

REMOVING EMBEDDED LETTER PATTERNS

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This is similar to the words within words game in which an embedded word is removed from a longer word to make a third word by joining the letters remaining at the beginning and end of the original word. For example, removing MEMBER from CAMEMBERT makes CAT. Instead of removing embedded words, the current exercise removes embedded tautonymic and palindromic sequences. Thus, respectively, when -inin- (letter pattern 1212) is removed, REINING makes REG, and when -illi- (letter pattern 1221) is removed, CHILLIEST makes CHEST. Within each section below, the words are arranged, in order of priority, by the length of their removable sequences, by the letter patterns of the sequences and by the alphabetical order of the sequences. I have tried to find at least one word with a sequence beginning with each letter of the alphabet for each different length of sequence. Inevitably there are gaps. Words which are not hyphenated have been selected in preference to hyphenated words whenever possible. References can be found at the end.

REMOVING EMBEDDED DOUBLE LETTERS

The double letter, with the pattern 11, is both a tautonymic sequence and a palindromic sequence. Bing Crosby sang 'We're poor little lambs who have lost our way, baa, baa, baa', so it is fitting that removing AA from BaaING makes BING. Continuing with the removal of sequences beginning with b, c through to z:

b	CRIBbED-CRIED, NIBbLE-NILE	c	OccUR-OUR
d	DADdY-DAY, MIDdLE-MILE	e	FeeLING-FLING
f	HUFFED-HUED	g	BUggY-BUY, HAggLE-HALE
h	TOWhhE (tough)-TOWE (tough)	i	DiiODO (Pulliam)-DODO
j	HAjjI-HAI (hi)	k	GEkkO (gecko)-GEO
l	COLLINS-COINS	m	HEmmED-HEED, TOMmY-TOY
n	PInnED-PIED; TOnnE-TOE	o	SooTY-STY
p	TIPpER-TIER	q	RIqqS (Egypt. pipes)-RIS (rice)
r	QUArrY-QUAY	s	FOssIL-FOIL, TOssES-TOES
t	BAttLE-BALE, BEttER-BEER	u	BUSTuuS (see boisterous)-BUSTS
v	NAvvY-NAY	w	BOwwARD (part of a key)-BOARD
z	DIzzY-DIY; MUzzLE-MULE		

A thought: BELLY dancing must be Turkey's phonetic BEY watch! Words with sequences of three or more like letters are almost invariably hyphenated and/or coined and have therefore not been included.

REMOVING EMBEDDED TAUTONYMIC SEQUENCES

Pattern 1212 LONENESS is a particularly good example because when the fragment -nene- is removed we are left with LOSS.

- a KababISH (nomadic Arab people; also a form of impure graphite)-KISH
(large wickerwork basket used for carrying turf in Ireland);
IMPLacacY-IMPLY; PararENAL-PENAL; CatatONIC-CONIC
- b IbibiO (a people of Southern Nigeria)-IO
- c CEcocoLIC (Stedman)-CELIC (obs. next); PIcucuLE (bird of the genus
Dendrocolapes)-PILE
- d MAdidiTY (moisture)-MATY e WAGererS-WAGS
- f HAFafaH ('Abu Hafafah' is in Oman)-HAH
- g DRAgagaNT (a gum, tragacant)-DRANT (droning tone)
- h AKAhahaKA (Mangareva: listen attentively)-AKAKA (mountain in Uganda)
- i Rififi (1955 film)-RI (Japanese unit of distance); RICininE (an alkaloid)-
RICE
- j AjajaJA (Ngarinjin: before his time)-AJA (town in Egypt)
- k Ski-kiTING-STING l PIlleleSS-PISS
- m SEMimiLL (Web 2)-SELL n LENiniST-LEST
- o CopopODA (var. Copepoda, an order of Crustaceans)-CODA
- p LIpopoD (type of rotifer)-LID r AraraT-AT
- s LYsosome (biological term)-LYME (Lyme Regis, Dorset, England)
- t ROtataBLE-ROBLE (California weeping oak); MASTitiS-MASS;
AUtotoXIN-AUXIN
- u ZululAND-ZAND (language of the Avesta)
- v CONviviAL-CONAL w TOwawaY-TOY
- x MAXaxaM (Ann Arbor firm)-MAM y POLycycLY-POLLY
- z HAZazaH ('Qararat el Hazazah' is a depression in Libya)-HAH

Pattern 123123

- a PashashIP (Pasha, a title of high-ranking officers in Turkey)-PIP;
SatiatiON-SON
- b NONbarbarIC-NONIC (of the ninth order)
- c ALchochoDEN (astrological term)-ALDEN (var. hold, old)
- d HYdrodrome (boatlike vessel that skims over the water surface)-
HYME (var. him)
- e RectectOMY-ROMY; NEEdledLY (Word Ways Feb 1980)-NEY (var. noy,
to annoy); SententIAL-SIAL (continental layer of the earth's crust)
- g CLOgdogdoS (inferred pl. of OED nonce-word)-CLOS (var. close)
- h ChichicASTE (tropical American stinging-nettle tree)-CASTE;
CHIhuahuaS-CHIS (fastidious); AhuehueTE (Mexican tree)-ATE
- i SingingLY-SLY; DististYLE (part of male genitalia of certain insects)-
DYLE (var. dill)
- l AlfalfaS-AS
- m CHEmosmosIS (Stedman)-CHEIS (var. choose); BEMurmuring-BEING
- n Encenced (brought into sense, informed)-ED; AnianiaU (the drepanid
bird, *Loxops parva*)-AU (var. awe); NONsenseS-NOS; CONtented-COD
- o LondondERRY-LERRY (var. lurry, something said by rote);
CopiopiA (weakness of the eyes)-CA (Scot: call)
- p GRaphophoNE-GRANE (var. grain); LOphophoRE (bird belonging to the
genus *Lophophorus*)-LORE; BENZOpurpurINE-BENZOINE (var. benzine)

- r VERatratE (salt of veratric acid)-VEE; MATeriarian (old word applied to heretics who believe in the eternity of matter)-MATEN (var. mate)
- s AscesceNT (var. acescent, turning sour)-ANT; FUscesceNT (brownish)-FUNT (var. font); DIstastABLE-DIBLE (var. dibble, a garden tool); DIstesteD (discredited the testimony of)-DID
- t METastasis (rapid transition from one point to another)-MEIS (var. mease, a measure for herrings); SATietieS-SAS; RETintinG-REG; ENTostosES (Stedman)-ENES (once)
- w AweoweoS (glasseyed snapper fishes)-AS;
- y PyomyomA (Stedman)-PA

Pattern 122122

- e COeffeffE (one who is put in joint possession of tenaments)-COE (disease of sheep)
- u HubbubbeD (a nonce-word)-HED (var. head)
- v AvaavaaVA (Mangareva: one who delays or hinders much)-AVA

Pattern 121212 (a 3-way sequence)

- a SanananAS (the two localities named Sananana, Indonesia)-SAS; CarararA (a South American monkey)-CA (Scot: a mountain pass)
- b DAbababaD (location in Iran)-DAD
- k KUKukukuS (a peoples of eastern New Guinea)-KUS (var. kiss)
- m AmamamaMA (Mangareva: to yawn repeatedly)-AMA (float of a Hawaiian outrigger canoe)
- o LogogogUE (one who legislates about words)-LUE (to sift with a sieve)

Pattern 121121 (also a palindromic sequence)

- e FIDDLedeedeE-FIDDLE

Pattern 112112

- f COEffeffeS-COES (obs. jackdaws)
- o CooloolY (var. Koolooly, an Algerine of mixed descent)-CY
- s AssesseS-AS; POssesseD-POD

Pattern 12341234

- a CONCatenatenESS (state of being linked)-CONCESS (var. concession)
- b CUbo-cubo-cuBE (the ninth power)-CUBE
- c AcetacetaTE-ATE; RACHischisIS (cleft spine)-RAIS (captain of a boat)
- e Denizenize (to admit to residence with certain rights and privileges)-DE (dial. the)
- h Chit-chit-CHAT (a nonce-word)-CHAT
- i ANTiberiberI-ANTI; NicodicodINE (Stedman)-NINE; VinewinewY (var. finewinewy)-VY (var. vie, a challenge in card-playing); MinglingLY-MY
- m HOOmalimaliS (Hawaii: things designed primarily to attract favourable attention)-HOOS (natural exclamations)
- n AnciencieS (antiquities)-AN
- o PostrostrAL-PAL
- p CARphiophioPS (a genus of snakes)-CARPS
- q PROTOquamquamS (protoquamquam is an obs. nonce-word in the OED)-PROTOS (more than one prototype)
- r TriatriatUM (Stedman)-TUM

u OuertuertS (var. overthwarts?)-OS; Cubo-cubo-cUBE-CUBE
w SwingwingS-SS

Pattern 12321232

k AkamakamaKA (Mangareva: to commence to ripen)-AKA (woody vine)
t KOtukutukuS (Maori: Kotukutuku is the New Zealand native fuschia)-
KOS (Greek island)
v SAve-revereNCE (var. sir-reverence, without respect for)-SANCE (var.
sans, without)

Pattern 12231223

e STRESSlessly-STRY (obs. hag)
y DysseysseS (diseases?)-DS (slang for detectives)

Pattern 12131213

a CauaiauaiA (place in Angola)-CA

Pattern 122122122 (a 3-way sequence)

a Rat-tat-tat-tORY (as a sharp rapping sound)-RORY;
Tat-tat-tattING (repeated tapping)-TING

In the above, adding the letter S to COEFFEFPE enabled the removal of an embedded 6-letter f-sequence -ffeffe- in addition to the e-sequence -effeff-. Similarly, two different sequences were removed from CUBO-CUBO-CUBE. This ability of some words to deliver more than one removable sequence is drawn upon more heavily in the case of 10- and 12-letter patterns.

Removing either -icksmicks- or -micksmicks- from SMICK-SMICK-SMACK makes SMAKE. Removing -tenostenos- from STENOSTENOSIS (Stedman) makes SIS. Removing -iddywiddy- from WIDDY-WIDDY-WAY (a children's game of tag) makes WAY. Removing either -hohohohoho- or -ohohohohoh- from HOHOHOHOHOHOH (a noise made by a horse in Ulysses) makes HOH (an Indian people of the Olympic Peninsula). Removing either -bububububu- or -ubububububu- from BUBUBUBUBUBUBU (the sound of flapping wings, in Dictionary of Jamaican English) makes BUBU (Pulliam). Removing -enzizenziz-, -nzizenzize- or -zizenzizen- from ZEN-ZIZENZIZENZIC (the square of a square of a square) makes ZENZIC (a square number).

Removing -phobiaphobia- from HYDROPHOBIAPHOBIA (inferred pl. of word in Nov 1978 Word Ways) makes HYDROS. Removing -bubububububu- from BUBUBUBUBUBUBU yields BU (dial. bow). GLYCYLGLYCYLGLYCYLGLYCINE lends itself to the removal of no fewer than 6 different tautonymic sequences of length 12! Either of the 4-way sequences -iik-ikiikiik- or -kiikiikiikii- can be removed from IKI-IKI-IKI-IKI-IKI (The Palindromicon) to make IKI (a Japanese island).

There exist a few even longer patterns. A 14-letter tautonymic sequence can be removed from COochie-coochie-coO (a coined term of endearment) to yield COO. Methylethylethylene (a 3-way sequence)

reduces to MENE (an old word for fellowship). The 16-letter tautonymic sequence -igmoidosigmoidos- can be removed from SIGMOIDOSIGMOIDOSTOMY to yield STOMY (which may only exist as a combined form).

REMOVING EMBEDDED PALINDROMIC SEQUENCES

Pattern 121

- a ARafaT-ART; SalaAM-SAM; MaraUD-MUD; PEasaNT-PENT
 b PRObable-PROLE c ScacITE (scarcity)-SITE
 d FOLdedLY-FOLLY; SORdidEST-SOREST
 e BEefeATER-BEATER; NemeAN-NAN; f CUfuffLE (disorder)-CUFLE (cowl)
 g LUGgagE-LUGE; VIgogne (vicuna)-VINE
 h ShahEEN (an Indian falcon)-SEEN; ChthONIC-CONIC
 i JUiciLY-JULY; TidiED-TED; VESTigIAL-VESTAL; FijiAN-FAN; FiliATED-FATED
 j UjijI (in Tanzania)-UI (Scot: neck of land)
 k MARKoke (var. moorcock)-MARE l BOLDly-BOY; ALlele-ALE
 m HELmsmen-HELEN n CONing-COG
 o HOopoE-HOE p OUTpipING-OUTING
 q QAqaqS (insular hills surrounded by glacial ice in Greenland)-QAS (qa is an ancient Mesopotamian liquid measure)
 r PrurITY-PITY s ASSisTER-ASTER
 t ROTate-ROE u FATuous-FATS; COutuRE-CORE
 v EVvivA (shout of applause)-EVA w WILLIwawS (wind gusts)-WILLIS
 x MAXixe (Brazilian dance)-MAE y ByryALL (var. burial)-BALL
 z AzazIL (in mythology, the Islamic devil descended from jinn)-AIL

Pattern 1221

- a AMassaBLE-AMBLE; REattaIN-REIN b HAboobS (Sudanese winds)-HAS
 c Scooch (Pulliam)-SH d MISdeedS-MISS
 e DUelleD-DUD; TerreAN-TAN; ASSesseES-ASSES; CAREsseD-CARD; HEIResseS-HEIRS; DISKetteS-DISKS; ROSetteS-ROSS
 f Ufu-ufU (decoy pipe of North Nias, Indonesia)-UU (var. yew)
 g AgaagA (Samoan: rebellious)-AA (type of lava)
 h SheehAN (English pathologist)-SAN (a sibilant, M, in early Doric script)
 i BilliARD-BARD; DECillion-DECON; MilliONTH-MONTH; SEXTillion-SEXTON
 j OjoojO (Yoruba: everyday)-OO (any of several birds of family Moho)
 k SkookUM (evil spirit)-SUM
 l GleelESS-GESS (var. jess, a strap around the hawk's legs in falconry)
 m SCHOOLmaamISH-SCHOOLISH n CONiine (an alkaloid)-COE
 o ColloID-CID; WOottoN (Wootton Bassett, England)-WON
 p OUTpeepING-OUTING
 r AraarA (the Motu Araara Islands in the South Pacific)-AA (an orchid)
 s DIseesE (var. decease)-DIE t StootHE (garnish with studs)-SHE
 u PulluLANS (Stedman)-PLANS v EeveeE (Tahitian raggedness)-EE
 w IwiiwI (Hawaiian: high cheek bones)-II (town in Finland)
 y ZyzyA (a sponge)-ZA (a musical note)
 z Uzu-uzU (Japanese: to be restless)-UU

Pattern 12321

- a TEamsmaN-TEN b AbatabLE-ALE

- c ScilicET (namely)-SET d REdivided-REED
 e BepapeRED-BRED; EVergreEN-EVEN
 g DEgaragED-DEED; LOGologY-LOY (type of spade in Ireland)
 h ChocohOLIC-COLIC i CitatiON-CON
 k OkazakI (Japanese molecular biologist)-OI (vulgar pronunciation of I)
 l HULLabalLOO-HULLOO
 m SEmitimE-SEE n GnomonIST-GIST
 o SToreroOM-STOM (stem or stalk) p SporopHORE-SHORE
 r WraparOUND-WOUND; PremerIT-PIT s UselesS-US
 t TIitanatE-TIE; ANticity-ANY; LATinity-LAY
 u GROundnuT-GROT; LANGuorouS-LANGS (var. tongues or languages)
 v AvadavAT-AAT (var. oat); DIvisivE-DIE
 w UNwelewABLE (var. unfadable)-UNABLE
 x ExotoxIN (Web 3)-EIN y SynonyMY-SMY (knave, rascal)
 z NEzapazEN (Serbo-Croat: unnoticed)-NEEN (dial. nine)

Pattern 12121

- a BananaLAND-BLAND
 j Ajajaja (Ngarinjin: before his time)-AA (a mollusc)
 q UqoqoqO (Aug 1982 Word Ways Colloquy)-UO (var. foe)

Pattern 11211

- f CUffuffLE-CULE (obs. the rump)
 s AssassIN-AIN (dial. one, own)

Pattern 123321

- a LECaniinaE (subfamily of scale insects)-LECE (var. leash)
 b Abittibi (an Indian of an Algonquin tribe in Ontario)-AI (type of sloth)
 c REcollocATE (to put in place again)-REATE (water-crowfoot)
 d KEdek-kedEK (Malay: waddling, mincing)-KEEK (dial. to peep)
 g DOgmaamgOD (NPL pseudonym of Charles E Bender)-DOOD (dude)
 h MASHallahS (mashallah, a Muslim exclamation)-MASS
 i ETienneite (a follower of French politician Pierre Etienne, in Feb 1976
 Word Ways)-ETTE (var. eat)
 k SkollokS (var. skollocks, meaning idles, sulks)-SS
 l GlossoALIA (unintelligible jargon)-GALIA (type of melon)
 m SIMillimUM (homeopathic term)-SIUM (marshwort plant)
 n SYNemmenON (pl. of past part. of synapterein, to join together, in
 ancient Greek music)-SYON
 r KrennerITE (a telluride of gold and silver)-KITE; PresserAGE-PAGE;
 SPARrowworT (a South African heath)-SPART (the grass Esparto)
 s SUsurrusES (whispers, rustlings)-SUES
 t StaccatO-SO; MANTelletTA (dim. of mantle, a cloak worn by cardinals)-
 MANTA (a cloak worn by Spaniards); CASstillitE (sulfide of copper, zinc
 and lead)-CASE
 u Suillius (Suillius Rufus, proconsul of Asia under Claudius)-SS
 v OverrevST-OST (var. oast)
 w GwallawG (Welsh masculine first name)-GG (ancient personal Syrian
 name); SwollowS (var. swallows)-SS
 y TEyelleYER (var. tailor)-TEER (to plaster or spread thickly)
 z AzennezAL (in Algeria)-AAL (a species of plant allied to the madder)

Pattern 121121

e FIDDLedeedeE-FIDDLE

o OorooroO (a creek in NSW, Australia)-OO

p PIP-pip-pipS-PIPS s NEsessesT (May 1993 Word Ways)-NEST

The following poem makes use of the removal of embedded 4-, 5- and 6-letter palindromic sequences:

The prison's DINETTES are renowned for their DINS.
FINESSES are absent, the fish served with FINS.
FETTERED to his chair, convict 666, FRED,
Eats fish which is MOTTOED 'Straight from the MED'.

He GUESSES the oil level, slipshod is our GUS.
On finding he's FUELLESS, he makes such a FUSS.
He phones the FUELLERS, clad in their FURS;
Their name is 'SIROCCOS' but they prefer 'SIRS'.

He works hard as a PATISSIER does our PATER
But in his spare time he's a GAZETTEER GAZER.
Way back in the '60s a HIPPIE was HE
Which is just what our BILLIE aspires to BE.

Free love--that's what BILLIE'D declared in BED
But his brother WILLIE'D said he should WED
His BREWERESS--she's a lass called BESS.
Oh, didn't I tell you? She's PREGGERS--P.S!

Pattern 1234321

a OPacificaTION-OPTION

c AcetatecOA (?) -AOA (lepidopteran)

d MIDdleveld'S (of the Middleveld, a Transvaal region)-MIDS (the middle)

e TAenioineI (class of flatworms)-TAI (any of several Pacific porgy fish of the genus Pagrus)

f AfgoiogfA (hymenopteran)-AA

g EgeszsegE (var. Hungarian egeszeg, meaning health and sanity)-EE (in the Netherlands)

i MEDicosociAL-MEDAL

j BOjigngijI (?) -BOI (var. boy)

n SANitatinG-SAG

r THOracocarE (trilobite)-THOE (var. tho); PromemorIAL-PIAL (pertaining to the pia mater); PERrotatorY-PERY (var. pear-tree)

s PREsentnesS-PRES (colloq. abbrev. of present); ASSertresS-ASS; DESertresS-DES

t INTERpretABILITY-INABILITY; DACtylolytIC (Stedman)-DACIC (pertaining to Dacia, an ancient country in southeastern Europe)

u NEuronoruM (Stedman)-NEM (var. nemn, to name)

v INVitativE-INE (var. of in, inn); LEvitativE-LEE

w SwollowS (var. swallows, deep holes in the earth)-SS

y Pynepenys (niggards)-PS

Pattern 1232321

h ShalalahAS (name for Silela, former village of the Kuitsh Indians in

western Oregon)-SAS

k AkahahakA (Mangareva: to listen attentively)-AA

Pattern 1231321

e THYMelaaleS (plant order)-THYMS (Pulliam)

Pattern 1223221

o PossessoRESS-PRESS

Pattern 1213121

i MiripiriUM (Stedman)-MUM; PRIMItivitiES-PRIMES; SENSItivitiES-SENSES

o HomonomoUS (subject to the same law)-HUS (var. house, us, use);

MonotonoUS-MUS (dial. mouth)

u MurumuruS (murumuru is a Brazilian palm)-MS

Pattern 1212121

m AmamamaA (Mangareva: to yawn repeatedly)-AA

Pattern 1123211

b Abba-dabbA (nonsense phrase)-AA

l Allenella (mollusc)-AA; Ellavalla (in Australia)-EA (in Spain);

Gilletella (a mollusc)-GIA (La Gia Pass, in Tibet)

Pattern 12211221 (also a tautonymic sequence)

o H0ot-toot-to0T (Scot: an exclamation of annoyance)-H00T

Pattern 11233211

t TAttarrattAT (rat-a-tat)-TAAT (Shetland Island dial. taut, to make rugs with tufts of hair)

Pattern 121131121

o COonoomoono0 (a stupid person, Dictionary of Jamaican English)-COO

Pattern 1221331221

i KinnikkinniK-KK (a crackling noise, Finnegans Wake)

Pattern 12314541321

s ANTIsensuousnesS-ANTIS; SUPERSensuousnesS-SUPERS; etc.

Pattern 12121212121

b BUbububububU-BUU (var. bow)

In some cases, palindromic sequences of differing lengths can be removed from the same word. We met ETIENNEITE earlier and saw how removing the 6-letter sequence -iennei- made ETTE. But it is possible to go one step further and remove the 8-letter sequence -tienneit- to make EE. Other words which lend themselves to a double removal include

REDIVIDED less -ivi- makes REDDED, less -divid- makes REED
 FOOTSTOOLED less -otsto- makes FOOLED, less -ootstoo- makes FLED
 OOLLOOPOOLOO (Pittapittic language spoken in Queensland) less

-oopoo- makes OOLL00 (place in Northern Territory, Australia), less
 -oloooolo- makes 00

KINNIKKINNIK less -nnikkinn- makes KIIK (town in Kazhakstan), less
 -innikkinni- makes KK (see above)

TATTARRATTAT less -tarrat- makes TAT-TAT, less -ttarratt- makes TAAT
 SINRAMMARNIS (Brooklyn oil company) less -nrammarn- makes SIIS (2nd
 person singular of see), less -inrammarni- makes SS

A few words are even amenable to a triple removal operation. For example, AKATAKATAKA (Mangareva: to fish all day or all night with the line) less -takat- makes AKAACA (a small town south of Auckland), less -atakata- makes AKKA (a race of pygmies in Zaire), less -katakatak- makes AA.

THE ULTIMATE IN REMOVALS?

There exist two words with which it is a delight to play the removals game, not least because neither of the words is a palindrome. Both are unusual in having long embedded palindromic sequences made of only two different letters of the alphabet. The first, WINNININNIE (a location in South Australia), has a 9-letter palindromic sequence composed of the letters I and N. Removing the central 5-letter sequence -ninin- makes WINNIE. Removing the entire 9-letter sequence makes WE. But the second word, BALLILLILLY (Scot: a lullaby), is undoubtedly 'king of the removals game' because it allows the removal of tautonymic sequences as well as palindromic ones, with surprising results. It has an 8-letter palindromic sequence composed of the letters I and L which when removed results in BAY. Removing either of the two overlapping identical 5-letter palindromic sequences -llill- makes BAILLY (var. authority). Removing the palindromic/tautonymic sequence -lillil- makes BALLY (Brit. slang, an euphemistic word for bloody). But BALLY can also be made by removing the 6-letter tautonymic sequence -lilli-. And removing the different 6-letter tautonymic sequence -illill- provides yet a third way of making BALLY. So now you have it on good BAILLY that BALLILLILLY is a BALLY remarkable word!

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