. CHD manifests as a stable angina when pain attacks are repeated regularly.

CHD features in elderly

Complex lesions | Comorbidities | Bleeding risk

= **high surgical risk**

— Tell me truth, doctor!

Coronagiography says you have 2 damaged vessels in your heart, but the situation is not acute.

Medical report

— What could I do?

continue medical therapy with lifestyle changes
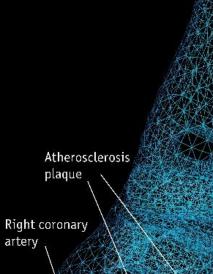
OR

undergo revascularization

percutaneous coronary intervention (PCI) | coronary artery bypass surgery (CABG)

Revascularization doesn't actually mean, that you could cancel all your pills.

It's basis of treatment. But the dose of some pills could become less.

— Surgery? But my age...

According to many trials, revascularization (both PCI and CABG) are effective and safe in elderly.
Surprisingly, it is more effective in elderly than in younger patients.

Medical therapy group

p=0.0027

Revascularization group

— What is the right way to treat elderly?

Factors that doctor take into consideration

procedure feasibility | risk of bleeding | frailty
type of lesions | risk of thrombosis | concomitant diseases
ischemic burden | risk of restenosis
| risk of stroke |

life expectancy | Doctor must give patient all available information and 2-3 days to make the decision. Making „risk/benefit" profile for each patient is strongly recommended.
mental status
social status
quality of health care

Patient most interested in

effect on survival | length of rehabilitation
symptom relief | potentiality of pain
quality of life

Patient opinion could not be underestimated.

— Elderly are not the same!

Kozlov rule

Many of elderly patients think not only in terms of survival, but mostly in terms of quality of life.

Thank you! Now I know what I need.

Fred received stent in one of his artery and after 3 days he plays with childkids again.

The end!

Conclusions

Revascularization is more effective in aged than in younger | Individual profile „risk/benefit" is strongly needed | Age itself is not a criterion for selecting treatment strategy | Quality of life for elderly may be most important than survival

Atherosclerosis plaque
Main stem
Circumflex artery
Right coronary artery
Left anterior descending artery

References.
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Hi! My name is Fred. I'm 92.

I like to ride my bicycle and play with my grandkids.

For 7 years I felt chest pain. But for the few last month I feel pain when simply walking.

You have angina and it got worse. We need to see your heart vessels.

Coroangiography uses X-ray and a contrast agent to visualise coronary arteries

— What this all about?

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Surprisingly, it is more effective in elderly than in younger patients.

Medical therapy group

p=0.0027

Revascularization group

Percent of patients without death, %
100
80
60
40
20

Years
2 4 6

— What is the right way to treat elderly?

Factors that doctor take into consideration

- procedure feasibility
- type of lesions
- ischemic burden
- risk of bleeding
- risk of thrombosis
- risk of restenosis
- risk of stroke
- frailty
- concomitant diseases
- life expectancy
- mental status
- social status
- quality of health care

Doctor must give patient all available information and 2-3 days to make the decision. Making „risk/ benefit" profile for each patient is strongly recommended.

Patient most interested in

- effect on survival
- symptom relief
- quality of life
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- Individual profile „risk/benefit" is strongly needed
- Age itself is not a criterion for selecting treatment strategy
- Quality of life for elderly may be most important than survival

Right coronary artery

artery

Left anterior descending artery

Это безумие

Accuracy of marginal fit of single crowns prepped by PREP-GUIDE : Preliminary study

Ui- jung Chin*, DMD, MSc, Hee-yong Ahn**, DDS, MSD, Phd, Oh-dal Kowm***, DDS, MSD, Phd, Sang-Wan Shin*,DDS, MPH, Phd, MSc
*Institute for Dental Research Center, Korea University, ** Ahn hee yong Dental Clinic, ***Dentapia Dental Clinic

INTRODUCTION

The marginal fit and the amount of tooth reduction in a full crown preparation are important factors that determine the lifespan of the crown restoration. Over-reduction and improper marginal fit can lead to increased tooth sensitivity, caries development, and progression of periodontal disease. The ability to control the location and morphology of the marginal fit of the crown as well as the amount of tooth reduction necessary using computer programs would allow for easier and more accurate crown preparations. CAD/CAM technology has been widely used in the fabrication of conventional dental prostheses including zirconia and gold crowns, and partial dentures. It has also been used for the placement of implants as well as for the fabrication of implant prostheses. However, until recently, CAD/CAM technology has been limited to the scanning of already prepped or implanted fixtures or abutment teeth and fabricating a crown to fit over these prepped fixtures or abutments. Prep-guide is a tool that aims to provide same-day crown and bridge prep and delivery using 3-dimensional simulation designing of a prep, which is then CAD/CAM-milled to be used as a model for reproduction in the patient's mouth. This tool's ability to measure the range of marginal error of the prepped tooth will serve as the assessment of the practicality of this tool. May et al. reported the error of marginal fit of Procera Allceram crown is 70 microns, while Hertlein et al. reported it to be 60 microns or less for the Lava system. Although depending on the study and the materials used, the error of marginal fit reported varied, from current literature, it seems that 70 microns is the average error of crown marginal fit. In this study, a virgin tooth is scanned and a corresponding prep-guide is fabricated using KDD's Digital Prep Guide™ technology. The prep-guide is used to prep the tooth to predetermined measurements, and a zirconia crown is seated on the prep. The error of marginal fit is then measured and analyzed.

OBJECTIVE

To assess the accuracy of marginal fit of a tooth that has been prepped using prep-guide.

MATERIALS & METHOD

1. Scanning the model
An un-prepped maxillary right first molar (Nissin, Japan) is scanned using a laboratory scanner (Organ, USA).

2. Preparation, simulation and prep-guide fabrication
Using KKDD's Digital Prep Guide™, axial wall taper of the tooth to be prepped is set to 2 degrees, the amount of reduction is set to 1mm, and shoulder margin type is set to a chamfer margin. After these dimensional criteria is determined and set, rapid prototyping (RP) (Objet Connex 500, Objet Geometries,Ltd, Israel) is used to fabricate the prep-guide (Figure 1).

3. Crown fabrication
Using Digital Prep™'s 3-D simulation of a prepped tooth, a zirconia (Metoxit-AG, Metoxit Dental, Switzerland) crown is designed using CAD/CAM, milled (DiamonDS, Datron AG, Germany), and sintered.

4) Tooth reduction
The prep-guide is placed on the tooth to be prepped. Preparation of the tooth is carried out by a specially designed handpiece (KDD prgn's, Dunamis Dental, Korea) and the tooth is reduced with chamfer shoulder margins (Figure 2).

5) Measuring marginal discrepancy
After seating and cementation of the crown, the margin is evaluated using a measuring microscope (100x magnification) in buccal, lingual, mesial, and distal aspects. Evaluation of marginal fit is divided into three categories depending on the size of marginal discrepancy detected: small (0-17 microns), medium (18-29 microns), and large (30 microns or greater). Only the largest open margin is noted for those teeth that fall in the "large" category, while both the largest and smallest sizes of open margins are noted for the "medium" and "small" categories (Figure 3 & 4, table 1).

Figure 1. Simulation of tooth prep. and fabricate Prep – Guide

Figure 2. Special Handpiece and tooth preparation.

Figure 3. Crown fitting.

Figure 4. Estimate marginal discrepancy. (Magnification X 100)

Lingual, Small number | Lingual, Small number | Lingual, Small number | Lingual, Small number
Distal, Small number | Distal, Medium number | Buccal, Large number | Buccal, Medium number

Table1. Marginal gap-accuracy (micron)

	Small-gap (0-17micron)	Medium-gap (18-29micron)	Large-gap (over 30micron)
Lingual	0 - 17	19 - 29	30
Distal	16 - 17	23	80
Buccal	0 - 8	18	35
Mesial	0	21 - 25	76
Average	8	21	55

RESULT

Results for marginal discrepancy showed that the maximum error average was 55 microns and the minimum error average was 8 microns. Marginal opening on the lingual was measured between 0-30 microns and on the buccal, 0-35 microns. The largest open margin was 80 microns detected on the distal. The average open margin was measured to be 30 microns or less.

DISCUSSION

The marginal fit of zirconia crowns varies with manufacturing company/labs and CAD/CAM machine used. Tinschert et al. reported 60.5-74.5 microns of marginal discrepancy in zirconia crowns, while in 2010, Abduo et al. reviewed the literature and concluded that the average marginal opening for zirconia crowns was 79.8 microns. This is within the clinically acceptable range of 100-200 microns of marginal discrepancy for dental crowns, and shows that CAD/CAM-milled zirconia crowns are accurate and suitable as dental prostheses. In our study, the maximum error average for marginal opening was 55 microns, with most areas measuring to approximately 30 microns or less. These measurements are similar in comparison to the results of previous studies, which supports the accuracy of tooth preparations using 3-D simulation preps.
The ability of Prep Guide technology to complete tooth preparation and final crown delivery in one visit allows for a comfortable, one-time operative appointment for older patients, especially those who may not be as mobile as younger patients. Also, using Prep Guide allows for greater accuracy of shaping and measuring shoulder margins and controlling the amount of tooth reduction, thereby offering minimally invasive prosthodontic therapy and prosthesis to geriatric patients with systemic conditions. However, new and variable experimental designs and follow-up studies are needed. Reports on the practical function of prep-guide crowns within the mouth will be needed.

CONCLUSION

The measured marginal discrepancy was on average 8-55 microns, which is similar to the marginal discrepancy of zirconia crowns that have been previously reported. This study's result demonstrates that the marginal discrepancy error created by computer-simulated tooth reduction is well within the acceptable error range for clinical use, and thus using a prep-guide modeled from the 3-D simulation should be clinically acceptable.

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1. Rekow EO. High-technology innovations and limitations for restorative dentistry. Dental Clinics of North America 1993;37:513-24.
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6. Tinschert J, Natt G, Mautsch W, Spiekerman H, Anusavice KJ. Marginal fit of alumina and zirconia based fixed partial dentures produced by CAD/CAM system. Oper Dent 2001;26:367-74.
7. Abduo J, Lyons K, Swain M. Fit of zirconia fixed partial denture: a systematic review. J Oral Rehabil 2010; 37: 866-876.
8. MacLean JW, Von Fraunofer JA. Estimation of cement film thickness by an in vivo technique. Br Dent J. 1971; Aug 3:131(3):107-11.

Clinical Case of Minimal Invasive Prosthesis (3 Units of Zirconia Bridge) Utilized by Prep-Guide

Before

After

1. Scanning and 3D Simulation
2. prep-guide design
3. Prep Guide
4.
5. Fabricated Prep Gide
6.
7. Zirconia Prosthesis

Title, formatted in sentence case (*Not Title Case* and *NOT ALL CAPS*), that hints at an interesting issue and/or methodology, doesn't spill onto a third line (ideally), and isn't hot pink

Colin Purrington

666 Teipai Street, Posterville, PA 19801, USA

Introduction

Your reader was mildly intrigued by the title, but you have exactly two sentences to hook them into reading more. So describe exactly what your interesting question is and why it really needed to be addressed. Gratuitous background information will cause them to walk away.

Typography research has shown that text is easier to read if you use a serif font such as Times. But use a non-serif font for title, headings, etc., to subtly tag them as different. Research has also shown that fully justified text (like this paragraph) is harder to read, so don't do this, even if it seems cool and professional looking.

Figure 1. A catchy photograph can help lure people to your otherwise boring poster. Yes, I risked my life getting this shot.

Materials and methods

Few people really want to know the gruesome details of what you've been up to, so be brief. And be visual. Use a photograph, drawing, or flow chart if possible, supplemented with only a brief overview of your procedure.

If you can somehow attach an object, an iPad, etc., that can involve viewers in active way, do so. Refer to the companion website (see bottom right section) for more ideas if you are creatively challenged.

Figure 2. Hand-drawn illustrations are preferable to computer-generated ones. Just bribe or flirt with an artist to get them to help you out. A photograph of you actually doing something might be nice.

Results

The overall layout in this arena should be visually compelling, with clear cues on how a reader should travel through the components. You might want a large map with inset graphs. Or have questions on left and answers with supporting graphs on right. Be sure to separate figures from other figures by generous use of white space. When figures are too cramped, viewers get confused about which figures to read first and which legend goes with which figure. Cramped content just looks bad, too. The big thing to remember is that a Results section on a poster does not need to look like a Results section on a manuscript, so feel free to be creative.

If you can add small drawings or icons to your figures, do so — those visual cues can be priceless aids in orienting viewers. And use colored arrows or callouts to focus attention on important parts of graphs. You can even put text annotations next to arrows to tell reader what's going on that's interesting in relation to the hypothesis test. E.g., "This outlier was most likely caused by contamination when I sneezed into tube." Also, don't be afraid of using colored connector lines to show how one part of a figure relates to another figure.

Figures are preferred but tables are sometimes unavoidable, like death. If you must include one, go to great efforts to make it look professional. Look in a respected journal and emulate the layout, line types, line thickness, text alignment, etc., exactly. A table looks best when it is first composed within Microsoft Word, then inserted as an Object. Use colored text or arrows to draw attention to important parts of the table.

Paragraph format is fine, but so are bullet lists of results:

- 9 out of 12 brainectomized rats survived
- Brainectomized rats ate less
- Control rats completed maze faster, on average, than rats without brains

This sample results section is way too wordy, in case you were wondering.

Do treatments differ in their effects?
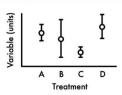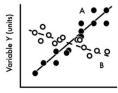
Figure 3. Legends can describe the experiment, answer the question, and even include statistics if you so choose (unlike a manuscript figure legend). And be brief.

Do As and Bs respond differently to X?

Figure 4. Label elements instead of relying on annoying keys that are defaults on most software. Add pictures of A and B if they are actually things (e.g., icons of aster and begonia flowers).

Are medians of treatment A and D different?
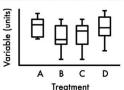
Figure 5. For the love of God, don't be tempted to reduce font size in figure legends, axes labels, etc. Your viewers are probably *most* interested in reading your figures and legends.

Conclusions

Conclusions should not be mere reminders of your results— that would be boring. You want to guide the reader through what you have *concluded* from the results, and you need to make the first several sentences understandable on their own and interesting…because many conference attendees will start reading this section first. If you don't hook them, they'll walk. These first several sentences should refer back, explicitly, to the burning issue mentioned in the introduction. (If you didn't mention a burning issue in the introduction, go back and fix that.)

A good conclusion will also explain how your conclusions fit into the literature on the topic. E.g., how exactly does your research add to what is *already* published on the topic? It's important to be humble and generous in this section, so assume that authors of previous literature may be at the conference, and further assume they are crabby and influential. You can also draw upon less formal types of context such as conversations you have had with smart and important people (God, personal communication).

Finally, you want to tell readers who have lasted this long what needs to be done next, and who should do it. E.g., are you taking the next logical step, or should another discipline follow up on your amazing result? It's OK to put a bit of personality into this ending because viewers expect posters to be personal, and if you're not actually standing there to convey your enthusiasm, your poster should be doing that for you.

If you have a graphical way to express the next iteration of your hypothesis, by all means include it. For example, you might make a graph of hypothetical data that shows an expected result in a future experiment. That's something you couldn't do in a traditional manuscript, but it's totally fine for a poster.

If you're curious, this poster has 876 words (just look in File Properties to get this statistic). Aim for 500 words. If you are above 1000 words, your poster will be avoided.

Literature cited

Bender, D.J., E.M Bayne, and R.M. Brigham. 1996. Lunar condition influences coyote (*Canis latrans*) howling. *American Midland Naturalist* 136:413-417.

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Society for the Study of Evolution. 2005. Statement on teaching evolution. < http://www.evolutionsociety.org/statements.html >. Accessed 2005 Aug 9.

[Don't just make up a format for your references — follow the standard citation format for your discipline exactly. Trust me, if you deviate from absolute perfection, the Type A citation police will be on you within a few minutes, and it won't be pretty. Note that you should not place a period after the journal name.]

Acknowledgments

Further information

More tips can be found on "Designing conference posters," at http://colinpurrington.com/tips/academic/posterdesign. Note that URLs should always be stripped of any automatic hyperlink formatting (right-click, then "remove hyperlink").

Defining and Measuring Elder Abuse in Canada: Toward a National Prevalence Study

Lynn MCDONALD[1], Anthony LOMBARDO[2], Marie BEAULIEU[3], Simon BIGGS[4], Gloria GUTMAN[5], Sandra HIRST[6], Ariela LOWENSTEIN[7] and Cynthia THOMAS[8]

[1]Factor-Inwentash Faculty of Social Work, University of Toronto; National Initiative for the Care of the Elderly, Canada; [2]National Initiative for the Care of the Elderly, Canada; [3]École de travail social, Faculté des lettres et sciences humaines, Université de Sherbrooke, Canada; [4]School of Social and Political Sciences, Faculty of Arts, University of Melbourne, Australia; [5]Gerontology Research Centre, Simon Fraser University, Canada; [6]Faculty of Nursing, University of Calgary, Canada; [7]Center for Research & Study of Aging, University of Haifa, Israel; [8]Westat, USA; Contact: alombardo@nicenet.ca

NICE — Initiative nationale pour le soin des personnes âgées / National Initiative for the Care of the Elderly

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We care together

www.nicenet.ca

Introduction

Elder abuse prevalence studies are important as they tell us the:

- Magnitude of the problem
- Distribution of the problem
- Trends over time
- Factors correlated with abuse and neglect
- Factors that predict abuse and neglect
- Targets for intervention

The size of the problem determines what legislation does or does not cover and it determines who is eligible for service and who is not (Biggs et al., 2009). Accurate data about abuse and neglect ensures accuracy in screening, classification, and appropriate treatment, if not prevention (McDonald et al., 2006). With updated prevalence data, practitioners, policy-makers and other decision-makers can develop evidence-based policy and practice.

The data on the prevalence of mistreatment of older adults in Canada are dated (Podnieks et al., 1989; Pottie Bunge, 2000). Updated prevalence data are urgently needed in Canada and the National Initiative for the Care of the Elderly (http://www.nicenet.ca) has been undertaking projects to provide these new estimates.

Defining and Measuring Elder Abuse: Preparatory Work

This project, funded by Human Resources and Skills Development Canada, conducted key sub-projects to prepare for a national prevalence study in Canada, including the development of conceptual definitions (see "Key Resources" section), the development and validation of a survey instrument to measure abuse and neglect, and ethical considerations in researching elder abuse prevalence. This section focuses on the development and validation of the survey instrument to be used in a national prevalence study of elder abuse and neglect in Canada.

Instrument Development & Validation

To test and validate the proposed prevalence questionnaire (in both English and French), cognitive testing and validation interviews were conducted:

Cognitive testing: 30 Anglophone and 10 Francophone interviews. The questionnaire was adjusted accordingly.

Survey Validation: Telephone interviews using the revised questionnaire were conducted with 267 older adults in Canada (55+, living in private dwellings) who volunteered to participate in the study.

Results:

Of the 267 community-dwelling respondents:

- 122 (46%) had experienced abuse in the past 12 months.
- Of those, 85 (69%) had experienced only one type of abuse.

"Known group" analyses showed…

- The "known abuse" group was more likely to respond positively to 20/25 specific types of abuse that were mentioned most frequently.
- The "known abuse" group also responded positively to 3.5 times more items than those in the known "non-abuse" group.

Experiencing Abuse and Feeling Abused

- Of the 122 (46%) respondents who responded "Yes" to one/several abuse items,
  › 78 (64%) felt abused
  › 44 (36%) did not feel abused
  › Evaluative coding was conducted to investigate the disparity: Why did these respondents not *feel* abused?
    • Reasons included not being a vulnerable adult; a non-trusted person was the perpetrator; it was only one incident; or they worked out their issues.

The analyses indicated that with a few revisions, the questionnaire successfully identified maltreatment and neglect and could be used for a national prevalence study in Canada.

Next Steps: National Survey on the Mistreatment of Older Adults in Canada

Purpose:

- Provide national estimates of the size of the problem in Canada
- Provide national estimates of who is at risk for abuse in Canada
- Provide data for decision-making on service provision and policy development in Canada

Methods:

Participants:

- Older adults (55 years+) living in private dwellings in Canada
- English- or French-speaking

Sampling:

- Total Sample: N=6,800
  › Base sample: n=5,000
  › Provincial oversampling: n=1,800
    • British Columbia (n=500), Ontario (n=550), Quebec (n=750)
    • Alberta (in progress)
- Random-digit dialing

Data Collection & Analysis:

- Computer-assisted telephone interviewing
- Data collection to begin in September 2013
- Analysis will provide descriptive statistics on the prevalence rate of types of elder abuse and neglect in Canada along with quantitative data on the risk factors, causes and dimensions of that abuse and neglect.
  › Evaluative coding will be conducted on abuse cases to investigate experiencing abuse and feeling abused

Knowledge Translation

A "pocket" tool summary of key results will be made available after analyses are completed. The results will be presented at academic conferences and published in academic journals.

Key Resources

Defining and Measuring Elder Abuse Synthesis Report (PDF)	Defining and Measuring Elder Abuse Conceptual Definitions	Download this poster! (PDF)
QR code	QR code	QR code

Contact: Anthony Lombardo, PhD, Project Manager • alombardo@nicenet.ca

References

Biggs, S., Erens, B., Doyle, M., Hall, J., & Sanchez, M. (2009). Abuse and neglect of older people: Secondary analysis of UK prevalence study. London: King's College London and the National Centre for Social Research.

McDonald, L., Collins, A., & Dergal, J. (2006). The abuse and neglect of adults in Canada. In R. Alaggia & C. Vine (Eds.), Cruel but not unusual (pp. 425–466). Waterloo, Ontario, Canada: Wilfrid Laurier University.

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Pottie Bunge, V. (2000). Abuse of older adults by family members. In V. Pottie Bunge & D. Locke (Eds.), Family violence in Canada: A statistical profile (pp. 27-30). Ottawa, ON: Statistics Canada.

Poster 1

Defining and Measuring Elder Abuse in Canada: Toward a National Prevalence Study

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- Targets for intervention

The size of the problem determines what legislation does or does not cover and it determines who is eligible for service and who is not (Biggs et al., 2009). Accurate data about abuse and neglect ensures accuracy in screening, classification, and appropriate treatment, if not prevention (McDonald et al., 2006). With updated prevalence data, practitioners, policy-makers and other decision-makers can develop evidence-based policy and practice.

The data on the prevalence of mistreatment of older adults in Canada are dated (Podnieks et al., 1989; Pottie Bunge, 2000). Updated prevalence data are urgently needed in Canada and the National Initiative for the Care of the Elderly (http://www.nicenet.ca) has been undertaking projects to provide these new estimates.

Defining and Measuring Elder Abuse: Preparatory Work

This project, funded by Human Resources and Skills Development Canada, conducted key sub-projects to prepare for a national prevalence study in Canada, including the development of conceptual definitions (see "Key Resources" section), the development and validation of a survey instrument to measure abuse and neglect, and ethical considerations in researching elder abuse prevalence. This section focuses on the development and validation of the survey instrument to be used in a national prevalence study of elder abuse and neglect in Canada.

Instrument Development & Validation

To test and validate the proposed prevalence questionnaire (in both English and French), cognitive testing and validation interviews were conducted:

Cognitive testing: 30 Anglophone and 10 Francophone interviews. The questionnaire was adjusted accordingly.

Survey Validation: Telephone interviews using the revised questionnaire were conducted with 267 older adults in Canada (55+, living in private dwellings) who volunteered to participate in the study.

Results:

Of the 267 community-dwelling respondents:

- 122 (46%) had experienced abuse in the past 12 months.
- Of those, 85 (69%) had experienced only one type of abuse.

"Known group" analyses showed…

- The "known abuse" group was more likely to respond positively to 20/25 specific types of abuse that were mentioned most frequently.
- The "known abuse" group also responded positively to 3.5 times more items than those in the known "non-abuse" group.

Experiencing Abuse and Feeling Abused

- Of the 122 (46%) respondents who responded "Yes" to one/several abuse items,
  › 78 (64%) felt abused
  › 44 (36%) did not feel abused
  › Evaluative coding was conducted to investigate the disparity: Why did these respondents not *feel* abused?
    - Reasons included not being a vulnerable adult; a non-trusted person was the perpetrator; it was only one incident; or they worked out their issues.

The analyses indicated that with a few revisions, the questionnaire successfully identified maltreatment and neglect and could be used for a national prevalence study in Canada.

Next Steps: National Survey on the Mistreatment of Older Adults in Canada

Purpose:

- Provide national estimates of the size of the problem in Canada
- Provide national estimates of who is at risk for abuse in Canada
- Provide data for decision-making on service provision and policy development in Canada

Methods:

Participants:

- Older adults (55 years+) living in private dwellings in Canada
- English- or French-speaking

Sampling:

- Total Sample: N=6,800
  › Base sample: n=5,000
  › Provincial oversampling: n=1,800
    - British Columbia (n=500), Ontario (n=550), Quebec (n=750)
    - Alberta (in progress)
- Random-digit dialing

Data Collection & Analysis:

- Computer-assisted telephone interviewing
- Data collection to begin in September 2013
- Analysis will provide descriptive statistics on the prevalence rate of types of elder abuse and neglect in Canada along with quantitative data on the risk factors, causes and dimensions of that abuse and neglect.
  › Evaluative coding will be conducted on abuse cases to investigate experiencing abuse and feeling abused

Knowledge Translation

A "pocket" tool summary of key results will be made available after analyses are completed. The results will be presented at academic conferences and published in academic journals.

Key Resources

Defining and Measuring Elder Abuse Synthesis Report (PDF)	Defining and Measuring Elder Abuse Conceptual Definitions	Download this poster! (PDF)
[QR code]	[QR code]	[QR code]

Contact: Anthony Lombardo, PhD, Project Manager • alombardo@nicenet.ca

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Biggs, S., Erens, B., Doyle, M., Hall, J., & Sanchez, M. (2009). Abuse and neglect of older people: Secondary analysis of UK prevalence study. London: King's College London and the National Centre for Social Research.

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Poster 2

Elderly Employment in an Aging Society: Productive Aging and Institutionalized Ageism

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University of Minnesota

UNIVERSITY OF MINNESOTA
Driven to Discover

Introduction

Elderly Employment
- Korea has experienced one of the most rapid demographic transitions to aged society of all OECD countries. In Korean society, involuntary early retirement is a social phenomenon that occurs generally around age 55 typically in private companies.
- The rapidly changing demographics of older adults have expanded the concept of productive aging in elderly employment focused social welfare policies in Korea.

Productive Aging
- "The capacity of an individual or population to serve in the paid workforce, to serve in volunteer activities, to assist in the family, and to maintain himself or herself as independently as possible" (Hinterlong, Morrow-Howell, & Sherraden, 2001, p.7)
- A view to emphasize the potential of elders as a resource of social change and economic growth rather than dependency and challenge posed to society by aging population.
- By emphasizing on achievement, this concept envisions a new image of elders as social contributor through the roles of volunteers, caregivers, and workers.

Institutionalized Ageism
- Macro-level ageism on a societal level (Nelson, 2005)
- Discrimination against and prejudices towards the elders reinforced by the social structure including legal, political, educational, and welfare structures of modern society (Corner, Brittain, & Bond, 2007)

Study Aim
- To examine the role of elderly employment center as mediator in elderly job market. Specifically, the ways elderly employment center increase elderly employment and how effective these strategies are.
- Elderly refers as persons aged 55 years and older.

Methods

Research Design
- A in-depth case study

Data Collection
- Participating observation and interviews from June 2006 to February 2007, at the Seoul-si employment center in Seoul, Korea.
- Study participants: twelve people consisting of four staff members of the employment center and eight elderly.
- The characteristics of the eight elders
  - six males and two females
  - the average age of the participants: 63 years old
  - four participants had high school diploma and three had bachelor degrees
  - former occupations: manager, office worker, technician, and housewife

Seoul-Si Employment Center
- Services: Employment counseling, mediation, job training programs and follow-up, as well as a job fairs for people 55 years old or older
- 4000-5000 elderly people visit and enroll with the center to look for a job
- The characteristics of the elderly enrolled at the Seoul-Si employment center (2007)
  - male (71.19%), females (28.8%)
  - 55–59 years old (18.1%), 60–64 years old (31.7%), 65–69 years old (34.3%), 70years + (16%)
  - under elementary (26.1%), middle school diploma (25.6%), high school diploma (36.7%), college graduation (16.1%)
  - reasons for seeking jobs: economic issues (68.9%), making use of spare time (20.0%) or giving back to society (10.5%)

Data Analysis
- Coding data and reviewing the codes and organizing them into key terms

Korean elderly employment policies

Two government departments

1) Ministry Health and Welfare
- Korean Welfare Law for the aged people in 1984
- The elderly social participation and creating jobs for their income security
- The major target: 65+ years

The goal of job creation policy: 300,000 job positions (from 2004 to 2008)
- Government creates suitable jobs for the elderly, hires them and pays their salary.
- Expected effects
  - Improving the quality of life of the elderly, encouraging the elders' social participation, and diffusion of the positive image of older workers
- Job positions and budget
  - 25,000 job positions in 2004 and 178 hundred million dollar
  - 35,000 job positions in 2005 and 267 hundred million dollar
  - 80,000 job positions in 2006 and 593 hundred million dollar
- The types of jobs
  - Teaching etiquette course at school, babysitter, culture explainer etc.
- The target population
  - 65+years older people who have limited work opportunities with low personal income

2) Ministry of Labor
- The aged Employment Promotion Act in 1991
- Improving the labor market environment for older workers such as extension of retirement age and bounty for employment promotion the aged
- The major target: 55+ years

Findings & Discussion

- The pattern of discriminatory and prejudicial attitudes towards elders' job market
  - Job creation policy is limited certain types of jobs such as street cleaner, school crossing guard and teaching etiquette.
  - Given that both age and appearance were more important than ability and skills in elderly employment, the employment center emphasized that elderly job seekers look young and neat.
  - The employment center focused on assisting the elderly to understand the reality of elderly job market and encouraging the elderly to accept low-paid, low-skilled, and temporary jobs. Elderly people who started working eventually quit after two-three months due to low pay, poor relations with co-workers, and health problems.
- A cultural issue related to Confucian ideas impacting on limited the elders' job market
  - Generally, the younger generation feels difficulty when they work with the elderly, especially when they supervise the elderly. They cannot direct the elderly easily or point out the errors out of respect. This is a sort of Confucian ideas, in which the young must always think highly of the elderly (Son, Lee, & Kim, 2005).

Conclusion

- The Korean government made efforts to boost the senior citizen workforce, injecting them into the labor market. However, these efforts reinforced certain types of jobs for the elderly rather than satisfying the senior citizen's desire to participate and achieve success in the workforce.
- Findings suggest that the government needs to apply continual effort to improve the elderly employment environment, considering elderly socioeconomic status, education level, and health conditions without discriminatory and prejudicial attitudes.

Engineering
University at Buffalo *The State University of New York*
The School of Engineering and Applied Sciences

MECHANICAL AND AEROSPACE ENGINEERING DEPT.

Musculoskeletal Simulation-based Parametric Study of Optimal Gait Frequency in Biped Locomotion

HYPOTHESIS

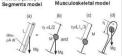- Expended effort is minimal when the locomotory appendages/ propulsive structures are moving at steady–state in periodic gaits at their resonant frequencies.

MOTIVATION

- Obtaining insights that will allow for better design of the robotic systems.

- Using virtual computational tools for studying hypotheses regarding locomotory systems.

Alexander's (1979) Walking Model
McGeer's (1990) Walking Models
Blickhan (1989), McMahon (1990)
McGeer (1990)

Mochon & McMahon's (1979) Balistic Walking
Alexander's (1992) Compliant Legs
Ren, Jones, & Howard (2007) 7-Segments model
Foster's (2003) Musculoskeletal model

Kuo's (2001) Idealized Simplest model, Simplest model, and Anthropomorphic model
Ahlborn's (2006) Pendulum models

RESEARCH QUESTIONS

- Can a musculoskeletal simulation system predict system resonance frequencies?

- If so, how well does the result compare with analytical solutions?

- Can we simulate and predict preferred walking frequency Using musculoskeletal simulation?

OUR APPROACH

- Create, test, and evaluate the hypothesis using a Virtual Prototyping (VP) methodology (also known as Simulation–Based Design).

- Perform comparative parametric studies of biped locomotion models (with varying level of complexity) completely in a virtual environment.

- Combine engineering support tools, such as musculoskeletal analysis and parametric sweeps, within an integrated environment to allow monitoring of internal variables (such as muscle forces and muscle activities).

ANALYSIS FRAMEWORK

AnyBody Engine — Musculoskeletal Model — Inverse Dynamic Analysis — Parametric Study

Musculoskeletal Evaluation Metric [Muscle Activity]

MATLAB
- Quantitative Analysis
- Data Visualization

3D Visualization/ Animation — Model Setup — Update Parameter — Define Parameters — Central Interface — Quantitative Results

Analysis framework: A MATLAB GUI serve as a Center Interface that allows performance studies of walking in response to various inputs. The AnyBody engine provides the computational musculoskeletal modeling while the parametric sweeps and plotting are handled by MATLAB.

CASE STUDIES

Three case studies :

(1) Simple Pendulum;
(2) Compound Pendulum;
(3) 18–DOF Lower Extremity Musculoskeletal Model.

- Both simple and compound pendulum models have been used as a simplified lower extremity model to predict human stride frequency, with some success [2];

- To gain insights to the more complex musculoskeletal model;

Natural Frequency of 'pendulum like' model:
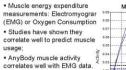
$$\omega = \frac{n}{2\pi}\sqrt{\frac{g}{L}}$$

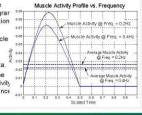$n = \sqrt{3/2} = 1.225$ - Uniform rod;
$n = \sqrt{5/2} = 1.581$ - Cone shape;

- In previous studies [2], researchers have shown $n = \sqrt{2} = 1.414$ correlates well with the human preferred walking speed;

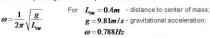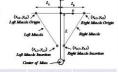- We compare this with our musculoskeletal simulation results.
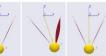
Evaluation Metric:

- Muscle energy expenditure measurements: Electromyogram (EMG) or Oxygen Consumption
- Studies have shown they correlate well to predict muscle usage;
- AnyBody muscle activity correlates well with EMG data.
- Average muscle activity, the average value of muscle activity profile is used as a performance measure.

Muscle Activity Profile vs. Frequency

- Muscle Activity @ Freq. = 0.2Hz
- Muscle Activity @ Freq. = 0.4Hz
- Average Muscle Activity @ Freq. = 0.2Hz
- Average Muscle Activity @ Freq. = 0.4Hz

CASE STUDY I – SIMPLE PENDULUM

Natural Frequency, ω of Simple Pendulum:

$$\omega = \frac{1}{2\pi}\sqrt{\frac{g}{L_{CM}}}$$

For $L_{CM} = 0.4m$ - distance to center of mass;
$g = 9.81 m/s$ - gravitational acceleration;
$\omega = 0.788 Hz$
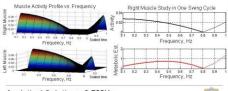
Musculoskeletal Simulation:

- Two Hill-Type muscles;
- Rotate at rate: $\theta = 20°\sin(\omega t)$
- ω varied from 0.1Hz – 10Hz;
- Complete a swing cycle shown.

Results:

- Muscle activity profile across frequency range 0.1Hz – 10Hz ;
- There appear to have a 'cut-off' frequency where activity is minimum;
- To locate this minimum, we plot the average muscle activity vs. Freq.;
- The frequency where minimum muscle activity occurs is 0.79Hz.

Muscle Activity Profile vs. Frequency
Right Muscle Study in One Swing Cycle

Analytical Solution: 0.788Hz.
Musculoskeletal Simulation: 0.79Hz.

CASE STUDY II – COMPOUND PENDULUM

Natural Frequency, ω of Compound Pendulum (Rod):
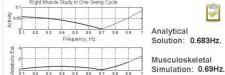
$$\omega = \frac{1}{2\pi}\sqrt{\frac{3g}{2L}}$$

For $L = 0.8m$ - length of uniform rod;
$g = 9.81 m/s$ - gravitational acceleration;
$\omega = 0.6825 Hz$

Musculoskeletal Simulation:

Results:

Right Muscle Study in One Swing Cycle

Analytical Solution: 0.683Hz.

Musculoskeletal Simulation: 0.69Hz.

CASE STUDY III – LOWER EXTREMITY

Human Gait:

- Gait of "Normal Man":
  - Stride Frequency – 0.77Hz
  - Stride Period – 1.3 seconds
  - Stride Length – 1.28 m
  - Speed – 0.99m/s
- Maintain 'normal walking' up to 3m/s

- Variance in 'natural' walking speed:
  - Village (0.8m/s) vs. Cities (1.7m/s)
  - Long vs. Short walkway
  - Treadmill vs. Natural surfaces
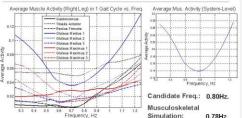 - Indoor vs. Outdoor
- 'Walk-run' transition: 1.92m/s

Musculoskeletal Model:

- Available in AnyBody Model Repository [3];
- 7 rigid bodies (Thigh x 2 + Shank x 2 + Foot x 2 + Pelvis)
- 27 unique muscles in each leg (54 in total)
- 18 Degree-of-Freedom
- Length: Thigh (0.44m), Shank (0.44m), Foot (0.22m)
- Hill-type muscle model
- Driven by motion capture data (1.25 seconds/cycle)
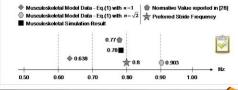
Simulation Settings

- Using the 'Man' data set from [4];
- Range of speed: 0.3 m/s – 1.5 m/s;
- Not consider force & moment data;
- Assuming the data sets are smooth;
- The candidate walk at 0.8Hz.

Results:

Average Muscle Activity (Right Leg) in 1 Gait Cycle vs. Freq.
- Gastrocnemius
- Tibialis Anterior
- Rectus Femoris
- Gluteus Medius 1
- Gluteus Medius 2
- Gluteus Medius 3
- Gluteus Maximus 1
- Gluteus Maximus 2
- Gluteus Maximus 3

Average Mus. Activity (System-Level)

Candidate Freq.: 0.80Hz.

Musculoskeletal Simulation: 0.78Hz.

Conclusion:

- The musculoskeletal simulation shows that the system used least effort (minimum activity) at 0.78Hz.

- Closer prediction of the preferred stride frequency (0.80Hz) compare to using equations in [2];
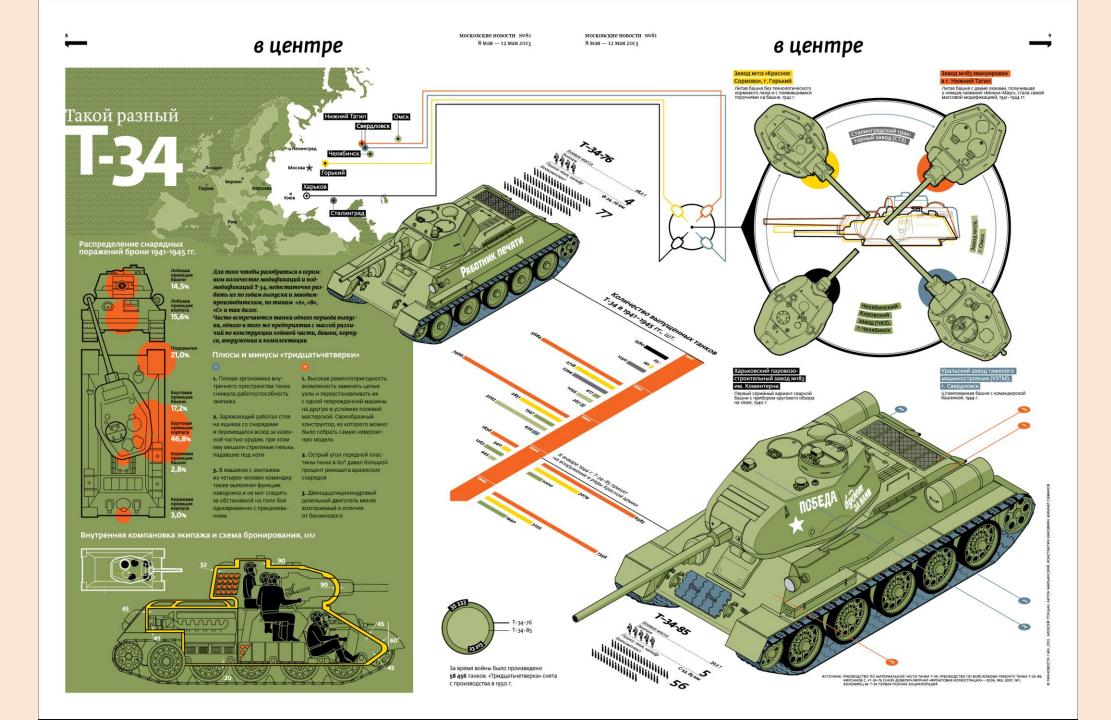
- Potential for use in other what-if type studies.

- ◆ Musculoskeletal Model Data - Eq.(1) with $n=1$
- ● Musculoskeletal Model Data - Eq.(1) with $n=\sqrt{2}$
- ■ Musculoskeletal Simulation Result
- ● Normative Value reported in [28]
- ★ Preferred Stride Frequency

0.77 ●
0.78 ■
◆ 0.638
★ 0.8
● 0.903

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Понятен без
объяснений

Не просто
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3

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Не просто переписанный текст статьи

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в центре

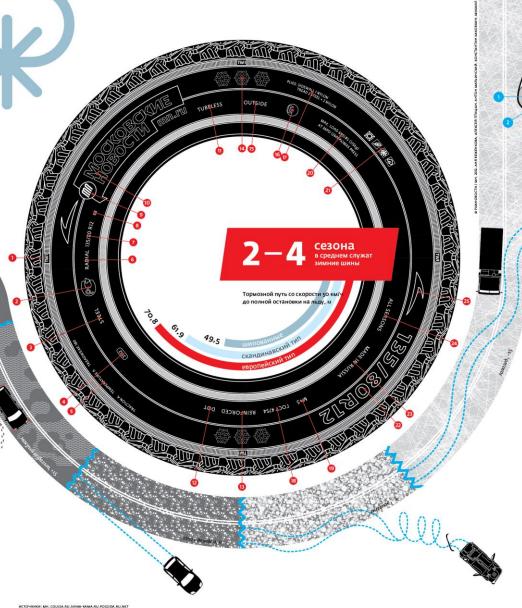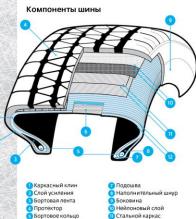МОСКОВСКИЕ НОВОСТИ №81
8 мая — 12 мая 2013

МОСКОВСКИЕ НОВОСТИ №81
8 мая — 12 мая 2013

в центре

9

Такой разный
Т-34

Распределение снарядных поражений брони 1941–1945 гг.

Лобовая проекция башни **14,5%**

Лобовая проекция корпуса **15,6%**

Подкрылки **21,0%**

Бортовая проекция башни **17,2%**

Бортовая проекция корпуса **46,8%**

Кормовая проекция башни **2,8%**

Кормовая проекция корпуса **3,0%**

Внутренняя компановка экипажа и схема бронирования, мм

Для того чтобы разобраться в огромном количестве модификаций и подмодификаций Т-34, недостаточно разбить их по годам выпуска и заводам-производителям, по типам «А», «В», «С» и так далее.
Часто встречаются танки одного периода выпуска, одного и того же предприятия с массой различий по конструкции ходовой части, башни, корпуса, вооружения и комплектации

Плюсы и минусы «тридцатьчетверки»

–

1. Плохая эргономика внутреннего пространства танка снижала работоспособность экипажа

2. Заряжающий работал стоя на ящиках со снарядами и перемещался вслед за казенной частью орудия, при этом ему мешали стреляные гильзы, падавшие под ноги

3. В машинах с экипажем из четырех человек командир также выполнял функции наводчика и не мог следить за обстановкой на поле боя одновременно с прицеливанием

+

1. Высокая ремонтопригодность, возможность заменять целые узлы и переустанавливать их с одной поврежденной машины на другую в условиях полевой мастерской. Своеобразный конструктор, из которого можно было собрать самую невероятную модель

2. Острый угол передней пластины танка в 60° давал большой процент рикошета вражеских снарядов

3. Двенадцатицилиндровый дизельный двигатель менее возгораемый в отличие от бензинового

Т-34-76

4

77

Количество выпущенных танков Т-34 в 1941–1945 гг., шт.

В январе 1944 г. Т-34-85 принят на вооружение в ряды Красной армии

За время войны было произведено **58 456** танков. «Тридцатьчетверка» снята с производства в 1950 г.

35 333

— Т-34-76
— Т-34-85

23 213

Сталинградский трактороный завод (СТЗ)

Завод №174 г. Омск

Челябинский Кировский завод (ЧКЗ). г. Челябинск

ПОБЕДА будет за нами

Т-34-85

5

56

Когда надо менять резину

+7

среднесуточная температура, при которой рекомендуется менять летнюю резину на зимнюю

сентябрь октябрь декабрь

сухой асфальт, +15

Выбор резины зависит от тех погодных и дорожных условий, в которых она будет использоваться. В городских условиях предпочтительней зимняя нешипованная резина. Для частых поездок загород больше подойдут шипы.

Что написано на шине (маркировка)

1. **TWI** — место расположения индикатора износа.
2. Обозначение сертификата соответствия ГОСТу РФ.
3. **STEEL** — шина с металлокордным брекере, **ALL STEEL** металлокорд и в брекере, и в каркасе.
4. **3500** дата изготовления, состоящая из четырёх цифр, из которых первые две обозначают неделю, а вторые две год изготовления.
5. **TRACTION A TEMPERATURE A TREADWEAR 180** — категории тягово-сцепных свойств, термостойкости и износостойкости по стандартам классификации департамента транспорта США.
6. **RADIAL** — обозначение радиальной конструкции шины.
7. **135/80R12** — обозначение размера шины.
8. **68** — индекс нагрузки – цифровой код, обозначающий максимальную нагрузку на шину.
9. Товарный знак.
10. Торговая марка.
11. **TUBLESS** — обозначение бескамерной шины. Обозначение для камерной шины — **TUBE TYPE** *(может не указываться)*.
12. **DOT** — *(Departament of Transportation)* соответствие требованиям стандарта США.
13. **REINFORCED** — усиленная шина.
14. Пиктограммы для шин с зимним рисунком протектора.
15. **OUTSIDE** — внешняя сторона шин с ассиметричным рисунком протектора.
16. Знак официального утверждения с номером страны, выдавшей сертификат, и соответствующим номером сертификата.
17. **PLIES: SIDEWALL 1 NYLON. TREAD 2 STEEL + 2 NYLON** — применяемые материалы и число слоёв в каркасе и брекере.
18. **ГОСТ или ТУ** — обозначение нормативного документа, по которому изготавливается шина.
19. **M+S** — шина предназначена для эксплуатации в зимних условиях *(грязь+снег)*.
20. **MAX. LOAD 695LBS (315kg). AT 36PSI (260kPa) MAX PRESS** — максимальная нагрузка в фунтах (кгс) при максимальном давлении в шине в фунтах/кв. дюйм (кПа).
21. Пиктограммы для шин со всесезонным рисунком протектора.
22. Дублирование размера шины *(крупно)*.
23. **MADE IN RUSSIA** — название страны-изготовителя.
24. **ALL SEASONS** — шина может эксплуатироваться всесезонно.
25. Направление вращения.

МОСКОВСКИЕ НОВОСТИ mn.ru

TUBLESS · OUTSIDE · TWI · RADIAL 135/80 R12 · STEEL · MADE IN RUSSIA · 135/80R12 · TRACTION A · ALL SEASONS · REINFORCED DOT · M+S · ГОСТ 4754 · PLIES: SIDEWALL 1 NYLON TREAD 2 STEEL + 2 NYLON · MAX. LOAD 695LBS (315kg) AT 36PSI (260kPa) MAX PRESS

2–4 сезона
в среднем служат зимние шины

Тормозной путь со скорости 50 км/ч до полной остановки на льду, м

70,8 · 61,9 · 49,5

шипованные — скандинавский тип
скандинавский тип — европейский тип

Компоненты шины

1. Каркасный клин
2. Слой усиления
3. Бортовая лента
4. Протектор
5. Бортовое кольцо
6. Галобутиловая прокладка
7. Подошва
8. Наполнительный шнур
9. Боковина
10. Нейлоновый слой
11. Стальной каркас
12. Основное покрытие

Основные типы резины

Универсальной резины для эксплуатации в зимних условиях не существует. Связано это в первую очередь с составом, который используется для производства автомобильных покрышек. Для лета (1) они изготавливаются более жёсткими, зимние – мягче. Так называемые всесезонные покрышки (2) эксплуатируются в диапазоне от –5 до 20 градусов Цельсия, и предназначены для мягких европейских зим.

Зимние нешипованные шины имеют свою классификацию и делятся на два типа: европейский и скандинавский.

Европейский тип (3) похож на противодождевую резину. Основной задачей этого типа шин является наилучшее сцепление с дорогой при дожде или в мокрый снег.

Скандинавский тип (4) имеет более разреженный рисунок. Основная задача такого типа шин – сделать наилучшим сцепление с заснеженной или заледенелой дорогой. Для жителей областных городов или для постоянных поездок по пересечённой местности.
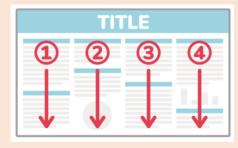
Шиповая резина (5) разбивает тонкую ледяную корку или снежный наст.

Из чего состоит шип

- круглые
- многоугольные
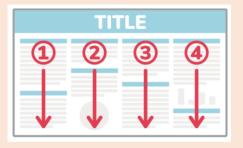
— Сердцевина (прочная)
— Основа (лёгкая)
В шипе предусмотрены особые отверстия для уменьшения веса
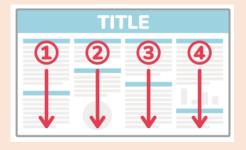
Как превратить годы исследований в один плакат?

Весь текст не нужен!
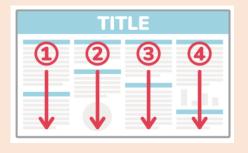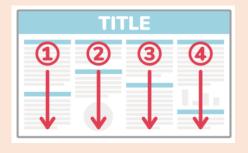
Газетные колонки

Газетные колонки

Круп-ный текст

Газетные колонки

Круп-ный текст
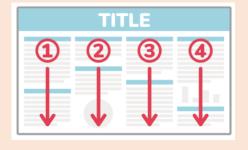
Подать графически, что можно

Газетные колонки

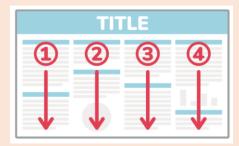# Круп-ный текст

Подать графически, что можно

(Остальное — убрать)

Газетные колонки

Круп-ный текст

Подать графически, что можно

(Остальное — убрать)

Графика в хорошем качестве

Газетные
колонки

Круп-
ный
текст

Подать
графически,
что можно

(Остальное —
убрать)

Графика
в хорошем
качестве

Выводы —
сверху

Выводы — сверху

Круп-ный текст

Подать графически, что можно

(Остальное — убрать)

Графика в хорошем качестве

Газетные колонки

Выводы — сверху

Круп- ный текст

Подать графически, что можно

(Остальное — убрать)

Графика в хорошем качестве
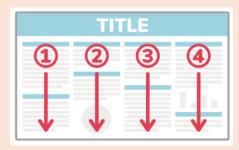
Газетные колонки
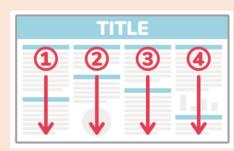
Цвет — для выделения важного

Выводы — сверху

Круп-ный текст

Подать графически, что можно

(Остальное — убрать)

Графика в хорошем качестве

Газетные колонки

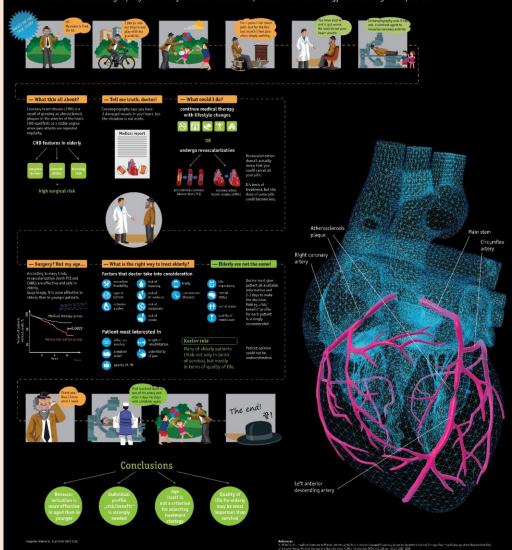Цвет — для выделения важного

Больше воздуха!

Treating elderly patients with stable angina: are pills enough?

K. L. Kozlov[1, 2], A. A. Bogachev[1], I. G. Oleksyuk[2]
[1]St. Petersburg Institute of Bioregulation and Gerontology, Northwestern Branch, Russian Academy of Medical Sciences, Russia
[2]Kirov Military Medical Academy, St. Petersburg, Russia

Coronary heart disease (CHD) is a leading cause of death in Europe and United States. The percentage of elderly patients with CHD is increasing rapidly in recent years. How to choose optimal treatment strategy in such a high-risk patients?
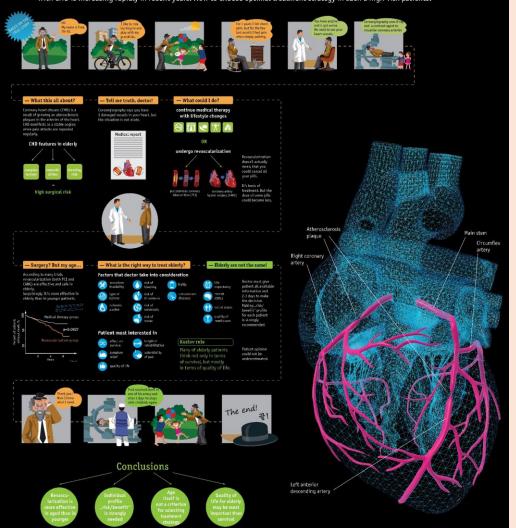
— What this all about?

Coronary heart disease (CHD) is a result of growing an atherosclerosis plaques in the arteries of the heart. CHD manifests as a stable angina when pain attacks are repeated regularly.

CHD features in elderly

complex lesions — comorbidities — bleeding risk

high surgical risk

— Tell me truth, doctor!

Coronangiography says you have 2 damaged vessels in your heart, but the situation is not acute.

Medical report

— What could I do?

continue medical therapy with lifestyle changes

OR

undergo revascularization

percutaneous coronary intervention (PCI) — coronary artery bypass surgery (CABG)

Revascularization doesn't actually mean, that you could cancel all your pills.

It's basis of treatment. But the dose of some pills could become less.

— Surgery? But my age...

According to many trials, revascularization (both PCI and CABG) are effective and safe in elderly. Surprisingly, it is more effective in elderly than in younger patients.

Medical therapy group
p=0.0027
Revascularization group

— What is the right way to treat elderly?

Factors that doctor take into consideration

procedure feasibility — risk of bleeding — frailty — life expectancy
type of lesions — risk of thrombosis — concomitant diseases — mental status
ischemic burden — risk of restenosis — social status
risk of stroke — quality of health care

Patient most interested in

effect on survival — length of rehabilitation
symptom relief — potentiality of pain
quality of life

— Elderly are not the same!

Doctor must give patient all available information and 2-3 days to make the decision. Making "risk/benefit" profile for each patient is strongly recommended.

Kozlov rule
Many of elderly patients think not only in terms of survival, but mostly in terms of quality of life.

Patient opinion could not be underestimated.

Atherosclerosis plaque
Main stem
Circumflex artery
Right coronary artery
Left anterior descending artery

Conclusions

- Revascularization is more effective in aged than in younger
- Individual profile "risk/benefit" is strongly needed
- Age itself is not a criterion for selecting treatment strategy
- Quality of life for elderly may be most important than survival

References:
1. Pfisterer M., Longterm Outcome in Elderly Patients with Chronic Angina Managed Invasively Versus by Optimized Medical Therapy: Four-Year Follow-up of the Randomized Trial of Invasive versus Medical therapy in Elderly Patients (TIME). Circulation 2004, vol. 110 no. 10 pp. 1213–1218.
2. Bogachev A. A., Kozlov K. L., Oleksyuk I. G., Coronary revascularization versus optimal medical therapy in elderly patients with stable angina, Advances in Gerontology 2013 vol. 3. Issue 3. pp 213–217.

Review: Treating elderly patients with stable angina: are pills enough?
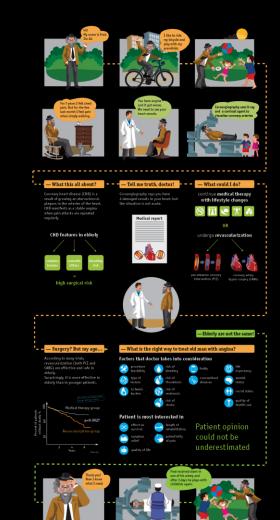
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- comorbidities
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→ high surgical risk

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2. **Individual profile „risk/benefit" is strongly needed**
3. **Quality of life for elderly may be most important than survival**
4. **Age itself is not a criterion for selecting treatment strategy**

References:
1. Pfisterer, M., Long-Term Outcome in Elderly Patients with Chronic Angina Managed Invasively Versus by Optimized Medical Therapy: Four-Year Follow-up of the Randomized Trial of Invasive Versus Medical Therapy in Elderly Patients (TIME). Circulation 2004, vol. 110, no. 10, pp. 1213–1218.
2. Bogachev A. A., Kozlov K. L., Oleksyuk I. G., Coronary revascularization versus optimal medical therapy in elderly patients with stable angina. Advances in Gerontology.

Cui?

* Для кого?

Прямой конкурент

Прямой конкурент

Одна область знания

Прямой конкурент

Одна область знания

Из другой области

Прямой конкурент

Одна область знания

Из другой области

Quid?*

* Что?

Что — Как —
Что в этом нового —
Что вы нашли — Что это меняет

Что — Как —
Что в этом нового —
Что вы нашли — Что это меняет

Почему это важно?

Not bad

Population-based interventions for the prevention of falls in the elderly.

Systematic review of target population, content and methods of process evaluation.

Klein D[1], Rapp K[1,2], Küpper M[1], Benzinger P[1], Becker C[1]
[1]Robert-Bosch-Hospital Stuttgart, Department of Geriatric Rehabilitation | [2]Ulm University, Institute of Epidemiology

Background

- There are several million of unintended falls per year in people aged 65 years and more.
- High-risk approaches for fall prevention have been implemented.
- Falls and fractures however are a population-wide problem and require also population-based interventions.

Objectives

To analyse target population, content and process evaluation methods of ongoing and finished population-based fall prevention programs (figure 1) in order to implement such an approach in Germany.

Methods

- Systematic literature review
- Discussion with experts
- Cochrane Review

Results

A variety of interventions and implementation strategies were applied (figure 2).

Process evaluation was not reported or insufficient with few exceptions:

- Cross-sectional survey of a study population
- Survey of participants of single interventions
- Survey and reports of stakeholders
- Participation rates
- Focus group discussions

The results vary from minor modifications in fracture rates to reductions up to 26% compared to the control regions. In addition, an increased awareness and knowledge about risk factors could be measured.

Conclusions

- Multifactorial fall prevention interventions are effective. But without detailed process evaluation, reasons for success or failure of implementation can not be identified.
- Components of process evaluation could be reach, fidelity, efficacy, adoption and maintenance (RE-AIM).
- A population-based fall prevention program is currently being developed to be implemented in Germany until 2013 within the PROFinD consortium „Prevention and Rehabilitation of Osteoporotic Fractures in disadvantaged Populations" (figure 3).

Figure 1: Included studies and target populations

Figure 2: Interventions and implementation strategies

Figure 3: Approach of the PROFinD consortium

Literature
McClure et al. (2005) Population-based interventions for the prevention of fall-related injuries in older people. Cochrane Database of Systematic Reviews 2005(1) Rose (2008) Rose's strategy of preventive medicine. New York: Oxford University Press.

Contact: Diana Klein, M.A. | diana.klein@rbk.de

GENDER PERSPECTIVE IN ELDERLY CARE – HOW NURSING STAFF'S ROUTINES AND REASONING CONDITION THE INVOLVEMENT OF RELATIVES IN SWEDISH NURSING HOMES

Jessica Holmgren, PhD-candidate, RN, MNSc, Karolinska Institutet, Sweden
Azita Emami, professor, University of Washington, USA
Lars E Eriksson, associate professor, Karolinska Institutet, Sweden
Henrik Eriksson, professor, The Red Cross University College, Sweden

CONCLUSIONS

- The results show that nursing staff's routines and reasoning condition the involvement of relatives based on gendered notions and a division of labor. This contributes to a strict and limited involvement of relatives since they are perceived as "visitors".

- This study highlights the importance of developing mechanisms that enable nursing staff to reflect upon the gendered power structures that exist in the nursing home culture, which condition the involvement of relatives.

AIM

To describe from a gender perspective, how nursing staff's routines and reasoning act to condition the involvement of relatives in Swedish nursing homes.

BACKGROUND

Little attention has been paid to scrutinizing the involvement of relatives in nursing home care, particularly in relation to the gendered structures in the nursing home culture that the nursing staff reproduce through their routines and reasoning.

METHODS

Focused ethnographic fieldwork was conducted in three different nursing homes in Sweden.

RESULTS

- The nursing staff assigns a certain code of conduct to all relatives, they perceive as "visitors" in their working arena.

- The code of conduct was related to routines and reasoning among the nursing staff, and stemmed from a division of labor.

- The underlying concept of "visitor" predetermined the potential involvement of relatives. This involvement is related to the general gendered characteristics that exist in the nursing staff's perceptions of relatives.

Upcoming article in the same research project:

Holmgren, J., Emami, A., Eriksson, L E., Eriksson, H. Intersectional perspectives on family involvement in nursing home care: Rethinking relatives' position as a betweenship. (Submitted).

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RESULTS AND PROSPECTS OF APPLICATION OF PEPTIDE GEROPROTECTORS IN OPHTHALMOLOGY

S.V. Trofimova, V.Kh. Khavinson

STUDY DESCRIPTION

Objectives:
To study the effect of peptide bioregulators in case of dystrophic changes in the retina of the patients.

Number of the patients involved:
115

Age:
60-82

Methods:
All patients were administered with peptide bioregulators:
Retinalamin – injected parabulbarly, once a day, 5.0 mg, 10 days (50.0 mg per course), and Cortexin – injected intramuscularly, once a day, 10.0 mg, 10 days (100.0 mg per course).
Control patients (42 persons) were subjected to traditional treatment methods.

STUDY DESCRIPTION

The study was conducted in patients suffering from:
diabetic retinopathy,
retinitis pigmentosa,
age-related macular degeneration etc.

MEDICAL CASE

Patient Danilov P.S., born in 1936

Diagnosis:
Pigment retinal degeneration in both eyes, low myopia in both eyes, pseudophakia in the left eye, initial cataract in the right eye.

Results of the field of vision tests

MEDICAL CASE

BEFORE TREATMENT			AFTER TREAMTENT		
Brightness gradation			Brightness gradation		
Norm	16	8.5	Norm	56	29.6
Scotoma 1	9	4.8	Scotoma 1	11	5.8
Scotoma 2	18	9.5	Scotoma 2	28	14.8
Abs. scotoma	146	77.2	Abs. scotoma	94	49.7
Number of objects		189	Number of objects		189

RESULTS OF THE STUDY

- Treatment with peptide bioregulators contributed to the enhancement of visual functions in 91.3% of cases.
- In 46.9% of cases we registered an increase in the visual acuity, while the results of the computer perimetry evidenced 2.5-fold decrease in the number of absolute and relative scotomas.
- In 85.2% of cases we registered an increase of the retinal functional activity and in 78.7% of cases – improvement of the retinal blood flow.
- Showing a pronounced antioxidant effect, peptide preparations contributed to the normalization of the antiradical activity of blood of all patients.
- Patients of the control group didn't show any reliable change in the indices of the visual functions.

CONCLUSION

Application of peptide bioregulators in the elderly and old patients not only services to stop progressing pathologic process in most of the cases, but also enhances visual functions, showing good prospects of this method of treatment in ophthalmogeriatrics.

Clinical Correlates and Prognostic Value of Soluble TRAIL in Older People

S. Volpato, P. Secchiero, F. Corallini, G. Zuliani, JM. Guralnik, S. Bandinelli, G.Zauli, L. Ferrucci

Dpt. of Clinical and Experimental Medicine & Dpt. of Morphology and Embryology, University of Ferrara, ITALY
Laboratory of Epidemiology, Demography and Biometry, National Institute on Aging, NIH, Bethesda, MD, USA
Geriatric Rehabilitation Unit, Azienda Sanitaria di Firenze, Florence, Italy
Longitudinal Studies Section, Clinical Research Branch, NIA, Baltimore, USA.

Background & Aim

- Tumor Necrosis Factor-related Apoptosis-inducing Ligand (TRAIL) is a member of the TNF ligand superfamily.

- Low levels of soluble TRAIL have been associated with poor prognosis and increased mortality in patients with acute coronary syndrome, congestive heart failure and chronic kidney disease.

- Little is know on correlates of TRAIL concentration and its prognostic value in older persons.

- We investigated demographic, clinical and biochemical characteristics associated with TRAIL and we tested the hypothesis that low TRAIL levels predict mortality in a population-based sample of older persons.

Methods

THE InCHIANTI STUDY

- Longitudinal population-based study of 1453 persons with a 9-year follow-up.
- 1270 persons aged aged 65 and older

This Analysis

- Age ≥ 70 years
- Baseline assessment of TRAIL by ELISA
- Complete vital status information over the 6-year follow-up
- 776 persons: mean age 77.5

TABLE 1. General Characteristics by TRAIL Quartiles

| | TRAIL Quartiles (pg/ml) | | | | |
	<59.8 (n =204)	59.8-71.3 (n=197)	71.4-84.4 (n=191)	≥84.5 (n=184)	P
Age (mean)	77.9	74.8	74.9	72.9	<.001
Women (%)	46.3	52.0	61.0	64.4	<.001
Ever Smoked (%)	37.9	37.4	49.0	43.0	0.336
BMI (mean)	28.7	27.2	27.3	28.4	<.001
CHD (%)	21.1	14.7	18.3	9.8	<.02
ABI <0.9 (%)	21.7	16.1	9.9	11.2	<.01
Diabetes (%)	13.7	16.8	14.1	9.2	0.194
Chronic Kidney dis. (%)	46.5	31.0	38.8	30.2	<.005
Cognitive Impairment (%)	49.5	34.0	30.9	33.7	<.005
ADL disability (%)	20.1	10.7	7.3	4.4	<.001

TABLE 2. Multiple linear regression predicting TRAIL levels according to gender

| | Age-adjusted | | Multiple adjustment | |
	β (SE)	P	β (SE)	P
Men				
Body mass index, Kg/m²	0.98 (0.36)	0.008	--	
Waist circ., cm	0.38 (0.13)	0.005	0.35 (0.13)	0.008
Physical Activity (light)	11.1 (3.31)	0.001	--	
Physical Activity (mod-intense)	10.5 (3.28)	0.001	--	
Ankle-brachial Index	11.2 (5.84)	0.057	--	
Chronic Kidney disease	-5.91 (2.46)	0.017	--	
ADL disability	-10.12 (4.01)	0.012	--	
White blood cells, 10³/μl	-2.31 (0.73)	0.002	-2.45 (0.71)	0.001
Total Cholesterol, mg/dl	0.08 (0.03)	0.006	0.07 (0.03)	0.021
C-reactive Protein, μg/ml	-1.97 (1.03)	0.056		
Women				
Body mass index, Kg/m²	0.64 (0.60)	0.290		
Waist circ., cm	0.38 (0.25)	0.136		
Physical Activity (light)	-0.28 (6.21)	0.962		
Physical Activity (mod-intense)	16.6 (7.93)	0.037	18.16 (8.63)	0.015
Ankle-brachial Index	6.89 (18.8)	0.715		
Chronic Kidney disease	-5.9 (4.72)	0.209		
ADL disability	-4.67 (8.6)	0.579		
White blood cells, 10³/μl	-6.38 (1.62)	0.001	6.35 (1.62)	<0.001
Total Cholesterol, mg/dl	0.07 (0.06)	0.310		
C-reactive Protein, μg/ml	4.65 (2.46)	0.049		

Linear relationship between age and TRAIL

All Cause Mortality

Log-rank test: p < 0.001

Adjusted for age, gender, smoking, BMI, CHD, PAD.CHF, diabetes, COPD, ECG abnormalities, Tot-Chol, statin use, IL-6, CRP

CONCLUSIONS

- In older community-dwelling TRAIL levels are inversely correlated with age, particularly among women.

- Baseline TRAIL levels are independently associated, indepently of potential confounders, with the risk of all-cause death over a 6-year follow-up period.

- Serum TRAIL levels might represent a new biomarker for health status and reduced survival in older persons.
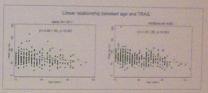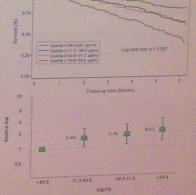
References
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- Michowitz Y. The involvement of tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) in atherosclerosis. Journal of the American College of Cardiology 2005;45:1018-24
- Volpato S. et al. Association of tumor necrosis factor-related apoptosis-inducing ligand with total and cardiovascular mortality in older adults. Atherosclerosis. 2011; 215; 452-458.

10-year physical activity patterns and health-related quality of life

Authors: H. Susan J. Picavet (1), Sandra H. van Oostrom (1), G.C. Wanda Wendel-Vos (1), Henriette A. Smit (2), Marjolein Visser (3), W.M. Monique Verschuren (1)

Contact: susan.picavet@rivm.nl

1. National Institute for Public Health and the Environment, Bilthoven, The Netherlands.
2. Julius Centre, Utrecht, The Netherlands.
3. VU University and VU Medical Center, Amsterdam, The Netherlands.

Introduction

Lifestyle during young and middle age will affect health at old age. Since lifestyle is likely to change data on life course exposure to lifestyle factors are needed. The objective of this study was to examine how physical activity patterns over a 10-year period are associated with health-related quality of life at the end of that 10-year period.

Methods

Men and women aged 26 to 65 years were examined three times in the population-based Doetinchem Cohort Study from 1995 till 2009. Participants reporting more than 3.5 hrs per week spent on bicycling, gardening, doing odd-jobs and sports (>4 MET) were defined as 'physically active'. Health-related quality of life was measured by the SF-36. Multivariable regression analyses were performed adjusted for sex, age, education, living alone, work status, smoking, alcohol, 6 chronic diseases, and baseline SF-36 scale score.

Table 1: Physical activity over a period of 10 years and health-related quality of life, Doetinchem Cohort Study

| Physical activity pattern over 10 years | Meeting physical activity guidelines | | | Pattern prevalence | SF-36 scale scores at round 3 | | | | | | | |
	Round 1 1995-1999	Round 2 2000-2004	Round 3 2005-2009		Physical functioning (PF)	Role limitations physical (RP)	Bodily pain (BP)	General health (GH)	Vitality (VT)	Social functioning (SF)	Role limitations emotional (RE)	Mental health (MH)
Stable active	Yes	Yes	Yes	31.8%	89.2	86.7	83.3	70.4	72.1	90.1	91.8	80.3
Becoming inactive	Yes / Yes	Yes / No	No / No	14.8%	83.6	74.6	78.0	66.8	66.8	85.3	87.7	76.7
Stable inactive	No	No	No	23.2%	83.4	79.7	79.4	65.9	67.2	86.7	88.9	78.4
Becoming active	No / No	Yes / No	Yes / Yes	18.0%	86.5	72.1	80.8	69.5	89.5	83.0	90.7	77.9
Varying	Yes / No	No / Yes	Yes / No	12.2%	86.8	80.7	80.7	67.8	68.7	89.0	90.0	79.0
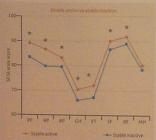
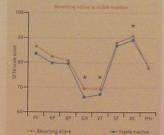Figure 1: SF-36 scale scores for the stable active and stable inactive participants.

Figure 2: SF-36 scale scores for becoming active and stable inactive participants.

Results

Preliminary analyses show that health-related quality of life was highest among those who were stable active during the 10-year period (Table 1). Being stable active contributes to a significant better health-related quality of life scores than being stable inactive, except for mental health (Figure 1). Becoming active results in better scores for general health, vitality, and emotional role limitations compared to stable inactive participants (Figure 2).

Conclusion

Physical activity should be promoted during all ages in order to promote health-related quality of life in old age.

77-year old man who walked the most (63 times) of the yearly 4-days walking event (40 km per day) in Nijmegen.

Functional Peptide β-sheets Microsponges

Steven Harris Wibowo, Dr. Adrian Sulistio, Dr. Edgar H. H. Wong, Dr. Anton Blencowe, Prof. Greg G. Qiao*

Polymer Science Group, Department of Chemical and Biomolecular Engineering, The University of Melbourne, VIC 3010, Australia
stevenhw@student.unimelb.edu.au; *gregghq@.unimelb.edu.au
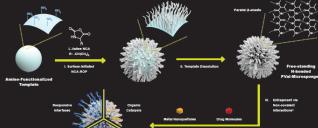
1. Introduction

Polypeptides have attracted widespread attention as building block of complex materials due to their ability to form higher-ordered structures such as β-sheets.[1,2] Still, the propensity of β-sheet-forming peptides to form unprocessable aggregates in solution remains a critical issue towards the preparation of well-defined β-sheet-assembled materials.

By employing surface-initiated N-carboxyanhydride ring-opening polymerization (SI-ROP), we recently reported a robust strategy to form well-defined peptide β-sheet architectures with sponge-like morphology. Herein, we demonstrate the unique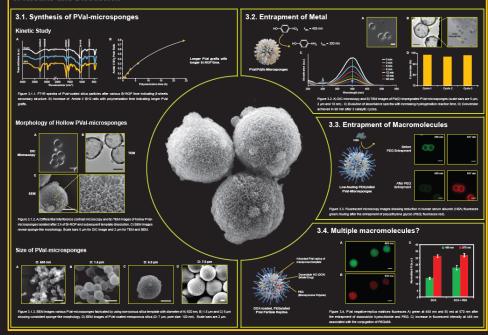 ability of the H-bonded microsponges in entrapping metal nanoparticles, proteins, drug molecules and bio-relevant polymers via non-covalent interactions. This ability mimics the absorption/filtering ability of marine animals (e.g., sea sponges) and present a simple yet versatile approach towards the fabrication of functional materials for various applications.

2. Synthetic Strategy

Amine-Functionalized Template
L-Valine NCA R: -CH(CH₃)₂
I. Surface-Initiated NCA-ROP
II. Template Dissolution
Parallel β-sheets
Free-standing H-bonded PVal-Microsponges
III. Entrapment via Non-covalent Interactions*
Metal Nanoparticles
Drug Molecules
Polymers
Responsive Interfaces
Organic Catalysis
Functional PVal-Microsponges
Drug Delivery
*H-bonding and/or hydrophobic interactions

3. Results and Discussion

3.1. Synthesis of PVal-microsponges

Kinetic Study

Longer PVal grafts with longer SI-ROP time.

Figure 3.1.1. FT-IR spectra of PVal-coated silica particles after various SI-ROP time indicating β-sheets secondary structure. B) Increase of Amide II·SI-O ratio with polymerization time indicating longer PVal grafts.

Morphology of Hollow PVal-microsponges

DIC Microscopy
TEM
SEM

Figure 3.1.2. A) Differential interference contrast microscopy and B) TEM images of hollow PVal-microsponges isolated after 2 h of SI-ROP and subsequent template dissolution. C) SEM images reveal sponge-like morphology. Scale bars 5 μm for DIC image and 2 μm for TEM and SEM.

Size of PVal-microsponges

D: 600 nm
D: 1.5 μm
D: 6.8 μm
D: 7.0 μm

Figure 3.1.3. SEM images various PVal-microsponges fabricated by using non-porous silica template with diameter of A) 600 nm, B) 1.5 μm and C) 5 μm showing consistent sponge-like morphology. D) SEM images of PVal-coated mesoporous silica (D: 7 μm, pore size: 100 nm). Scale bars are 2 μm.

3.2. Entrapment of Metal

λabs = 405 nm
λabs = 300 nm
PVal/Pd(0)-Microsponges
0 min, 3 min, 6 min, 9 min, 12 min, 15 min, 60 min

Figure 3.2. A) DIC microscopy and B) TEM images of Pd(0)-impregnated PVal-microsponges (scale bars are 5 μm, 2 μm and 10 nm). C) Evolution of absorbance spectra with increasing hydrogenation reaction time. D) Conversion achieved in 60 min after 3 catalytic cycles.

3.3. Entrapment of Macromolecules

HSA
Before PEG Entrapment
Low-fouling PEGylated PVal-Microsponges
After PEG Entrapment
488 nm
647 nm

Figure 3.3. Fluorescent microscopy images showing reduction in human serum albumin (HSA; fluoresces green) fouling after the entrapment of poly(ethylene glycol) (PEG; fluoresces red).

3.4. Multiple macromolecules?

H-bonded PVal replica of mesoporous template
Doxorubicin HCl (DOX) (Model Drug)
PEG (Bioresponsive Polymer)
DOX-loaded, PEGylated PVal Particle Replica
488 nm
570 nm

Figure 3.4. PVal negative-replica matrices fluoresces A) green at 488 nm and B) red at 570 nm after the entrapment of doxorubicin hydrochloride and PEG. C) Increase in fluorescent intensity at 488 nm associated with the conjugation of PEG488.

4. Conclusion

The present study demonstrates the facile formation of polypeptide microsponges by employing surface-initiated N-carboxyanhydride ring-opening polymerization. We further demonstrates the ability of the β-sheets-stabilized microsponges in entrapping a range of organic and inorganic materials including metal nanoparticles, proteins, drug molecules and bio-relevant polymers via non-covalent interactions.

Further studies are currently directed at employing this surface-driven approach to fabricate other unique β-sheets-assembled nano/micro-architectures, as well as utilizing the reported hollow PVal-microsponges as platforms for organic catalysis and biomedical devices.

5. References

1. H. R. Kricheldorf, Angew. Chem. Int. Ed. 2006, 45, 5752-5784
2. S. H. Wibowo, A. Sulistio, E. H. H. Wong, A. Blencowe, G. G. Qiao, Chem. Comm. 2014, 50, 4971-4988.
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6. Acknowledgement

An intervention applying a palliative care approach in residential care – effects on care provision and caring climate

Ingela Beck[1,3] RN, PhD • Ulf Jakobsson[2] RN, PhD, Associate Professor • Anna-Karin Edberg[1,3] RN, PhD, Professor • Contact: Ingela.Beck@hkr.se
[1] The Swedish Institute for Health Sciences, Lund University, Sweden, [2] School of Health and Society, Kristianstad University, Sweden, [3] Center for Primary Health Care Research, Lund University, Sweden

Conclusion

The intervention seemingly facilitated for the NAs to focus on relationship aspects with the residents. However, in spite of the leaders' involvement, the intervention seemed not to be sufficient to change the organizational prerequisites for the staff to provide a more person-centered care.

Introduction

The palliative care approach aims to integrate psychosocial and existential aspects as well as relationship aspects in the care and can be used in all care contexts. In residential care, nurse assistants (NAs) are the ones who are closest to the residents, but have limited prerequisites to work in accordance with the palliative care approach. We aimed to investigate the effects of an intervention applying a palliative care approach in residential care, on NAs' experience of care provision and caring climate.

Method

In this quasi-experimental study we evaluated the intervention involving NAs (n=75) and their leaders (n=9), focusing on emotional, existential and relationship aspects within the palliative care approach, in comparison with controls (n=110). Data consisted of a questionnaire that the NAs answered at three time points. Comparison within groups was performed.
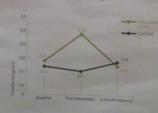
Results

In the intervention group, effects were seen concerning the NAs reports of the care provision in that they focused more on to ease for residents to narrate about their lives, and on communication with residents in what gives them meaning in life. In the intervention group also effects were seen, in that the NAs rated the residents' medical and nursing care needs being less met at the facility directly after the intervention. No effects were seen concerning the caring climate or the possibilities to provide a more person-centered care.

Do you facilitatet for residents to speak about their lives in the past, present and their thoughts about the future?

Do you talk to the residents about what gives them mening in live?

Quality of nursing and medical care

CHART engineering

Hillary Argyle   Daniel Talbert
Rachelle Rosendahl   Brent Chase

1. The Challenge

CHART Engineering was presented with the challenge of designing a temple steeple that would meet the seismic constraints of the area while optimizing cost and keeping the architectural requirements.
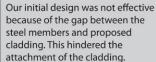
Our initial design was not effective because of the gap between the steel members and proposed cladding. This hindered the attachment of the cladding.

The second design that was proposed was not efficient because of the unnecessary amounts of steel needed.

Our third design allows the cladding to be attached at the top while reducing the number of steel members.

Architectural Constraints

- No steel framing crossing large windows
- Octagonal steeple shape
- Angel Moroni
- Heavy cladding

Seismic Constraints

- High seimic activity area
- Seismic category E
- Minimized deflection
- Safe for Maximum Considered Earthquake

2. The Process

The steeple was designed as a special concentrically brace frame, using the two-stage analysis approach from ASCE 7-10.

ASCE 7-10

The two-stage approach required certain conditions to be met. This approach was desirable because it resulted in a lower seismic force.
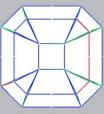
- Period of base structure cannot be 1.1 times more than period of top structure
- Base structure and steeple must have seperate R and ρ values
- The ratio of R/ρ of the base to R/ρ of the steeple must be less than 1

Period Requirement	T_{base}	0.18
	$T_{steeple}$	0.13
	$1.1*T_{steeple}$	0.143
R and P Requirement	$R_{steeple}$	6
	$\rho_{steeple}$	1.3
R and P Ratio Requirement	R/ρ_{base}	0.85
	$R/\rho_{steeple}$	4.62
	Ratio	0.83

3. The Analysis

With the system and approach chosen, Visual Analysis was used to iterate and find a steeple without failure.

With the first iteration, failure (red) can be seen in the members connecting the top and bottom frame as well as members on the top of the steeple.
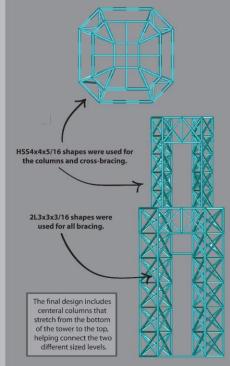
With this iteration, beams were added where the top and bottom frames were connected to alieviate failure.

Finally, cross-bracing was added to the top of the steeple, strengthening the top members and eliminating failure.

The added cross-bracing resulted in no failure throughout the steeple design. This design met all architectural and seismic consraints given in the challenge.

HSS4x4x5/16 shapes were used for the columns and cross-bracing.

2L3x3x3/16 shapes were used for all bracing.

The final design includes central columns that stretch from the bottom of the tower to the top, helping connect the two different sized levels.
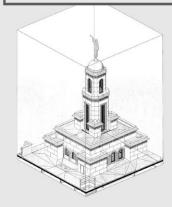
COST ANALYSIS

Optimizing cost was a large part of the overall consideration for design. Steel cost was reduced by using local steel throughout the entire structure. Labor costs, one of the most significant costs of steel buildings, were reduced by only using two different steel members in the design, simplifying construction. Welded designs were considered to not be significantly more expensive than bolted connectionsout of the country.

4. The Solution

APRIL 2012

Title
Authors

Intro

Methods
1.
2.
3.
4.

Results

Discussion
More research is needed, but...

Main finding goes here, translated into **plain english**. **Emphasize** the important words.

Take a picture to download the **full paper**

Extra Tables & Figures
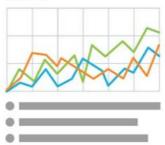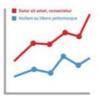
Anatomy of a #betterposter.

Silent Presenter Bar

Concentrated summary of your intro, methods, and results that can be skimmed in 1-5 minutes. Located intentionally far away from the presenter's personal space. For when an attendee wants more detail but the presenter is busy (or they just don't feel like interacting).

WHY: Centralizing and succinctly summarizing the study details in a single column is fast & easy to scan without having to hunt around the poster for each section.

Title
Authors

Intro

Methods
1.
2.
3.
4.

Results

Discussion

Main finding goes here, translated into plain english. Emphasize the important words.

Take a picture to download the full paper

Extra Tables & Figures

Ammo Bar

For all the figures and tables that you feel like you need to be able to point to if somebody asks you a hard question. Leave it messy! It's just for you to reference.

WHY:
1. Lets you get the worries out of the way, so you can focus the rest of the poster on clearly communicating the need-to-know info to attendees.

2. Keeps the detail you need for questions closest to where you're standing, so you don't have to reach across the poster and block the view.

QR Code to full paper

Point your phone camera at this and instantly download the full paper, a copy of the poster, the presenter's contact details...and/or even the data-set powering the study.

Main finding

The key 'takeaway' of the study is central, translated into plain english. Research on usability writing suggests that casual language is interpreted faster than formal language.

Focus area
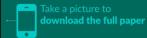
Hardly "wasted", negative space maximizes signal-to-noise ratio and helps attendees quickly find the takeaway.

Main finding goes here, translated into **plain english**. **Emphasize** the important words.

Title goes here; make it small if you need to free up space.
Authors

Intro

Methods
1.
2.
3.
4.

Results

Discussion
More research is needed, but...

Extra Tables & Figures

Take a picture to **download the full paper**

Switch of metabolic dependency in hormone-dependent breast cancer resistant to endocrine therapy

Ylenia Perone[1]

Rohit Bharat[2], Emanuela Mensa[1], Giancarlo Pruneri[3], Marco Vanoni[2] and Luca Magnani[1]

[1]Imperial College London, UK
[2]University of Milano-Bicocca, Italy
[3]University of Milan, European Institute of Oncology, Italy

WORKING MODEL - Intro

Imperial College London
Department of Surgery and Cancer

Apocalipids Now:

the **alternative fuel** driving

resistance in breast cancer

Get more information!

SCAN ME

References:

1   Nguyen, V. et al. Differential epigenetic reprogramming in response to specific endocrine therapies promotes cholesterol biosynthesis and cellular invasion. Nat. Commun. 2015.

2   Perone, Y and Magnani, L. Going off the grid: ERα breast cancer beyond estradiol. J Mol Endocrinol. 2016.

3   Perone, Y. et al. SREBP1 drives Keratin-80-dependent cytoskeletal changes and invasive behaviour in endocrine-resistant ERα breast cancer. Nat. Commun. 2019.

CANCER RESEARCH UK

Cell line models:

Fig. 4S: Metabolic Switch from Glucose to Glutamine

Fig 5S: Increased Glutamine-mediated lipid synthesis

Fig 4S: Increased mitochondrial respiration and autophagy

Autophagy

Main finding in plain English. Emphasize important words.

Presenter Name, author2, author3, author4

INTRO
- Just give context for the gap you're filling
- You're not going to get yelled at if you don't cite the 5 papers from 1937 that defined this construct. This ain't no lit review. They'll download your paper if they want that.

METHODS
- Measures you collected.
- What you tested for (i.e., the predictor and outcome relationships you looked for).
- Statistical techniques you used.

RESULTS
- Ideally a graph, if you have one. NBD if you include your money-graph in both sidebars.
- Listing specific relationships you found is clearer than trying to summarize the results overall. But doing both is fine too.
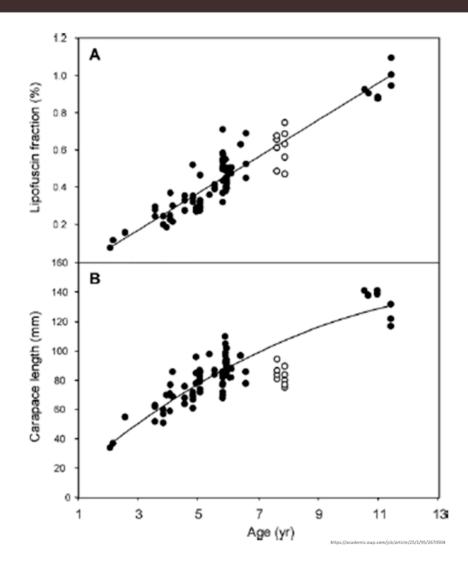
DISCUSSION
- "If this result actually generalized and I didn't have to humbly disclaim the possibility of a thousand confounds and limitations, it would imply that...."

Fill this space up as much as you need to, and feel free to include *essential* figures and table-data but keep it skimmable. You can make this bar slightly wider if you need to, but don't squish the middle too much. The middle is more important than this bar.

AMMO BAR

Delete this and replace it with your...
- Extra Graphs
- Extra Correlation tables
- Extra Figures
- Extra nuance that you're worried about leaving out.
- Keep it messy! This section is just for you.

Take a picture to **download the full paper**

http://betterposters.blogspot.com/2019/04/critique-morrison-billboard-poster.html

Горячо

The Experiences of Grandparents raising Grandchildren

Lynn McDonald, PhD. 1, 2, 3
Raza M. Mirza, PhD. 1, 2
Rebecca Bliss, MSW 1, 2, 3

UNIVERSITY OF TORONTO

Institute for Life Course and Aging 1
National Initiative for the Care
of the Elderly (NICE) 2
Factor-Inventash Faculty of Social Work 3

Introduction

Over the last decade the number of custodial grandparents has dramatically increased. This new caregiving role often arises as a result of their child's substance misuse, divorce or separation, mental and physical health issues, or through their death.

Women were overrepresented among grandparent caregivers.

One in three households of grandparent caregivers includes a grandparent with a disability and a household income less than $15,000 per annum.

60% of grandparents were likely to be out of the labour force and spend long hours on unpaid childcare.

Grandparent caregivers had twice the rates of clinical depression as non-grandparent caregivers.

Research Question

How do custodial grandparents experience the acquisition of the unexpected and dynamic roles grandparents take on with regard to kinship care?

Methods

This study employed a qualitative research design and in-depth interviews were conducted with participants (n=25). From these interviews, observations were made to address the similarities, differences and variability within the participants' experiences with regard to raising their grandchildren.

Results

Grandparents raising their grandchildren identified several gaps for which relevant and practical solutions to their stresses are needed. Participants in the study indicated that their custody situations were often driven by sudden change and therefore lacked planning.

Grandparents talked about raising their grandchildren...

"It's like becoming a parent again, it has really given me great meaning to my life in my old age. I would not change anything.."

"My plan was to travel when I retired, not to raise children"

"As an older adult, I have to worry about what is gonna happen to the kids, if something happens to me"

"I wound up working longer than I had planned. I have to save for our future and also plan for their future as well"

"Being in custody of grandchildren greatly affects older people more because they are closer to retirement, or they've made lifestyle changes, you know for example, downsized to a one bedroom apartment and then they get three kids who they now have to move again and incur more expenses"
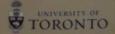
"I am clinically depressed. I went bankrupt"

"Being in custody of grandchildren greatly affects older people more because they are closer to retirement, or they've made lifestyle changes, you know for example, downsized to a one bedroom apartment and then they get three kids who they now have to move again and incur more expenses"

"I fought my drug addicted daughter for custody. The first six weeks of having the baby were tough. I was away from work and going to lose my job. I was in a battle to save my granddaughter's life. I returned to work so I could pay the lawyers."

Discussion

The experiences of the older adults in our study highlight the acquisition of various roles for grandparents raising grandchildren. Social role theory is helpful for framing the similarities and differences in roles between older and younger grandparents and between older men and women.

Conclusion

Our findings identify the diversity in experiences that exist amongst our sample with regard to gaining custody of grandchildren, becoming parents again and adopting to new roles in later life and the perceived positive and negative aspects of their experiences.

UNIVERSITY OF TORONTO

Scan to Learn More About Our Study

IAGG 2013 Seoul
The 20th IAGG World Congress of Gerontology and Geriatrics

Use new technologies to assess walking in the elderly:
clinical protocol

Authors:
C.Cridelich, G.Sacco, C.Vuagnoux,
L.Bosher, B.Teboul , O.Guérin

With aging, the ability to walk is modified by the combined effect of physiological and pathological aging. It is therefore important to recognize the gait and prevent.
Currently, tools exist to assess the risk of falling. Some are comprehensive but time-consuming and are generally discarded in favor of other simpler tests. However, the listing of these lack precision, particularly in terms of duration.

Method

In this study, we will use the smart walker developed by INRIA(National Institute for Research in Computer Science and Control), entitled ANG (for Assisted Navigation Guide), to obtain more reliable and accurate measurements of parameters such as walking speed and direction.
The main objective of this study is to compare a standard evaluation of walking and a technology assessment for people, who are between 65 and 90 years old.
Secondary objectives are to evaluate the tolerance of the use of ANG walker in the elderly, develop new indices for doctors and test the feasibility of detection by ANG for alterations of the musculoskeletal system, witch are not felt by the patient.

Centre
Hospitalier
Universitaire
de Nice

Plateforme
Patient

Results

Currently, 17 volunteers were included in this protocol. Inclusions should be completed by November 30th 2012.

Walking

smart walker

risk of falling

Université
Nice
Sophia Antipolis

Plateforme
Partenariale Innovation

Conclusion

It's not possible to conclude now. The results of this study should be available in March 2013.

Ventilatory response of male Mozambique tilapia to putative pheromones of conspecific males

(Oreochromis mossambicus)

Ana Leitão, Rute Mendonça, Adelino V.M. Canário, Eduardo N. Barata

Centre of Marine Sciences (CCMAR), Campus de Gambelas, 8005-139 Faro, Portugal

University of Évora, Dept. of Biology, Apartado 94, 7002-554 Évora, Portugal

INTRODUCTION

The Mozambique tilapia is a lek-breeding cichlid in which males establish social hierarchies through aggressive interactions (1).

The dominant males, unlike the submissive, store more urine and release it in pulses, whose frequency increases during aggression bouts towards opponent males. The olfactory potency of urine is positively correlated to the social rank of the male donor (2).

We have hypothesized that dominant males' urine is vehicle of a putative pheromone, reflecting the competitive ability of the sender and effecting aggressive behaviour of the receiver.

OBJECTIVES

Determine if stimulation with water conditioned by dominant or subordinate males affects:

1 - Opercular ventilation frequency of socially isolated males.

2 - Aggressive behaviour towards male's image in a mirror.

METHODS

1 - Observation of social groups to obtain the treatments (water-only controls, water conditioned by dominant or subordinate males (Fig.1)
2 - Social isolation of the male (7 days).
3 - Acclimatization to the experimental tank (24h before experiment)
4 - Experiment:
 4.1 - Ventilatory frequency was assessed by bioelectric potentials generated by the fish opercular and mouth movement, and aggressive behaviour by mirror image (Fig.2).
 4.2 - Procedure:

RESULTS

CONCLUSIONS

- In contrast to water-only controls, water conditioned by dominant or subordinate males caused a significant and similar increase in ventilatory rate and swimming time (Fig. 3 A and B). However, these two variables were not correlated within the three treatment groups (Fig. 3 C and D).

- Increase in swimming time and ventilation caused by odours from conspecific males seem to be independent phenomena, but both may result from independent motor reflexes that increase sniffing.

- The frequency of males showing aggressive behaviour was lower in the group stimulated with water from dominant males than in those stimulated with water from subordinates or water-only controls, but not statistically significant (Fig. 4 A).

- It remains to be conclusively demonstrated that a putative urinary pheromone of dominance reduces aggressiveness in opponent males.

Это топ

DISCOVER THE UNKNOWN
Survey Systems

ELAC SeaBeam 3030 / 3050

ELAC HydroStar 4900

ELAC SeaBeam 3012 / 3020

MULTIBEAM ECHO SOUNDING

SWEPT BEAM™ TRANSMISSION TECHNIQUE

ADVANCED TRANSMISSION BEAM STEERING

ICE PROTECTION

WATER COLUMN IMAGING (WCI)

MULTI-PING

WÄRTSILÄ

THE HEART TRUTH® CELEBRATES

A DECADE OF INSPIRING WOMEN TO PROTECT THEIR *hearts*

10th Anniversary

IN 2002, 1 IN 3 WOMEN DIED OF HEART DISEASE.
That year, the National Heart, Lung, and Blood Institute launched *The Heart Truth* campaign to make women more aware of the danger of heart disease. It all started with a little red dress…

HEART DISEASE IS THE #1 KILLER OF WOMEN

83 DESIGNERS

178 CELEBRITIES

208 ADDRESSES

Two thirds of women say that the Red Dress makes them want to learn more about heart disease.

$800,000 in grants awarded to support community education in partnership with the Foundation for the National Institutes of Health.

We have provided thousands of free heart disease **risk factor screenings** for women across the country.

MAKING HEART HEALTH FASHIONABLE
The annual Red Dress Collection Fashion Show brings the issue to life and raises awareness. Top designers like Diane von Furstenberg and Michael Kors have lent their talent with appearances by Heidi Klum, Vanessa Williams, and Sheryl Crow.

OUR MESSAGE IS NATIONAL
The Red Dress® has appeared on **29 BILLION** product packages & **1.7 MILLION** Red Dress Pins have been distributed across the country.

We launched **National Wear Red Day®** with our partners in 2002. Each year on the first Friday of February, thousands of people across the country wear red in support of women's heart health.

480 community leaders have been trained as *Heart Truth Champions*, educating more than **half a million** people on heart disease prevention.

HEART DISEASE IS PREVENTABLE
By leading a healthy lifestyle, women can lower their risk of heart disease.

- EAT RIGHT
- REGULAR PHYSICAL ACTIVITY
- LIVE SMOKE-FREE
- KNOW YOUR NUMBERS

30% (1997) 46% (2005) **54%** (2009)
Awareness of heart disease among women has **nearly doubled**.

30% (1997) **48%** (2009)
More women are **speaking to their doctors** about heart disease.

47%
Women who are informed about heart disease are **35% more likely to be physically active** and **47% more likely to report weight loss** compared with those who are less aware.

TODAY, 1 IN 4 WOMEN DIES OF HEART DISEASE.
Although significant progress has been made, there is still work to do. Help *The Heart Truth* and its partners continue to make strides.

SHARE THIS INFOGRAPHIC WITH AT LEAST ONE WOMAN IN YOUR LIFE.

FACEBOOK.COM/HEARTTRUTH

National Heart Lung and Blood Institute

the heart TRUTH®

Seeking Euthanasia

AFO 169
13   SBS

Design Guidelines

When it comes to design, there are a few basic rules to follow:

SIMPLE IS GOOD

Your background should be plain white or a very subtle gradient/pattern that is not distracting and your text should be clear and easy to read. Any charts or graphics should be able to be understood quickly and not include unnecessary elements.

MAKE IMPORTANT INFORMATION STAND OUT

Section headings should be obvious and important research should draw attention.

LINE THINGS UP

Try to fit everything to a basic grid and align each section with another. If you have a set of charts or photos, it looks best to have them equally-sized and distributed evenly.

DON'T MAKE IT CROWDED

A viewer may only spend a minute or two looking at your poster so they should immediately be able to make sense of the organization and be able to identify the distinct sections.

LAYOUT AND DESIGN »

makesigns.com/tutorials/

Постер — это тизер

Постер — это тизер

Одно ясное сообщение

В форме графики

Понятно узкой аудитории

Привлекает внимание

Александр Богачев

ДЛЯ СВЯЗИ

ТЕЛЕГРАМ-
КАНАЛ

 bogachev11

 chartomojka