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FASTE MED SUCCES

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SE OGSÅ referencelisten til bogen "Faste uden Sult", som du finder på www.jerk.dk. hvor mange af de grundlæggende begreber omkring faste, virkningsmekanismer og effekter beskrives.

EKSPERTER

Mange af bogens informationer, beskrivelse af forsøgsresultater og konklusioner stammer fra mine samtaler med førende eksperter, der bidrager med mange faglige konklusioner indenfor deres forskningsområde. Her er de væsentligeste kilder:

MARK P. MATTSON

Adjunct professor of neuroscience, Ph.D.

Johns Hopkins University School of Medicine, Department of Neurology,
Baltimore, Maryland

<https://neuroscience.jhu.edu/research/faculty/57>

Mark P. Mattson er adjungeret professor i neurovidenskab på Johns Hopkins University School of Medicine, Department of Neurology, i Baltimore, Maryland, og som en af verdens førende forskere i periodisk faste giver han kommentarer og vurderinger mange steder i bogen, ikke mindst omkring fastens betydning for hjernen og neurdegenerative lidelser.

Mark P. Mattson er medforfatter til: Effects of Intermittent Fasting on Health, Aging, and Disease. N Engl J Med 2019; 381:2541-2551

<https://www.nejm.org/doi/full/10.1056/NEJMra1905136> Denne videnskabelige artikel bragt i et af de fineste lægevidenskabelige fagtidsskrifter satte for alvor periodisk faste på verdenskortet med sit faglige overblik over forskningen. Artiklens konklusion: Preclinical studies and clinical trials have shown that intermittent fasting has broad-spectrum benefits for many health conditions, such as obesity, diabetes mellitus, cardiovascular disease, cancers, and neurologic disorders. Animal models show that intermittent fasting improves

health throughout the life span, whereas clinical studies have mainly involved relatively short-term interventions, over a period of months.

Mark P. Mattson har skrevet bogen: The Intermittent Fasting Revolution (MIT Press, 2023). <https://mitpress.mit.edu/9780262545983/the-intermittent-fasting-revolution/>

Mark P. Mattson medvirker ofte i podcasts og interviews om periodisk faste. Hans egen interessante – og nørdede - podcast 'Brain Ponderings' om hjernen ligger bl.a. på Spotify:
<https://open.spotify.com/show/39HsoeK8o7DtXIhepNCvfl>

PHILIP RUPPERT

Molekylærbiolog, postdoc på Center for Funktionelle Genomiske Studier og Metabolisme, Institut For Biokemi og Molekylær Biologi, Syddansk Universitet
<https://portal.findresearcher.sdu.dk/da/persons/ruppert>

KRISTA VARADY

Professor of Nutrition, Ph.D.
Department of Kinesiology and Nutrition
University of Illinois, Chicago

<https://ahs.uic.edu/kinesiology-nutrition/directory/varady-krista/>

- Som professor i ernæring ved University of Illinois i Chicago forsker Krista Varady i intermitterende faste, vægttab, samt beskyttelse mod metaboliske sygdomme, herunder risikoen for hjertekarsygdomme. Hun har gennemført mange kliniske studier af forskellige fasteformer og bidrager blandt andet med vigtige konklusioner omkring vægttab. Hun medvirker ofte i podcast og interviews om periodisk faste samt har skrevet flere bøger.

KRISTOFFER BERG-HANSEN

Læge, ph.d.,
Institut for Klinisk Medicin på Aarhus Universitet og Afdeling for Hjertesygdomme, Aarhus Universitetshospital
<https://pure.au.dk/portal/da/persons/krbh%40clin.au.dk>

MARTIJN REDEGELD

Head of Nutrition at Team Visma|Lease a Bike, på tidspunktet for mit interview. I dag: Head of Top Sports at AFC Ajax
<https://www.linkedin.com/in/mredgeld/>

MADS MEJDAHL

Speciallæge i almen medicin
Charlottenlund

THOMAS ELBENHARDT JENSEN

Humanfysiolog, Ph.D., lektor

Institut for Idræt og Ernæring på Københavns Universitet, August Krogh

Sektionen for Molekylær Fysiologi

- Leder forskningsgruppen Muskelvækst og Stofskifte. Forsker bl.a. i skeletmusklers tilpasning til ydre faktorer såsom fysisk aktivitet og inaktivitet, herunder betydningen for livsstils- og aldringsbetingede sygdomme som diabetes overvægt og kræft. Bidrager i bogen med sin store viden om, hvordan man skal forholde sig til faste, når man henholdsvis udholdenhedstræner og styrketræner.

<https://nexus.ku.dk/ansatte/?pure=da/persons/56931>

NATASJA BJERRE

Postdoc og Projektleder, cand.scient.soc

Steno Diabetes Center Copenhagen

Afd. for Vidensformidling og Kompetenceudvikling

Afd. for Sundhedsfremme, Forebyggelse og Samfundet

<https://www.sdcc.dk/forskning/forskningsprofiler/Sider/Natasja-Bjerre-Martinsen.aspx>

<https://research.regionh.dk/da/persons/natasja-bjerre-martinsen>

CHARLOTTE NÄSLUND-KOCH

Læge, Ph.D.

Afdeling for Allergi-, Hud- og Kønssygdomme på Gentofte Hospital

Ph.D.-afhandling: 'Risk factors and comorbidities in individuals with psoriasis'

<https://research.regionh.dk/da/persons/charlotte-n%C3%A4slund-koch>

FORSKNING, ARTIKLER, REVIEWS

A Smartphone App Reveals Erratic Diurnal Eating Patterns in Humans that Can Be Modulated for Health Benefits. Cell Metab 2015;22(5):789-98

<https://linkinghub.elsevier.com/retrieve/pii/S1550413115004623>

- I gennemsnit spiser man hele syv gange om dagen, langt mere end de tre måltider som vi typisk siger

International consensus on fasting terminology. Cell Metab 2024;36(8):1779-1794.e4

<https://pubmed.ncbi.nlm.nih.gov/39059384/>

- For at skabe bedre overblik og større enighed om definitionerne på faste søger eksperter at skabe systematik, især i den videnskabelige verden.

Faste 16:8 – tilbagemelding og resultat. Charlotte Ringbæk 2024

<https://feedback.dk/2024/04/25/faste-168-tilbagemelding-og-resultat/>

- et spændende projekt, som fysioterapeut og fitnessinstruktør Charlotte Ringbæk har taget initiativ til ved at inkludere faste hos Senior Styrke-holdet hos fitnesscentret SATS Amager Strand

World's Longest Medically Documented Repeated Fasting History in a 92 Years Old Man Who Fasted 21 Days Yearly for 45 Years: A Case Report. Journal of Integrative and Complementary Medicine 2024; 30(5): 487-491

<https://www.liebertpub.com/doi/10.1089/jicm.2023.0352>

- 92-årig mand faster 21 dage årligt gennem 45 år

Hver tiende faster – er de tre hovedmåltider på vej ud?

Fuldkornspartnerskabet 3. juni 2024.

<https://www.mynewsdesk.com/dk/fuldkornspartnerskabet/pressreleases/hver-tiende-faster-er-de-tre-hovedmaaltider-paa-vej-ud-3327058>

- Hver tiende af os angiver at spise to hovedmåltider og derudover faste.

The hormesis principle of neuroplasticity and neuroprotection. Cell Metab 2024;36(2):315-33

<https://pubmed.ncbi.nlm.nih.gov/38211591>

- når kroppen møder en mindre belastning, reagerer den ved at blive stærkere, så den næste gang er bedre rustet til at klare udfordringen.

Mechanisms of hepatic fatty acid oxidation and ketogenesis during fasting. Trends in Endocrinology & Metabolism 2024;35(2):107-124

- Om ketonstoffer. We synthesize the current molecular knowledge on the impact of fasting on hepatic fatty acid oxidation and ketogenesis.

<https://pubmed.ncbi.nlm.nih.gov/37940485>

- Dansk beskrivelse: <https://www.sdu.dk/da/om-sdu/fakulteterne/naturvidenskab/nyheder-2024/ketosis>

Metabolism of ketone bodies during exercise and training: physiological basis for exogenous supplementation. J Physiol. 2017; 595(9): 2857–2871
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5407977/>
- ketonstoffer dannet under træning

Cardiovascular Effects of Oral Ketone Ester Treatment in Patients With Heart Failure With Reduced Ejection Fraction: A Randomized, Controlled, Double-Blind Trial. Circulation 2024;149(19):1474-1489
<https://pure.au.dk/portal/da/publications/cardiovascular-effects-of-oral-ketone-ester-treatment-in-patients>
- ketonstoffer forbedrer hjertets pumpekraft

Vis mig din ph.d.: Jacob Marthinsen Seefeldt
Ugeskrift for læger 2024, 29. juli (video)
<https://ugeskriftet.dk/nyhed/vis-mig-din-phd-jacob-marthinsen-seefeldt>
- ketonstoffer har to isolerede effekter på hjertekar-systemet.

What's the big deal about ketones? Cycling Weekly 12. juni 2024
<https://www.cyclingweekly.com/fitness/whats-the-big-deal-about-ketones>
- ketonstoffer i cykelsport

Do ketone esters increase EPO? mysportscience.com
<https://www.mysportscience.com/post/do-ketone-esters-increase-epo>
- This study showed that ketone esters can increase EPO. Whether ketone esters actually increase EPO enough, and also long enough, to cause changes in RBC over time, remains to be determined.

The effect of fasting or calorie restriction on autophagy induction: A review of the literature. Ageing Res Rev 2018;47:183-197
<https://www.sciencedirect.com/science/article/abs/pii/S1568163718301478>
- autofagi er en central virkningsmekanismer, som faste udløser i kroppen.

Flipping the Metabolic Switch: Understanding and Applying Health Benefits of Fasting. Obesity (Silver Spring). 2018; 26(2): 254–268.
<https://onlinelibrary.wiley.com/doi/10.1002/oby.22065>
- det metaboliske skift til fedtforbrænding og ketonstoffer

Hvordan reagerer kroppen på sult? Louise Torp Dalgaard, professor. Roskilde Universitet. 31. juli 2024

<https://ruc.dk/nyheder/hvordan-reagerer-kroppen-paa-sult>

Watching, keeping and squeezing time to lose weight: Implications of time-restricted eating in daily life. *Appetite* 2021;161:105138

<https://www.sciencedirect.com/science/article/abs/pii/S0195666321000465?via%3Dihub>

<https://www.sciencenews.dk/da/problemer-ved-en-af-tidens-populaere-slanke-trends-kan-godt-loeses>

- cand.scient.soc. Natasja Bjerre fra Steno Diabetes Center ser i sin ph.d.-afhandling på, hvilke forhold omkring motivation, der betyder rigtig meget for at gennemføre et fasteprojekt.

Effect of Intermittent Fasting on Reproductive Hormone Levels in Females and Males: A Review of Human Trials. *Nutrients*. 2022 Jun; 14(11): 2343

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9182756/>

- On the one hand, fasting may prove to be a valuable tool for treating hyperandrogenism in females with polycystic ovarian syndrome (PCOS) by improving menstruation and fertility. On the other hand, fasting may be shown to decrease androgens among males, which could negatively affect metabolic health and libido. More research is warranted to confirm these preliminary findings.

Effect of time-restricted eating on sex hormone levels in premenopausal and postmenopausal females. *Obesity (Silver Spring)*. 2023; 31(Suppl 1): 57-62

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9877115/>

- Our data suggest that concentrations of testosterone, androstenedione, and sex hormone binding globulin (SHBG) do not change during 8-weeks of TRE in premenopausal or postmenopausal women, with 3-4 % weight loss. Estradiol, estrone, and progesterone, were only measured in postmenopausal women, and remained unchanged. Dehydroepiandrosterone (DHEA), on the other hand, decreased in both groups of women by the end of the trial. These preliminary data suggest that short-term TRE, that produces mild weight loss, has little effect on sex hormone levels in premenopausal or postmenopausal women. These findings still require confirmation by well-powered RCT that specifically examines the effect of TRE on sex steroids of women of various ages.

Effect of Time-Restricted Eating on Weight Loss in Adults With Type 2 Diabetes. A Randomized Clinical Trial. *JAMA Netw Open*.

2023;6(10):e2339337

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2811116>

omtale: <https://www.nih.gov/news-events/nih-research-matters/intermittent-fasting-weight-loss-people-type-2-diabetes>

- Et halvt år senere havde de fastende i gennemsnit tabt 3,6 % af kropsvægten. Dem, der talte kalorier, tabte sig 1,8 %, altså lidt mindre.

Time-restricted eating: Watching the clock to treat obesity. Cell Metab 2024;36(2):301-314

<https://pubmed.ncbi.nlm.nih.gov/38176412>

Beneficial effects of intermittent fasting: a narrative review. J Yeungnam Med Sci 2023;40(1):4-11

<https://www.e-jyms.org/journal/view.php?doi=10.12701/jyms.2022.00010>

Time-restricted eating without calorie counting for weight loss in a racially diverse population: a randomized controlled trial. Ann Intern Med 2023; 176:885-895

<https://www.acpjournals.org/doi/10.7326/M23-0052>

- De fastende spiste 425 færre kcal dagligt og tabte sig 4,9 % i forhold til kontrolgruppen, mens dem på kalorierestriktion spiste 405 færre kcal og tabte sig 5,3 %. Tallene i de to grupper er i praksis ikke statistisk forskellige.

Calorie Restriction with or without Time-Restricted Eating in Weight Loss. N Engl J Med 2022;386:1495-1504

<https://www.nejm.org/doi/full/10.1056/NEJMoa2114833>

- fastegruppen tabte i gennemsnit 8 kg i løbet af et år, mens gruppen på kalorierestriktion tabte 6,3 kg. Bl.a. taljemål, blodtryk, kolesterol og blodsukker faldt i begge grupper, der var ikke statistiske forskelle mellem gruppernes resultater.

A 5:2 Intermittent Fasting Meal Replacement Diet and Glycemic Control for Adults With Diabetes. The EARLY Randomized Clinical Trial. JAMA Netw Open 2024;7(6):e2416786

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2820237>

Omtale: <https://www.washingtonpost.com/wellness/2024/06/21/intermittent-fasting-type-2-diabetes/>

- Det tyder på, at 5:2 kan være en effektiv indledende strategi hos en person med nydiagnosticeret type 2-diabetes i stedet for straks at begynde på medicinen, skriver forskerne.

Clinical potential of fasting in type 1 diabetes. Trends Endocrinol Metab 2024;35(5):413-424

<https://pubmed.ncbi.nlm.nih.gov/38331668>

- Peger på, at faste potentielt kan være gavnligt, men der er behov for mere forskning.

- presstekst: Intermittent fasting shows promise for those with type 1 diabetes. University of Illinois Chicago. Press release. February 21, 2024

<https://today.uic.edu/type-1-diabetes-intermittent-fasting-research/>

Spørgsmål og svar om vægttabsmedicin og diabetesmedicin.

Lægemiddelstyrelsen 30. april 2024

<https://laegemiddelstyrelsen.dk/da/nyheder/2023/spoergsmaal-og-svar-om-vaegttaabsmedicin-og-diabetesmedicin/>

Impact of Ramadan fasting on thyroid status and quality of life in patients with primary hypothyroidism: a prospective cohort study from Karachi, Pakistan. Endocr Pract 2018;24:882–8

<https://pubmed.ncbi.nlm.nih.gov/29975574/>

- Ramadan studies suggested the need for higher doses of levothyroxine, a globally prescribed drug for hypothyroidism, in primary hypothyroidism patients because their serum TSH levels exceeded normal ranges after the Ramadan fast.

Effects of Intermittent Fasting on the Circulating Levels and Circadian Rhythms of Hormones. Endocrinology and Metabolism 2021;36(4):745-756.

<https://www.e-enm.org/journal/view.php?number=2205#b118-enm-2021-405>

- generelt om hormoner, incl. stofskiftet

Current Evidence and Directions for Intermittent Fasting During Cancer Chemotherapy. Adv Nutr 2022; 13(2): 667–680

<https://www.sciencedirect.com/science/article/pii/S2161831322000837>

Periodisk Faste: Genvejen til sundhed eller endnu en madtrend? Kræftens Bekæmpelse 22. maj 2024.

<https://www.cancer.dk/nyheder-og-fortaellinger/2024/faste/>

What to know about fasting during cancer treatment. MD Anderson Cancer Center. University of Texas. January 29, 2024

<https://www.mdanderson.org/cancerwise/what-to-know-about-fasting-during-cancer-treatment.h00-159694389.html>

What you need to know about fasting and cancer. City of Hope. June 21, 2021.

<https://www.cancercenter.com/community/blog/2021/06/fasting-cancer>

2 years of calorie restriction and cardiometabolic risk (CALERIE): exploratory outcomes of a multicentre, phase 2, randomised controlled trial. Lancet Diabetes Endocrinol 2019;7(9):673-683

<https://pubmed.ncbi.nlm.nih.gov/31303390>

- omtale: <https://www.nytimes.com/2019/07/16/well/eat/cutting-300-calories-a-day-shows-health-benefits.html>

- 12 % kaloriebegrænsning gennem to år

Effect of long-term caloric restriction on DNA methylation measures of biological aging in healthy adults from the CALERIE trial. *Nature Aging* 2023;3:248–257

<https://www.nature.com/articles/s43587-022-00357-y>

- 12 % kaloriebegrænsning gennem to år, målinger på biologisk alder

Calorie studies. Duke University School of Medicine

<https://calerie.duke.edu/background>

- hjemmeside for CALORIE-studiet

Caloric restriction improves health and survival of rhesus monkeys. *Nat Commun.* 2017; 8: 14063

<https://www.nature.com/articles/ncomms14063>

- abestudier med kaloriebegrænsning

Circadian alignment of early onset caloric restriction promotes longevity in male C57BL/6J mice. *Science* 2022;376(6598):1192-1202

<https://www.science.org/doi/10.1126/science.abk0297>

- faste forlænger levetiden hos på mus

Kostens betydning ved psoriasis. *Ugeskr Læger* 2023;185:V08230535

<https://ugeskriftet.dk/videnskab/kostens-betydning-ved-psoriasis>

Gigtforeningen: Nye smertetal er et wake-up call til politikerne. 7. februar 2024

<https://via.ritzau.dk/pressemeddelelse/13780240/gigtforeningen-nye-smertetal-er-et-wake-up-call-til-politikerne>

Danskernes sundhed 2023

https://www.sdu.dk/da/sif/rapporter/2024/danskernes_sundhed_2023

Smerter i kroppen hos hver tredje lønmodtager. Det Nationale Forskningscenter for Arbejdsmiljø (NFA). 30. august 2018

<https://nfa.dk/nyt/nyheder/2018/smerter-i-kroppen-hos-hver-tredje-loenmodtager>

The effects of modified anti-inflammatory diet on fatigue, quality of life, and inflammatory biomarkers in relapsing-remitting multiple sclerosis patients: a randomized clinical trial. *Int J Neurosci* 2021;131(7):657-665

<https://www.tandfonline.com/doi/abs/10.1080/00207454.2020.1750398>

- antiinflammatorisk kost mindsker fatigue

Time-Restricted Eating in Adults With Metabolic Syndrome: A Randomized Controlled Trial. Ann Intern Med 2024, Oct 1

<https://www.acpjournals.org/doi/10.7326/M24-0859>

Omtale: National Institutes of Health: <https://www.nih.gov/news-events/nih-research-matters/time-restricted-eating-metabolic-syndrome>

- 108 prædiabetikere. Halvdelen indskrænkede spiseintervallet til 8-10 timer, Tre måneder senere var blodsukkeret HbA1C faldet statistisk sikkert. De tabte sig gennemsnitligt 3 kg, især inflammatorisk mavefedt, uden at miste muskler.

Insulin resistance reduction, intermittent fasting, and human growth hormone: secondary analysis of a randomized trial. npj Metab Health Dis 2, 26 (2024)

<https://www.nature.com/articles/s44324-024-00025-2>

Effects of Intermittent Fasting on the Circulating Levels and Circadian Rhythms of Hormones. Endocrinology and Metabolism 2021;36(4):745-756

<https://e-enm.org/journal/view.php?doi=10.3803/EnM.2021.405>

- mængden af væksthormon i blodet kan tredobles eller mere under faste.

Is It Healthy to Eat Just Once a Day? New York Times. 2024, Nov. 1

<https://www.nytimes.com/2024/11/01/well/eat/omad-diet-benefits-risks.html>

- om OMAD

Autophagy in endometriosis. Am J Transl Res 2017;9(11):4707-4725

<https://pmc.ncbi.nlm.nih.gov/articles/PMC5714760>

- Faste kan måske lindre pga. en antiinflammatorisk effekt, ligesom noget forskning peger på, at autofagi er nedsat ved tilstanden.